

UNIVERSIDAD DE GRANADA

DEPARTAMENTO DE DIDÁCTICA Y ORGANIZACIÓN ESCOLAR

**PROGRAMA OFICIAL DE DOCTORADO EN CIENCIAS DE LA
EDUCACIÓN**



**National Culture and its Impact on the Development of
Intercultural Competences in the Era of Internationalization of
Higher Education and Research in Asian and European Contexts.
Comparative Study of General Campuses and Specialized Faculty**

Cultura Nacional y su Impacto en el Desarrollo de las Competencias
Interculturales en época de la Internacionalización de la Educación
Superior e Investigación en Contextos Asiáticos y Europeos.
Un Estudio Comparativo de los Campus Generales y Especializados

Tesis presentada por

Lidia Maria Wiśniewska

**Para la obtención del grado de Doctor por la Universidad de Granada
con Mención de Doctorado Internacional**

Director: Dr. Manuel Fernández Cruz

GRANADA, 2017

Editor: Universidad de Granada: Tesis Doctorales
Autora: Lidia Maria Wiśniewska
ISBN: 978-84-9163-432-4
URI: <http://hdl.handle.net/10481/48066>

UNIVERSITY OF GRANADA
DEPARTMENT OF DIDACTICS AND SCHOOL ORGANIZATION
FACULTY OF EDUCATION



**National Culture and its Impact on the Development of
Intercultural Competences in the Era of Internationalization of
Higher Education and Research in Asian and European Contexts.
Comparative Study of General Campuses and Specialized Faculty**

A Dissertation by

Lidia Maria Wiśniewska

**Submitted in Partial Fulfilment of the Requirements for the Degree of
Doctor of Education with the International Distinction**

Director: Dr. Manuel Fernández Cruz

GRANADA, 2017

DECLARACIÓN/DECLARATION

La doctorando/ *The doctoral* candidate Lidia Maria Wiśniewska y el director de la tesis/
and the thesis supervisor: Dr. Manuel Fernandez Cruz

Garantizamos, al firmar esta tesis doctoral, que el trabajo ha sido realizado por el doctorando bajo la dirección del director de la tesis y hasta donde nuestro conocimiento alcanza, en la realización del trabajo, se han respetado los derechos de otros autores a ser citados, cuando se han utilizado sus resultados o publicaciones.

/

Guarantee, by signing this doctoral thesis, that the work has been done by the doctoral candidate under the direction of the thesis supervisor and, as far as our knowledge reaches, in the performance of the work, the rights of other authors to be cited (when their results or publications have been used) have been respected.

Granada,2017/ *Place and date:*

Director de la Tesis/ *Thesis supervisor*

Doctoranda/*Doctoral candidate:*

Fdo.: Dr. Manuel Fernandez Cruz

Fdo.: Lidia Maria Wiśniewska

This Thesis was developed through my professional experience and practice on various campuses worldwide (in Spain, South Korea, France, Italy and USA) and during the development of an international cooperation network called the POSEIDO Project (Acronym for Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization).

This research work was mostly self-funded, however, I frequently received support from institutions.

- The research stay at the Chonnam National University in Gwangju, South Korea, received financial support from the Korean Government under a “FRONTIER” fellowship of the Korean Ministry of Education, and from a scholarship of the Chonnam National University. This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121).
- The research stays at the University Paris-Sorbonne (Paris IV) in Paris, France, at the Università degli Studi di Napoli Federico II in Naples, Italy, and at the University of Michigan in Ann Arbor, USA, were supported by the POSEIDO Foundation, during the development of the POSEIDO network.

This work was developed at the Department of Didactic and School Organization of the University of Granada, Spain, at the International Office and School of Dentistry of the Chonnam National University in Gwangju, South Korea, at the Pôle des Relations Internationales of the University Paris-Sorbonne (Paris IV) in France and at the Department of Periodontics & Oral Medicine of the University of Michigan, Ann Arbor, USA.

INDEX OF THE SCIENTIFIC PUBLICATIONS

The content (ideas, texts, pictures and data) of this Doctoral Thesis is based on 8 international scientific articles and one official report prepared for the Presidency of Paris-Sorbonne University (Paris, France). These 9 documents are presented in Annex of this Thesis.

- **Wisniewska LM**, Dohan Ehrenfest DM, Galindo-Moreno P, Domingo Segovia J, Inchingolo F, Wang HL, and Fernández-Cruz M. *Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective*. Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802**.
- Dohan Ehrenfest DM, **Wisniewska LM**, Cieslik-Bielecka A, Wang HL, and Fernández-Cruz M. *Editorial: Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International cooperation, translational research and transdisciplinarity*. Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802**.
- **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014;2(3):179-94.
- **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean*

universities using the ISAIAS FAST score. POSEIDO, 2014;2(3):195-207.

- **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014; 2(3):209-23.
- Dohan Ehrenfest DM, **Wisniewska LM**, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. *Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research.* POSEIDO. 2014;2(3):167-77.
- Sammartino G, Del Corso M, **Wisniewska LM**, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine.* POSEIDO. 2014;2(2):105-15.
- Dohan Ehrenfest DM, **Wisniewska LM**, Pinto NR, Mirgazizov MZ, Zhang CQ, Piattelli A. *The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity.* POSEIDO. 2014;2(4):225-31.
- **Wisniewska LM**, *Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne (Paris IV) in Paris.* Research project prepared for the *Service des Relations Internationales* of the Université Paris-Sorbonne (Paris IV). Paris 2014/2015. Updated in 2016.

Dedication

This Thesis is dedicated to my Family, for teaching me the value of being curious, for giving me the freedom to explore, and for sharing their love of learning.

Acknowledgements

I would like to take this opportunity to express my gratitude and appreciation to my supervisor, Professor Manuel Fernandez Cruz for his patience, guidance, and the sharing of his extensive knowledge.

I also want to thank all the wonderful Scholars I met during this professional PhD experience on these numerous campuses worldwide, and particularly Prof. Araceli Guillaume-Alonso (Professor in charge of international relations for Paris-Sorbonne University and representing occasionally international relations of Sorbonne University), all the Leaders of the POSEIDO network for their help and support (particularly Prof. Jean-Pierre Bernard from Geneva, Prof. Marc Quiryne from KULeuven, Prof. Jamil Shibli from Sao Paulo, Prof. Steven Feinberg and Prof. Hom-Lay Wang from Michigan, Prof. Marsel Mirgazizov from Moscow, Prof. Gilberto Sammartino from Naples, Prof. Francesco Inchingolo from Bari, Prof. Derong Zou from Shanghai, Prof. David Dohan Ehrenfest and Prof. Hee-Kyun Oh from South Korea), and the many other scholars who supported this work.

I would also like to gratefully thank all of the study participants who took the time to tell me their stories and also for encouraging me in this investigation.

Finally, very special thanks go to my Family. Without their support and encouragement, this endeavor would not have been possible.

Abstract

The main hypothesis of this PhD thesis is that the internationalization of higher education and research is impacted by the national culture and organizational culture of a university, and that both cultures have an impact on the development of the intercultural competences of the campus population.

The objectives of this thesis were:

- to observe which components of the intercultural competences participants of the internationalization processes developed on Asian and European campuses;
- to observe how the national culture and organizational culture of the campus influence the development of the intercultural competences;
- to find out the differences and similarities in internationalization of higher education and research in European and Asian contexts;
- finally, to observe the differences and similarities in the internationalization of general campuses and specialized faculties (Models: Dental Schools and Implant Dentistry Research and Education Groups), to investigate how the specific ecosystem of a specialized field and local leaderships of internationalization impact the general patterns of internationalization met at a University.

An ethnographical case study approach was used and a mixed methodology of evaluation of the internationalization of a campus has been developed. A quantitative methodology using the ISAIAS (Intercultural Sensitivity Academic Index & Advanced Standards) FAST (Fast Assessment Screening Test) questionnaire and a qualitative approach (observation, participation and interviews, etc.) were applied on a population of students, faculty and staffs. Data were gathered during professional activities (2011-2014) on the general campuses and in dental schools in Spain (University of Granada), South Korea (Chonnam National University), France (Paris University) and Italy (Federico 2 Naples).

This work highlighted (as the first one have into consideration development of intercultural competences in Schools of Dentistry in Asia and Europe), that the national and organizational cultures of each university impacted the development of intercultural competences of the participants, each component of intercultural competences being affected differently. However, even if these European and Korean Universities have

different patterns, this field study and FAST scores highlighted that institutions and groups were facing similar difficulties. Even the development of components of intercultural competences showed some similar patterns. The comparison between general campus, specialized Faculty and research/education groups revealed that development of intercultural competences and internationalization of research and education are critically dependent on the presence of local leaders of internationalization in the various disciplines. In both contexts, Asian and European, the paradigm of internationalization of Higher Education and Research introduced the elements of continental and regional convergence, international mobility with a continental focus, recognition of diplomas, transparency and innovation related to the international and interdisciplinary dimension. The most visible differences are related to a cultural framework offered by a university. While Asian campuses are submerged in Confucianism, Europeans "breathe with the air" of humanism and Aristotelian logic.

Finally, this thesis is completed by a Report about Internationalization prepared for the Presidency of the Paris-Sorbonne University; the analysis of the general campus and of the various specialized schools or groups revealed the same observations, i.e. the national and organizational cultures of this major historical University affect the development of intercultural competences and their components in a specific way on the campus, and the development of internationalization and its impact are strongly dependent on the presence of a leadership of internationalization at the ground level of each group.

Resumen

La hipótesis principal de esta Tesis doctoral es que la cultura nacional y la cultura organizacional de una universidad tienen un impacto en la internacionalización de la educación superior y en la investigación, y que estas conjuntamente impactan en el desarrollo de las competencias interculturales de la población de los campus universitarios.

Los objetivos principales de esta Tesis son:

- observar qué componentes de las competencias interculturales los participantes de los procesos de internacionalización desarrollan en los campus asiáticos y europeos;
- observar cómo la cultura nacional y la cultura organizacional de campus influyen en el desarrollo de las competencias interculturales;
- averiguar las diferencias y similitudes en la internacionalización de la educación superior y la investigación en los contextos asiático y europeo;
- por último, observar las diferencias y similitudes en la internacionalización de los campus generales y especializados (modelos: Escuelas de Odontología y grupos educativos y de investigación en el campo de Odontología e Implantología) para investigar cómo un ecosistema específico de un campo especializado y liderazgo local de la internacionalización impactan en los patrones generales de la internacionalización de una universidad.

Se ha utilizado una metodología de estudio de caso múltiple desde una perspectiva etnográfica y se ha aplicado una metodología mixta de evaluación de la internacionalización de un campus universitario. Se ha llevado a cabo un análisis cuantitativo de los datos mediante el índice ISAIAS (Index de la Sensibilidad Intercultural Académica y Estandartes Avanzados / *Sensitivity Academic Index and Advanced Standards*) y el cuestionario FAST (Test de Evaluación Rápida / *Fast Assessment Screening Test*). Además, se ha aplicado un análisis cualitativo a datos recabados mediante observaciones, entrevistas, diarios profesionales y fotos recogidos entre los estudiantes participantes, personal académico y administrativo. Los datos fueron recogidos durante las actividades profesionales en los campus centrales de las

universidades y en las escuelas de odontología en España (Universidad de Granada), Corea del Sur (Universidad Nacional Chonnam / 전남대학교), Francia (Universidad de París / *Université de Paris*) e Italia (Universidad de Federico II de Nápoles / *Università degli Studi di Napoli Federico II*) en los años 2011-2014.

Este trabajo de investigación ha destacado que, la cultura nacional y organizacional de cada universidad influyen en el desarrollo de competencias interculturales de los participantes de campus, y cada componente de estas complejas competencias es influenciado de manera diferente. Sin embargo, aunque las universidades europeas y coreanas tienen patrones y contextos de desarrollo diferentes, este estudio de campo y los resultados de FAST han destacado que las instituciones y grupos tienen dificultades similares. Incluso el desarrollo de componentes de competencias interculturales muestran algunos patrones similares. La comparación entre los campus generales y los grupos especializados del profesorado y de investigadores / grupos de educación especializada reveló que el desarrollo de las competencias interculturales y de internacionalización de la investigación y de la educación son críticamente dependientes de la presencia de los líderes locales de la internacionalización en las diversas disciplinas. Tanto en el contexto asiático como europeo, el paradigma de internacionalización de la Educación Superior y de la Investigación introdujo elementos de la convergencia continental y regional, movilidad internacional con un enfoque continental, reconocimiento de diplomas, transparencia e innovación relacionada con la dimensión internacional e interdisciplinar. Las diferencias más destacadas entre ambos contextos en cuestiones de internacionalización están relacionadas con el marco cultural ofrecido por la universidad. Mientras que los campus asiáticos están sumergidos en el confucianismo, los europeos “respiran con el aire” de humanismo y la lógica aristotélica.

Por último, esta Tesis se completa con un informe sobre la internacionalización del campus preparado para la Presidencia de la Universidad de París-Sorbonne; el análisis del campus general y de las distintas escuelas o grupos especializados confirmó las mismas observaciones recogidas en otros campus, es decir, que la cultura nacional y la cultura organizacional de esta histórica y culturalmente importante Universidad Europea, impactan significativamente el desarrollo de competencias interculturales y sus componentes en una manera específica. Además, el desarrollo de

internacionalización y sus efectos son fuertemente dependientes de la presencia de líderes de la internacionalización tanto en el nivel más alto como en el nivel organizativo más básico de cada grupo.

요약

본 박사학위 논문의 주요 가설은 고등교육 및 연구의 국제화가 국내문화와 대학의 조직 문화의 영향을 받는다는 것과, 그 두 문화는 대학 구성원의 상호문화역량 발달에 영향을 준다는 것이다.

본 논문의 목적은 다음과 같다.

- 아시아 및 유럽 대학 등에서 국제화 과정을 밟고 있는 참여자들이 상호문화역량 중 어떠한 요소가 아시아 및 유럽 대학 등에 어떠한 영향을 미치는지 알아본다.
- 국내 및 대학의 조직문화가 상호문화역량을 발달시키는데 어떠한 영향을 미치는지 알아본다.
- 국내 및 대학의 조직문화가 상호문화역량의 발달에 어떠한 영향을 미치는지 관찰한다.
- 유럽과 아시아의 대학교육과 연구의 국제화에 어떤 차이와 공통점이 있는지 찾아본다.
- 전문분야의 특정 생태와 국제화의 지역 리더십이 대학에서 보이는 일반적인 국제화 패턴에 어떤 영향을 주는지 조사하기 위해 일반 대학과 전문기관(대상: 치의대학, 임플란트 치과연구 및 교육 집단)의 국제화에 대한 차이와 공통점을 관찰한다.

문화기술적 연구 접근법이 사용 되었고, 대학의 국제화 평가에 있어서는 혼합 연구법이 개발되었다. ISAIAS(Intercultural Sensitivity Academic Index & Advanced Standards)와 FAST(Fast Assessment Screening Test)를 활용한 정량적 설문조사 그리고 학생, 교수진, 교직원등에 질적 연구 방법이 적용되었다. 자료는 스페인(University of Granada), 한국(Chonnam National University), 프랑스(Paris University), 이탈리아(Federico 2 Naples)의 일반 대학교와 치의학 대학교에서 전문활동 동안 수집되었다.

이 논문은 각 대학의 국내 및 조직 문화가 참여자의 상호문화적 능력 발달에 영향을 미친다는 것을 강조했다(각 요소가 다르게 영향 받음). 그러나, 유럽과 한국 대학이 다른 패턴을 보인다 하더라도, 이러한 현장조사 및 FAST 점수는 기관과 집단이 비슷한 어려움을 겪는 것을 강조했다. 심지어 상호문화적 능력의 요소 발달이 약간은 비슷한 패턴을 보였다. 일반 대학, 전문기관, 연구/교육 집단 사이의 비교는 상호문화역량과 연구 및 교육의 국제화의 발달이 다양한 지도법의 국제화 지역 리더들의 존재에 달려있음을 보여준다. 아시아와 유럽에서 대학교육 및 연구의 국제화 패러다임은 대륙 및 지역 집합성, 대륙적 집중이 있는 국제 이동성, 학위 인정, 국제적이고 학제간 관점과 관련된 명료성과 혁신을 도입했다. 가장 가시적 차이는 대학에서 제공되는 문화 체제와 관련되어 있다. 아시아 대학들은 유교에 침수되어있지만, 유럽에서는 인문주의와 아리스토텔레스 논리가 중요하다.

마지막으로, 이 논문은 파리 소르본 대학 대표를 위해 준비된 국제화에 대한 보고서에 의해 완성되었으며 일반 대학 및 다양한 전문 대학 또는 집단에서 같은 내용이 관찰되었다(주요 기념비적인 대학의 국내 그리고 조직 문화는 상호 문화 능력 및 그들의 대학에서 구체적 방법의 구성요소, 그리고 국제화 발전과 그 영향은 각 그룹의 초기단계에서 국제화의 리더십의 존재에 달려있다).

Table of Content

Table of Content	1
Resumen (Short Thesis in Spanish).....	11
1. General Introduction.....	45
1.1. A Professional Thesis based on international practices and experiences in the framework of Internationalization of Higher Education and Research.....	45
1.2. Articulation of the main hypothesis of the Thesis, with the 8 articles and the Report on Internationalization prepared for the Paris-Sorbonne University.....	59
1.2.1. Three articles for the introduction of this Thesis.....	59
1.2.2. Three articles in the Methodology and Results of this Thesis	60
1.2.3. Two collateral articles, illustrating professional practical experience.....	62
1.2.4. Official report for the Presidency of Paris Sorbonne University.....	63
1.3. The POSEIDO ISAIAS Project.....	63
2. Internationalization of Higher Education and Research and Development of Intercultural Competences.....	67
2.1. Introduction.....	67
2.2. Understanding the dimensions of intercultural competences.....	68
3. Internationalization of Higher Education and Research: European and Asian Paradigms.....	71
3.1. Internationalization endeavors in Europe and Asia.....	71
3.2. South Korea – European Union collaboration in Higher Education and Research.....	73
3.3. Language and Intercultural Competences.....	77
3.4. Education in movement (statistical evidence).....	78
3.5. Mobility of health professionals in the EU – the case of Dentistry.....	83
3.6. Mobility of dental practitioners – Asian context.....	90

4. Internationalization of Higher Education and Research in Oral and Maxillofacial Sciences.....	93
4.1. Dental Biomaterials Education and Research: the modern paradigm.....	93
4.2. International Cooperation in Biomaterial Research: the ISO example.....	94
4.2.1. The development of ISO standards.....	94
4.2.2. Illustration of the limits of international scientific cooperation.....	95
5. Internationalization of Higher Education and Research: Assessing Efforts for International Scientific Cooperation through Publications.....	98
5.1. Using the SCIENTI System to assess the scientific cooperation effort.....	98
5.2. Defining the cultural areas in international cooperation.....	101
5.3. SCIENTI scores between categories of journal and periods.....	103
6. General Objectives of the Thesis.....	106
7. Theoretical Framework of the Thesis.....	108
7.1. Matching the research objectives with theoretical framework.....	108
7.2. Role of diversity impact and developmental growth in the development of intercultural competence on the campus (campus culture).....	113
7.2.1. University versus Multiculturalism.....	113
7.2.2. What is the impact of campus culture on its population?.....	114
7.2.3. What elements impact culture of university campus?.....	114
7.2.4. How the campus culture impact development of intercultural competences? The Theory of the diversity impact/ developmental growth.....	119
7.3. Impact of national culture and organizational culture on campus culture and the development of intercultural competences.....	122
7.3.1. National cultures and its impact on campus culture and development of intercultural competences.....	124
7.3.2. Organizational culture and its impact on campus culture and development of intercultural competences.....	131
7.3.3. Confucian values and Aristotle's reason in Education	138
7.4. Internationalization of University.....	140

7.4.1. Institutional approaches toward internationalization.....	140
7.4.2. Institutional level strategies for an internationalized university campus.....	142
7.4.2.1. Factors of internationalization.....	142
7.4.2.2. Organization efforts towards internationalization of university.....	145
7.4.3. Strategies for internationalization of university.....	147
7.4.3.1. Keller’s factors of internationalization.....	147
7.4.3.2. Knight division of institutional internationalization strategies.....	150
7.4.3.3. Internationalization at home and models of international university.....	152
7.5. Development of intercultural competence (ICC).....	154
7.5.1. Understand Culture - and its visible and invisible.....	154
7.5.2. What is intercultural competence? - Asian, European, USA perspective.....	157
7.5.3. How are intercultural competences developed?.....	163
7.5.3.1. Deardorff’s model of Intercultural Competence.....	163
7.5.3.2. Mechanic of development of intercultural competences (ICC) in intercultural environment.....	165
7.5.4. How to assess intercultural competences?.....	168
8. Methodology.....	170
8.1. Strategy of the research.....	171
8.1.1. Multiple Case Study (qualitative and quantitative methodology).....	171
8.1.2. Retroductive strategy.....	174
8.1.3. The inductive strategy.....	175
8.2. Research methods: Instrumentation and procedure.....	175
8.2.1. Informal Interview.....	178
8.2.2. Participative observation and notes from the field.....	179
8.2.3. Pictures as instruments of data gathering.....	181
8.2.4. Professional diary.....	181
8.2.5. Institutional documentation.....	181
8.2.6. Online sources.....	182
8.3. Validity & reliability of the Observation (observation security).....	182
8.4. Reliability and validity of the study.....	186
8.5. Ethical considerations.....	188
8.6. Analysis of the qualitative data.....	188
8.7. Quantitative methodology: the questionnaire.....	190
8.7.1. Questionnaire as a data gathering tool.....	190
8.7.2. Theoretical construct of the questionnaire (dimensions).....	191

8.7.2.1. Determination of the study purpose and dimensions.....	192
8.7.2.2. Conceptual validation of the questionnaire.....	193
8.7.2.3. Implementation of the questionnaire.....	196
8.7.3. Analysis of the quantitative data.....	196
8.7.4. Ethical considerations.....	197

9. Methodology and Results: a study in 3 levels.....199

9.1. Field study in general campuses in Asian and European contexts.....	201
9.1.1. Introduction.....	201
9.1.2. Materials and Methods.....	201
9.1.2.1. General methodology.....	201
9.1.2.2. Description of the questionnaires.....	203
9.1.2.3. Treatment of data and calculation of the ISAIAS FAST score.....	207
9.1.3. Results.....	208
9.1.4. Discussion.....	212
9.1.4.1. General Hypotheses and objectives of the ISAIAS project.....	212
9.1.4.2. About the University of Granada: score and observations.....	213
9.1.4.3. About the University Paris Sorbonne: score and observations.....	214
9.1.4.4. About the Chonnam National University: score and observations.....	216
9.1.5. Conclusion of the first part.....	218
9.2. Field study in specialized faculties (dental schools) in Asian and European contexts.....	219
9.2.1. Introduction.....	219
9.2.2. Materials and Methods.....	220
9.2.2.1. General methodology.....	220
9.2.2.2. Description of the questionnaires.....	221
9.2.2.3. Treatment of data and calculation of the ISAIAS FAST score.....	222
9.2.3. Results.....	223
9.2.4. Discussion.....	226
9.2.4.1. General specificities of the dental community.....	226
9.2.4.2. About the School of Dentistry at University of Granada.....	227
9.2.4.3. About the Faculty of Odontology at University of Paris.....	228

9.2.4.4. About the Department of Oral Surgery at University Federico II of Naples.....	230
9.2.4.5. About the School of Dentistry at the Chonnam National University.....	232
9.2.5. Conclusion of the second part.....	234
9.3. Field study in research and education groups within 4 specialized faculties (dental schools) in Asian and European contexts.....	235
9.3.1. Introduction.....	235
9.3.2. Materials and Methods.....	237
9.3.2.1. General methodology.....	237
9.3.2.2. Description of the questionnaires.....	238
9.3.2.3. Treatment of data and calculation of the ISAIAS FAST score.....	239
9.3.3. Results.....	240
9.3.4. Discussion.....	244
9.3.4.1. General observations.....	244
9.3.4.2. About the Implant/biomaterial Group at the University of Granada.....	244
9.3.4.3. About the Implant/biomaterial Group at the Chonnam National University.....	246
9.3.4.4. About the Implant/biomaterial Group at the University of Paris.....	248
9.3.4.5. About the Implant/biomaterial Group at the University Federico II of Naples.....	250
9.3.5. Conclusion of the third part.....	252

10. General Results and Discussion.....254

10.1. Different approaches to Internationalization and convergences of Higher Education and Research in European and Asian contexts.....	255
10.2. National and organizational cultures and components of the intercultural competences in Asian and European contexts.....	259
10.2.1. General mechanisms.....	261
10.2.2. Culture and ICC in the Korean model – CNU.....	263
10.2.3. Culture and ICC in the French model - Paris University....	265
10.2.4. Culture and ICC in the Spanish model – University of Granada	267
10.2.5. Culture and ICC in the Italian model - University Federico II of Naples.....	269
10.3. Differences and similarities in internationalization of general campuses and specialized faculties.....	270
10.4. Ethical considerations and potential limitations.....	273
10.5. Perspectives and evolutions: an insight from	

the University of Michigan.....	274
11. General Conclusions.....	279
12. Bibliography.....	282
Annexes.....	311
Index of Content of the Annexes	312
Annex 1. Questionnaires used in this study (11 models)	
Annex 2. International scientific articles (8 publications), which compose this Doctoral Thesis	
Annex 3. Wisniewska, L. (2014). <i>Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne in Paris.</i> Report prepared during the research internship: Review of the Current Practices in the Internationalization of Higher Education and Research at the Université Paris- Sorbonne (Paris IV) in Paris - cultural approach. Unpublished.	

List of Figures

Figure 1. The University of Granada, Spain.....	48
Figure 2. The Chonnam National University, Gwangju, South Korea.....	49
Figure 3. Chonnam National University School of Dentistry, Gwangju, South Korea.	50
Figure 4. Paris Sorbonne University, France.....	51
Figure 5. The University of Michigan, Ann Arbor, USA.....	52
Figure 6. Debates on internationalization and diversity at UMich.....	54
Figure 7. Development of the POSEIDO Community worldwide.....	55
Figure 8. Development of the POSEIDO Community worldwide.....	56
Figure 9. Development of the POSEIDO Activities through ISO.....	57
Figure 10. Development of the POSEIDO Community worldwide.....	58
Figure 11. The ISAIAS logo.....	65
Figure 12. The Intercultural Competence Learning Spiral.....	69
Figure 13. The growth of International Student Mobility 1990-2014.....	78
Figure 14. Distribution of foreign students in tertiary education by region of origin (2012).....	79
Figure 15. Distribution of foreign students in tertiary education, by country of destination (2012).....	80
Figure 16. Top countries of origin of foreign students by regions of the world (2011).	81
Figure 17. Trends in international markets shares (2000-2011).....	82
Figure 18. Statistics on most mobile professionals, permanent establishment within the EU Member States, the EFTA and Switzerland (2001/2002-2016).....	83
Figure 19. Statistics on most mobile professionals, permanent establishment within the EU Member States (2001/2002-2016).....	84
Figure 20. Statistics on most mobile professionals, permanent establishment within the EU Member States, the EFTA and Switzerland (2010-2016).....	85
Figure 21. Statistics on most mobile professionals, permanent establishment within the EU Member States (2010-2016).....	85
Figure 22. Decisions taken by host countries on recognition of Dental Professionals in the EU, the EFTA and Switzerland (2010-2016).....	87
Figure 23. The proportion of “overseas dentists” in each country.....	88
Figure 24. Statistics on mobile dentists, permanent establishment within the EU Member States for the period 2001-2016 and 2015-2016.....	89
Figure 25. Main fields of Study of International Students, 2009.....	91
Figure 26. Main Asian Origin Countries of Migration to the OECD, 2011.....	91
Figure 27. Main Destination Countries of Asian Migration to the OECD.....	92
Figure 28. SCIENTI system map of the general cultural areas in scientific cooperation (ISAIAS Project, POSEIDO Foundation).....	102

Figure 29. Creation of university culture and its impact on the development of intercultural competences among campus population.....	112
Figure 30. Process of Internationalization of Higher Education & Research, and development of multicultural environment.....	116
Figure 31. Contextual dependencies in the process of internationalization of higher education and research and its impact on the development of intercultural competences on a university campus.....	119
Figure 32. Different levels of culture.....	125
Figure 33. Implications of Power Distance on Teaching.....	127
Figure 34. Implications of Collectivism vs. Individualism on Teaching.....	128
Figure 35. Implications of Uncertainty Avoidance on Teaching.....	129
Figure 36. Implications of Femininity vs. Masculinity on Teaching.....	130
Figure 37. Implications of Long Term Orientation on Teaching.....	131
Figure 38. Organizational culture model levels of Schein.....	133
Figure 39. Zeus Culture (the Power Culture, the Club Culture).....	134
Figure 40. Apollo’s Culture (The Role Culture).....	135
Figure 41. Athena Culture (the Tasks Culture).....	136
Figure 42. The Dionysus Culture (the Existential Culture).....	137
Figure 43. Elements considered in the development of international strategy in university.....	143
Figure 44. Institutionalization of Approaches to Internationalization in Universities.....	148
Figure 45. Three Levels of Uniqueness in Mental Programming.....	155
Figure 46. Hall’s Iceberg model of culture.....	156
Figure 47. Chinese Model of Intercultural Leadership Competence.....	159
Figure 48. Process Model of Intercultural Competences.....	164
Figure 49. Anxiety as strategic moment.....	166
Figure 50. International Team Culture.....	167
Figure 51. Research design.....	173
Figure 52. Theoretical framework of the case study.....	189
Figure 53. Dimensions of the questionnaire.....	192
Figure 54. Model of development of intercultural competence proposed by Deardorff (2004, 2009).....	197
Figure 55. Debates on internationalization of higher education and issues of diversity, inclusion and equality at the University of Michigan.....	278

List of Tables

Table 1. Rules to determine the SCENTI score of a publication.....	100
Table 2. SCIENTI scores of 4 different journals.....	104
Table 3. Knight’s framework for “internationalization at home”	153
Table 4. Instruments for data collection.....	176
Table 5. Information used for our analysis overlap.....	183
Table 6. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 3 different general campus.....	210
Table 7. Intercultural dimensions and total ISAIAS FAST scores of a group of Students from 3 different general campus.....	211
Table 8. Intercultural dimensions and total ISAIAS FAST scores of a group of dental students from 4 different Dental Schools.....	225
Table 9. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 4 different Dental Schools.....	242
Table 10. Intercultural dimensions and total ISAIAS FAST scores of a group of Postgraduate Students connected to some implant and biomaterials leaders of internationalization in 4 different Dental Schools.....	243
Table 11. Intercultural dimensions and total ISAIAS FAST scores of 5 different groups of stakeholders at the University of Michigan, Ann Arbor, USA.....	276

Resumen (Short Thesis in Spanish)

1. Introducción general

1.1. Una Tesis profesional basada en las prácticas y experiencias internacionales en el marco de la internacionalización de la Educación Superior y de la investigación

En el marco de las recientes transformaciones de las comunidades académicas, el fenómeno de la internacionalización de la Educación Superior y la Investigación es reconocido como crucial aunque no se haya aún evaluado su verdadero impacto en instituciones concretas. La evaluación interna es difícil, ya que cada miembro de una institución ha interiorizado patrones y valores propios de esa institución y del marco nacional en que se inserta, que le impiden adoptar la distancia necesaria para reconocer las transformaciones ocurridas. Desde fuera, a través de la evaluación externa, la observación sigue siendo demasiado superficial, porque el alma de una institución permanece opaca al evaluador y, a veces, le impide la valoración pues carece del conocimiento de los antecedentes históricos y culturales a partir de los que las instituciones están evolucionando.

Esta Tesis Doctoral ha sido desarrollada a través de mis experiencias y prácticas profesionales en diversos campus en todo el mundo -sobre todo en España, Corea del Sur, Francia, Italia y los Estados Unidos-, durante del desarrollo de una red de cooperación internacional de los Departamentos académicos en 42 países, en torno al Proyecto POSEIDO: Organización de Periodoncia, Cirugía Oral e Implantología Estética. Esta experiencia profesional me ofreció la oportunidad de conocer diferentes instituciones, estando involucrada en sus acciones y formando parte de sus comunidades académicas durante un cierto periodo de tiempo, pero manteniendo una distancia suficiente con el fin de experimentar, observar, discutir y reflexionar sobre su funcionamiento y sus elementos culturales.

La Tesis adopta un formato de conjunto de múltiples estudios de caso y se investiga específicamente la correlación entre la cultura nacional y organizativa, el desarrollo de las competencias interculturales (CCI) entre los participantes de cada campus universitario (estudiantes, profesores – investigadores y personal) y el proceso

de internacionalización en campus generales (campus central) y especializados (Facultades de Odontología) en contextos de Asia y Europa.

La Tesis fue elaborada entre los años 2011 a 2017, lo que me ha permitido realizar estancias prolongadas en las diferentes Facultades que participaron en este estudio.

Los principales datos relacionados con esta parte del trabajo se agrupan en seis artículos publicados, dos de ellos con factor de impacto de 1,802.

Sin embargo, este trabajo es ante todo una Tesis Doctoral de carácter profesional elaborada a partir de las experiencias profesionales acumuladas durante seis años, trabajando y colaborando en diferentes campus y países. Este trabajo también incluye, por ello, otros trabajos prácticos:

- participación en el desarrollo de la Comunidad POSEIDO (dos artículos más y trabajo como asistente editorial),

- trabajo de gestión como editora invitada de un número especial de una revista internacional (Current Pharmaceutical Biotechnology, factor de impacto 1.802).

- coordinación de trabajo de diferentes grupos de investigación procedentes de nueve países,

- y, por último y como una experiencia profesional importante, la investigación holística de campo de la internacionalización de la Educación Superior y de la investigación de la Universidad de París-Sorbonne (París IV), bajo la supervisión de la profesora Araceli Guillaume-Alonso, vicepresidenta de Asuntos Internacionales de la Universidad Paris-Sorbonne de París y una de las personas clave responsable del desarrollo de las relaciones científicas internacionales de la agrupación "Universidad de la Sorbona"/ Sorbonne Universités (Universidad de París-Sorbonne, Universidad Pierre et Marie Curie, y Université de Compiègne, entre otras).

No puede pasarse por alto la base de conocimiento profesional que adquirí sobre la internacionalización de la Educación Superior y la investigación (evaluación, innovación, gestión, contextualización, y asesoramiento pedagógico), a través de los cursos y prácticas internacionales en el Master Erasmus Mundus Mundusfor impartido en la Universidad de Granada (España), Akershus University College (Noruega), Universidad de Reims-Champagne-Ardenne (Francia), Universidad de Oporto

(Portugal) y la Universidad Rovira i Virgili (España). Muchos aspectos de la teoría del impacto de la cultura nacional y organizacional en el desarrollo de las CCI se redactaron en mi propia Tesis de Master (Wisniewska, 2011) mientras que este trabajo de doctorado representa el desarrollo y la aplicación de esta teoría en diferentes contextos nacionales y organizativos.

Esta Tesis Doctoral de carácter profesional presenta un fuerte enfoque interdisciplinar e internacional. Cada estudio de caso tiene en cuenta los procesos, políticas, organización, prácticas, pedagogías y cultura de las instituciones de Educación Superior en los campus generales, pero también se centra en los campus médicos y odontológicos especializados, en particular en las ciencias de biomateriales y la implantología dental, en cada universidad participante. Los campus especializados son interesantes para investigar con más detalle sus mecanismos de internacionalización y contar con la mirada de los líderes de internacionalización en este complejo proceso.

En su conjunto, esta Tesis ofrece una investigación de campo sobre el proceso de internacionalización de campus universitarios y su correlación con la cultura nacional y el desarrollo de las CCI, a través de perspectivas muy prácticas basadas en la experiencia en varios ámbitos académicos durante la investigación de campo y las actividades profesionales en cinco países en tres continentes.

Las perspectivas finales ofrecidas por esta Tesis están relacionadas con una experiencia en la Universidad de Michigan (2015-2016), donde se realizó el mismo estudio de campo. Los datos relacionados con esta última universidad no han sido publicados todavía y están fuera del alcance del proyecto inicial de esta Tesis, pero esta información es importante para alimentar la discusión y proporcionar perspectivas. De hecho, los paradigmas modernos de la internacionalización de la Educación Superior y la investigación se han desarrollado en universidades anglosajonas especialmente importantes, como es la Universidad de Michigan, y lo que se observó en este campus nos da información considerable sobre las evoluciones actuales del paradigma de internacionalización, sobre el desarrollo de las CCI y llama la atención a la interpretación del concepto de la diversidad en los países occidentales y las posibles evoluciones de la internacionalización en los campus de Asia y Europa.

La teoría actual de internacionalización de la Educación Superior se inició en los campus de los Estados Unidos y es aquí donde este estudio de campo en tres

continentes está terminado, lógicamente, aportando sus perspectivas y algunas conclusiones.

1.2. Articulación de la hipótesis principal de la Tesis Doctoral, con los ocho artículos y el Informe sobre la Internacionalización de la Educación Superior y la Investigación preparado para la Universidad de París-Sorbonne

Como hemos anticipado, esta Tesis profesional está basada en una investigación científica hecha durante los estudios de campo (estudios de caso), en múltiples experiencias profesionales de la autora en varios puestos profesionales y campus en varios países. La Tesis contiene ocho artículos y un informe sobre la internacionalización de la educación y de la investigación en el contexto de Université Paris-Sorbonne, preparado para la Presidencia de la Universidad de la Sorbona. Todos los artículos e informes publicados durante este período de Doctorado están conectados con los temas de internacionalización de la Educación Superior e investigación en el contexto de desarrollo de las CCI, y algunos artículos están centrados especialmente en la hipótesis de esta Tesis, para investigar, debatir y discutir las preguntas principales de Doctorado. Son seis los artículos que sirven de cuerpo principal de la Tesis y responden específicamente a la hipótesis de la Tesis Doctoral.

1.2.1. Tres artículos para la introducción de esta Tesis

Los siguientes tres artículos revisan y destacan el proceso de internacionalización de la Educación Superior y la investigación, su relación con el desarrollo de las CCI y las dificultades de la cooperación internacional en cirugía oral y maxilofacial, en particular en el creciente ámbito de los biomateriales. Adicionalmente, el primer artículo también propone una metodología de evaluación de la internacionalización de una publicación científica.

- **Wisniewska LM, Dohan Ehrenfest DM, Galindo-Moreno P, Domingo Segovia J, Wang HL, and Fernández-Cruz M. *Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective.* Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802.****
- Dohan Ehrenfest DM, **Wisniewska LM**, Cieslik-Bielecka A, Wang HL, and Fernández-Cruz M. *Editorial: Molecular, Cellular and Pharmaceutical Aspects*

of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International cooperation, translational research and transdisciplinarity. Current Pharmaceutical Biotechnology, 2017; ***Impact factor: 1.802.***

- Dohan Ehrenfest DM, **Wisniewska LM**, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. ***Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research.*** POSEIDO. 2014;2(3):167-77.

El contenido de estos artículos sirve como parte de la introducción de esta Tesis, ya que da una visión global de la problemática actual, particularmente orientada a los campos médicos y odontológicos.

1.2.2. Tres artículos en la Metodología y Resultados de esta Tesis

Otros tres artículos presentan estudios comparativos y transversales de la Universidad Nacional de Chonnam (CNU, Corea del Sur), la Universidad de Granada (UGR), la Universidad de París (París 4 y 5, Francia) y la Universidad Federico 2 de Nápoles (UNINA, Italia) en los campus generales y en las escuelas de odontología. La combinación de los datos y de los resultados obtenidos en los diferentes campus universitarios conducen a las respuestas para todas nuestras preguntas de investigación.

✓ **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. ***The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score.*** POSEIDO, 2014;2(3):179-94.

✓ **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. ***The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental***

school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. POSEIDO, 2014;2(3):195-207.

✓ **Wisniewska LM**, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014; 2(3):209-23.

Estos tres artículos responden directamente a los objetivos principales de esta Tesis. La sección de discusión general de la Tesis hará la síntesis de todos estos resultados, ya que los datos se distribuyen entre los tres niveles de análisis: campus generales, facultades especializadas y grupos especializados de investigación y educación.

1.2.3. Dos artículos colaterales que ilustran la experiencia profesional

Los siguientes dos artículos fueron publicados como parte de la experiencia profesional, y participan en el debate sobre la internacionalización de la educación superior y la investigación en la perspectiva del desarrollo de CCI, pero no responden específicamente a las preguntas precisas de la Tesis.

- Sammartino G, Del Corso M, **Wisniewska LM**, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine.* POSEIDO. 2014;2(2):105-15.
- Dohan Ehrenfest DM, **Wisniewska LM**, Pinto NR, Mirgazizov MZ, Zhang CQ, Piattelli A. *The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity.* POSEIDO. 2014;2(4):225-31.

1.2.4. Informe oficial de la Presidencia de la Universidad de París-Sorbonne

La última parte de esta Tesis profesional es la presentación del informe oficial sobre la Internacionalización de la Enseñanza Superior y el Proceso de Investigación de la Universidad Paris-Sorbonne (París IV), bajo la supervisión de la Profa. Araceli Guillaume-Alonso, Profesora delegada para las Relaciones Internacionales de la Universidad París-Sorbonne y de Sorbona Universidades (Sorbonne Universités).

Wisniewska LM, *Rol del Servicio de Relaciones Internacionales en la implementación de la política internacional de la Université Paris-Sorbonne (París IV) en París.* (Wisniewska LM, *Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne (Paris IV) in Paris*). Un proyecto de investigación preparado para el *Servicio de Relaciones Internacionales* de la Universidad Paris-Sorbonne (París IV). París 2014/2015. Actualizado en 2016.

Este trabajo representa una experiencia profesional práctica significativa y una ilustración de las habilidades desarrolladas durante este tiempo de Doctorado.

1.3. El Proyecto ISAIAS de POSEIDO

Esta Tesis ofrece una experiencia de campo única, con el valor añadido de reunir los datos de cinco universidades muy importantes en el mundo educativo y de investigación, en tres continentes diferentes, y sus respectivas escuelas de odontología (incluyendo los principales grupos de investigación especializados en biomateriales aplicados y odontología de implantes) donde la autora de la Tesis ha tenido la oportunidad de estar involucrada profesionalmente durante periodos significativos de tiempo: la Universidad de Granada (España), la Universidad de París (Francia), la Universidad Nacional de Chonnam (Corea del Sur), la Universidad Federico II de Nápoles (Italia) y la Universidad de Michigan (USA)).

Esta posición de insider /outsider, la posibilidad de reunir tantos datos y una experiencia transdisciplinar e internacional de campo en sí es única y jamás sería posible sin un vector que permitiese esta experiencia profesional: el Proyecto ISAIAS de POSEIDO.

El POSEIDO es una red científica internacional de Departamentos Académicos y Sociedades Científicas de 40 países y se desarrolló como un consorcio de entidades académicas que comparten las responsabilidades del funcionamiento global de la red. La comunidad POSEIDO financió el programa ISAIAS (Índice Académico de Sensibilidad Intercultural y Estándares Avanzados) para evaluar el grado de internacionalización y sensibilidad intercultural de los miembros de la comunidad en todo el mundo y desarrollar nuevas estrategias y estándares para el desarrollo de CCI entre los miembros, los colaboradores y amigos, con el fin de promover una cooperación global más fluida y eficaz en el campo de investigación y educación en odontología de implantes y biomateriales.

2. Internacionalización de la Educación Superior e Investigación y Desarrollo de Competencias Interculturales

El proceso de internacionalización de la Educación Superior y de la Investigación (ES & I) es una de las evoluciones más visibles del mundo académico de las últimas décadas, y se ha desarrollado como una consecuencia de globalización de la economía de la ciencias y del conocimiento. Este proceso es muy complejo debido a diversos mecanismos administrativos, pero sobre todo a las muy amplias diferencias culturales y estereotipos existentes entre los diversos actores del entorno académico: docentes, investigadores y estudiantes. Las diferencias abordadas por la cultura nacional que impacta la percepción y acción, y las diferentes culturas organizacionales de cada país, institución y departamento forman a menudo obstáculos muy fuertes para una cooperación internacional fluida y eficaz.

En los últimos años, se han desarrollado muchos proyectos de investigación para evaluar las CCI en diversos entornos profesionales (Griffith et al., 2016). En 2004, Deardorff propuso una lista de componentes de las CCI basados en un estudio de 29 universidades americanas y los educadores internacionales involucrados activamente en el proceso de internacionalización de la Educación Superior. Este estudio sigue sirviendo hoy como una referencia mundial para la definición de cuáles son los componentes de las CCI. Se desarrolló como una forma de evaluar el impacto formativo de la internacionalización de las universidades en los estudiantes.

A partir de los conceptos y elementos claves señalados por Deardorff (2004;

2006), se ha elaborado un cuestionario de evaluación de los esfuerzos de internacionalización de un campus universitario a través del desarrollo de CCI, verificado y validado estadísticamente y validado en un estudio elaborado entre la Universidad de Granada (España) y Akershus & Oslo University College (Noruega) (Wisniewska, 2011). Este cuestionario (contextualizado y validado) fue seleccionado como un primer instrumento para el proyecto ISAIAS para la evaluación del proceso de internacionalización de una universidad a través del desarrollo de competencias interculturales entre los actores académicos. El cuestionario se puede contextualizar en varias formas paralelas para los estudiantes o los profesionales académicos (investigadores, profesores, personal administrativo). Utilizando este cuestionario, FAST - Proyección de la Evaluación Rápida - [*Fast Assessment Screening Test (FAST) Score*] como el primer método de evaluación mixta, fue preparada por el grupo global de investigación llamado ISAIAS.

En este estudio se utilizó la definición de CCI propuesta por Deardorff (2004; 2006; 2013) entendidas como la capacidad de comunicación efectiva y adecuada en situaciones interculturales basada en las propias actitudes, conocimientos, habilidades y capacidades de reflexión intercultural. Las cuatro dimensiones de las CCI pueden definirse como las siguientes:

- **Actitudes.** Deardorff considera la actitud positiva hacia las situaciones interculturales como la base para la competencia intercultural. Valorar la diversidad cultural, tolerar las ambigüedades y la apertura general son los elementos clave de esta dimensión. La motivación positiva, la apertura general, la curiosidad y la capacidad de interactuar sin prejuicios acompañan al proceso de aprendizaje que tolera la ambigüedad.
- **Conocimiento y comprensión.** El conocimiento intercultural (sobre nuestra propia cultura y cultura de los demás) nos permite adquirir habilidades específicas para poder entrar en conversación e interacción. La comprensión de la visión de mundo de otros, la comprensión del impacto que la cultura tiene sobre el comportamiento y sobre la comunicación son los elementos clave de esta dimensión.
- **Habilidades.** La capacidad de escuchar, observar e interpretar, relacionar elementos culturales y evaluar son los puntos claves de esta dimensión. Estas habilidades no son específicas sólo para la competencia intercultural, son muy importantes también para el procesamiento del conocimientos sobre la propia cultura y otras culturas.

- **Resultados Internos Deseados.** Esta dimensión es entendida como una reflexión sobre las interacciones interculturales. Los resultados del desarrollo de actitudes, conocimientos y habilidades relacionados con diferentes culturas impactan fuertemente la capacidad de cambiar la perspectiva y adoptar una posición relativa hacia las referencias culturales propias. Este nivel conduce a la flexibilidad y a la adaptación a las situaciones interculturalmente nuevas.

3. Internacionalización de la Educación Superior y de la Investigación: Paradigmas Europeo y Asiático

En la era de la globalización, de la inmigración masiva y de movimiento intercultural, la internacionalización de la ES & I se revela como uno de los principales objetivos de mejoría de las instituciones académicas del mundo (de Wit et al., 2015; OECD, 2016). Las universidades europeas comenzaron a participar activamente en esta estrategia desde 1998 con los procesos de Bolonia, de Lisboa y las indicaciones de Copenhague (2002), trabajando en un marco cultural común de la civilización heleno-romana-cristiana. Al mismo tiempo, los campus asiáticos comenzaron la estrategia al introducir el paradigma occidental de la internacionalización de la educación superior contextualizándolo a su propio entorno. Los Scholars asiáticos y la movilidad estudiantil, especialmente a los campus de los Estados Unidos, tenían una escala significativa ya antes de los años 90 de siglo XX, lo que estaba vinculado con los procesos geopolíticos y económicos de esta región del mundo. Los países asiáticos han estado internacionalizando sus universidades, utilizando las reuniones colaborativas de Asia en el contexto de la civilización confuciana.

Globalmente, el uso de la lengua inglesa a gran escala (especialmente en el ámbito asiático) se convirtió en uno de los cambios más visibles en el paisaje de la Educación Superior. Un significativo y rápido aumento del número de estudiantes internacionales en los contextos asiáticos y europeos ha tenido lugar en este tiempo. La formación de nuevos *líderes globales* es el objetivo principal de las universidades asiáticas (Bennett, 2011). Sin embargo, las habilidades lingüísticas y un número elevado de estudiantes internacionales (en Asia principalmente asiáticos, en Europa más mixtos) en el campus no son suficientes para construir una colaboración fructífera. Teniendo esto en cuenta, las CCI han sido ampliamente reconocidas como un elemento esencial

para la coexistencia pacífica en un mundo diverso (OECD, 2016).

Para educar a profesionales competentes interculturalmente, las universidades eligen diferentes enfoques, racionales y estrategias de internacionalización. Para ello se han desarrollado diversos elementos de internacionalización de la Educación Superior, por ejemplo: internacionalización del currículo, movilidad académica de estudiantes y de personal, proyectos internacionales de investigación / educación, diplomas internacionales conjuntos, etc. Sin embargo, es difícil mencionar un tipo de innovación en esta dimensión. Algunos países como los Estados Unidos, Canadá, Australia, Noruega (entre otros) se centran en unos enfoques más activos frente a la internacionalización llamados "internacionalización en casa" para aportar un desarrollo intercultural a toda la población estudiantil y especialmente a la que no tiene posibilidad de estudiar en el extranjero.

Grandes recursos están comprometidos en los esfuerzos de internacionalización (Erasmus+, Horizon 2020, etc.). ¿Cómo evaluar sus resultados? Las estadísticas relacionadas con el número de la movilidad y las convenciones internacionales no son suficientes. La consideración del desarrollo de las CCI entre la población del campus, se percibe como un enfoque adecuado para estimar los resultados del esfuerzo de la internacionalización (Deardorff, 2004; 2006; Berardo et al., 2013).

4. Internacionalización de la Educación Superior y de la Investigación en Ciencias Oral y Maxilofacial

En Odontología y Cirugía Oral y Maxilofacial, el desarrollo de biomateriales implantables y la comprensión de sus aspectos moleculares, celulares y farmacéuticos son actualmente importantes campos de investigación y educación, con un impacto considerable en la práctica clínica diaria y en la evolución de las estrategias terapéuticas. En la era de la economía globalizada de conocimiento y de la ciencia, este dominio científico necesita el desarrollo de la cooperación global y una evolución paradigmática en la cultura organizacional de las Ciencias Odontológicas y de la industria dental relacionada. A pesar de la presión política y los esfuerzos teóricos, la internacionalización de la ES & I en la actualidad en los sectores de Odontología y Biomateriales en general es bastante superficial y depende sobre todo de los esfuerzos de unos pocos líderes de la internacionalización a través de sus redes personales. La

cooperación en una comunidad multicultural y multipolar requiere un desarrollo de fuertes CCI, pero este proceso sigue siendo limitado en la mayoría de las instituciones. Estos límites de la cooperación científica internacional pueden observarse a través de diferentes marcadores, particularmente la producción difícil y limitada de las normas ISO (Organización Internacional de Normalización) (Wisniewska, 2017a).

5. Internacionalización de la Educación Superior y de la Investigación: Evaluación de los esfuerzos para la Cooperación Científica Internacional a través de publicaciones

Los límites de la cooperación científica internacional en las Ciencias Orales y Maxilofaciales pueden observarse también en las puntuaciones relativamente bajas de SCIENTI (Esfuerzos de Internacionalización en la Colaboración Científica & Test de Redes & Index), elaboradas sobre la literatura internacional especializada en Odontología, y especialmente en comparación con la más relevante literatura médica (Wisniewska, 2017a; 2017b).

Como una herramienta analítica para evaluar el esfuerzo de cooperación científica internacional entre campos y períodos, la metodología propuesta por SCIENTI también destacó un aumento significativo del esfuerzo de internacionalización en los últimos años en las mejores publicaciones sobre biomateriales dentales (Wisniewska, 2017a). Por último, una internacionalización de la ES & I es un enfoque muy importante para evaluar la evolución de la ciencia de los biomateriales dentales y destaca muy claramente las tendencias futuras de este campo, en particular el impacto y las interferencias de entidades y empresas privadas en el desarrollo de este Corpus de conocimiento.

6. Objetivos Generales de la Tesis

La hipótesis principal de esta Tesis Doctoral es que la internacionalización de la Educación Superior y de la Investigación está influenciada por la cultura nacional y la cultura organizacional de una universidad y que ambas culturas tienen un impacto en el desarrollo de las competencias interculturales de la población universitaria.

Los objetivos de esta Tesis son los siguientes:

- observar qué componentes de las ICC participantes de los procesos de internacionalización son desarrollados en los campus asiáticos y europeos;
- observar cómo las culturas nacionales y organizacionales del campus influyen en el desarrollo de las ICC;
- conocer las diferencias y similitudes en la internacionalización de la Educación Superior y la investigación en contextos asiáticos y europeos;
- finalmente, observar las diferencias y similitudes en la internacionalización de los campus generales y facultades especializadas (ejemplo de: Escuelas de Odontología y Grupos de Investigación y Educación de la Odontología de Implantes), para investigar cómo el ecosistema específico de un campo especializado y las direcciones locales de internacionalización inciden en los patrones de internacionalización de una universidad.

7. Marco teórico de la Tesis

La hipótesis principal de este Trabajo Doctoral era la siguiente: la cultura nacional y la cultura organizacional impactan la internacionalización de la Educación Superior y la Investigación (ES & I) y estas, conjuntamente (cultura nacional y organizacional y ES & I), impactan en el desarrollo de las CCI de los actores de un campus.

El marco teórico que ha sido elegido para la argumentación de la hipótesis de esta investigación, está integrado por diversas teorías construidas por académicos de diferentes entornos sociales y culturales, sin embargo, principalmente de los Estados Unidos y de Europa. Sus contextos culturales fueron destacados en la Tesis.

El término francés "culture" (de origen latino "*cultura*") utilizado primera vez en el siglo XV, se empleó en esta Tesis a través de la definición de Hofstede (2010), que lo describió como la programación colectiva de la mente que distingue a los miembros de un grupo de otro. El término la *internacionalización de la educación* creado en los años 80 en los campus de EE.UU. ha seguido en esta Tesis la definición de Knight (2003) que la describió como un proceso de integración de una dimensión internacional, intercultural o global en los objetivos, las funciones o la prestación de la educación (postsecundaria). Darla Deardorff (2004, 2009) en el contexto de los Estados Unidos

elaboró una lista de componentes de las CCI y su definición de este concepto fue utilizada.

En busca de la explicación de las interrelaciones entre *cultura nacional*, *cultura organizacional*, *internacionalización de campus* y *competencias interculturales*, han sido utilizadas las siguientes teorías pedagógicas, organizativas y culturales (Figura):



Figura. Creación de la cultura universitaria y su impacto en el desarrollo de ICC entre la población de campus. Evaluación de la internacionalización de la Educación Superior y de la Investigación a través de la evaluación de ICC entre los diferentes actores de campus. (Fuente: Elaboración propia).

a) Para hacer coincidir la cultura del campus con el desarrollo de las ICC entre su población se utilizó la teoría del impacto de la diversidad de Gurin (2002) basada en las teorías del desarrollo (crecimiento cognitivo) de Piaget (1971).

b) El marco teórico para la internacionalización de la universidad propuesto por Keller (1983), Davies (1990), de Wit, Davies y Knight (de Wit, 2010), ayuda a comprender y analizar cómo diferentes acciones de los esfuerzos de internacionalización (factores planeados) son planificadas e implementadas para desarrollar una cultura específica en el campus. En esta Tesis se consideró que los resultados complejos de los esfuerzos de internacionalización relacionados con el

desarrollo de la diversidad cultural de un campus, pueden ser evaluados a través del desarrollo de CCI entre la población del campus.

c) Se explicó el papel de la cultura nacional (Hofstede, 2001, 2010), la cultura organizacional (Handy, 1995; Schein, 1992) y los valores confucianos en el entorno académico coreano. Estos factores no planificados (llamados también “factores silenciosos”) juegan un papel activo en la creación de la cultura de campus, en la implementación de la estrategia de internacionalización y a través de estos procesos en el impacto sobre el desarrollo de CCI entre la población universitaria.

d) Los componentes de ICC propuestas por Deardorff en su Tesis doctoral (2004) se utilizaron para ver el impacto de la cultura de campus creada por los esfuerzos de internacionalización (factores planificados) y la cultura nacional y organizacional en el desarrollo de CCI entre la población del campus (estudiantes y personal académico de los campus generales, estudiantes y personal académico de los campus especializados).

8. Metodología

Para alcanzar los objetivos de esta Tesis doctoral, se recopilaron los datos a través del proyecto ISAIAS de POSEIDO, como se describió anteriormente, y los resultados se publicaron en revistas biomédicas. Por esta razón, los títulos, las introducciones y las conclusiones de los artículos pueden aparecer a veces como diferentes de las cuestiones de investigación de la Tesis. Sin embargo, los datos, los resultados, las discusiones y perspectivas de los tres artículos principales responden directamente a los objetivos y las preguntas de esta investigación y son incluidas directamente en esta Tesis.

Los tres artículos presentan un estudio de caso múltiple (un estudio de carácter comparativo, transversal, etnográfico) de la Universidad Nacional de Chonnam (CNU, Corea del Sur), la Universidad de Granada (UGR), la Universidad de París (París 4 y 5 Francia) y la Universidad Federico 2 de Nápoles (UNINA, Italia) en los campus generales y en las escuelas de odontología. La combinación de los datos y de los resultados de todos los campus lleva a la respuesta para las preguntas de investigación y sus objetivos generales.

En cada campus, la investigación utilizaba una metodología mixta (método

cualitativo y cuantitativo). El enfoque descriptivo y etnográfico de la investigación fue principalmente exploratorio. La investigación utilizaba la estrategia retroductiva (*retroductive strategy*): análisis de la documentación, notas de campo, diario profesional, informes profesionales (preparados por la autora de la Tesis, así como por agencias externas), entrevistas informales basadas en la regla de “bola de nieve”, observación participativa, fuentes digitales de las universidades (*Facebook, Twitter, Wikipedia, You-Tube, foros, etc.*), revistas universitarias, artefactos del campus, fotografías y un cuestionario.

En este estudio se utilizó un enfoque de procesos y de desarrollo de competencias hacia la internacionalización. Se utilizó triangulación múltiple de datos, de investigadores, de métodos (cualitativa y cuantitativa, Denzin, 2006). La reflexión crítica sobre el análisis y la interpretación de datos fue hecha constantemente. El análisis de los datos cualitativos recogidos en los campus durante la estancia profesional se ha realizado en un marco de teorías diferentes: pedagógica, organizativa y cultural, que han sido presentadas en el marco teórico de la Tesis.

Se desarrolló un cuestionario de evaluación de internacionalización de un campus universitario a través de desarrollo de CCI, basado en los conceptos y elementos claves aportados por Deardorff (2004). El cuestionario (como herramienta de opinión) mide cuatro dimensiones de las CCI: actitudes, conocimiento y comprensión, habilidades y deseados resultados internos. Fue evaluado estadísticamente y validado en un estudio hecho entre la Universidad de Granada y el Akershus & Oslo University College (Wisniewska, 2011). Este cuestionario FAST (la Proyección de Evaluación Rápida) fue seleccionado como primer instrumento del proyecto ISAIAS para la estimación de la evaluación de proceso de la internacionalización de una Universidad a través del desarrollo de CCI entre la población de campus y se utilizó para calcular una puntuación que integraba diversos aspectos del desarrollo de CCI. El programa SPSS ha sido utilizado en el análisis de datos.

Se intentó presentar una perspectiva comparada de los procesos de internacionalización en los campus asiáticos y europeos. Los destinatarios principales de los resultados de este estudio son los gerentes de Educación Superior, administradores, líderes y personal académico que están involucrados en el desarrollo e implementación de estrategias de internacionalización en un campus universitario.

9. Metodología y Resultados: un estudio en tres niveles

En esta serie de artículos se han calculado los puntos de ISAIAS FAST en cuatro ambientes académicos diferentes (Corea del Sur, España, Francia e Italia) implicados en Odontología de Implantes y Educación de Biomateriales e Investigación dentro de las entidades académicas miembros de la red POSEIDO, con el objetivo de comprender los patrones de internacionalización de estas universidades, escuelas de odontología y los importantes grupos educativos y de investigación en la materia de implantes y biomateriales. Estas puntuaciones se integraron con otros datos recogidos durante estos múltiples estudios de campo.

Este estudio se ha organizado para comparar un modelo asiático (en este caso un específico modelo coreano) con tres versiones diferentes del entorno europeo, ya que la interfaz asiático-europea podría ser una fuente importante de malentendidos interculturales y provocar situaciones de ansiedad en las colaboraciones. Parece un buen ejemplo por sustentar un análisis de relaciones sobre cómo la internacionalización de la ES & I se ve afectada por la cultura nacional y la cultura organizativa de una universidad y cómo estas culturas tienen un impacto en el desarrollo de las CCI de la población universitaria y en este modo responder a las complejas cuestiones de esta investigación doctoral.

Sin embargo, los modelos seleccionados también ofrecen perspectivas interesantes, debido a su enfoque transversal múltiple, lo que aumenta la validación de los resultados. Este análisis transversal no sólo es transdisciplinario, sino que también está atravesando diferentes niveles de organización del campus, desde el general hasta algunos ejemplos particulares: desde el campus general (central) hasta las facultades especializadas y hasta los grupos de investigación y educación más especializados dentro de estas facultades especializadas.

Cada nivel de este análisis, desde lo general hasta lo particular, aporta datos considerables a la discusión sobre los objetivos de la investigación. Los resultados se presentan por separado, nivel por nivel, y están completando y refinando la respuesta a los objetivos de la investigación. La sección de discusión general de la Tesis recoge la síntesis de todos estos resultados, ya que los datos se distribuyen entre los tres niveles de análisis: campus general, facultades especializadas y grupos especializados de la investigación y educación.

9.1. Estudio de campo en campus generales en contextos asiático y europeo

El siguiente artículo se centró en las principales cuestiones de investigación de esta Tesis y recogió los datos de estos estudios de campo sobre la internacionalización de la Educación Superior y de la Investigación, y el desarrollo de las CCI en los campus generales de tres Universidades diferentes en contextos europeo y asiático:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014;2(3):179-94.

En esta parte del estudio se puso a prueba el método ISAIAS FAST a escala de todo el campus, para evaluar su relevancia práctica. El cuestionario ha sido utilizado para la evaluación general de tres campus diferentes (1 coreano y 2 europeos) con 3 fondos históricamente, culturalmente y organizacionalmente muy diferentes. Este modelo de investigación permitió investigar si la metodología y puntuación de ISAIAS FAST corresponde al perfil típico, fácilmente observable y bien documentado de estas tres universidades, y proporcionó los datos y perspectivas sobre estos tres campus generales y culturas nacionales en las cuales están sumergidas.

Resumen del artículo parte 1

Objetivos. En la primera parte del estudio se implementó el método ISAIAS en el campus general de tres universidades para validar el método mismo y evaluar los esfuerzos de internacionalización de las universidades participantes a través de desarrollo de CCI, teniendo en cuenta los contextos culturales: asiático y europeo.

Materiales y métodos. En cada campus se realizó un seguimiento de perfil de 20 profesores y 100 estudiantes de tres universidades: la Universidad de Granada (España), la Universidad de París-Sorbonne (Francia) y de la Universidad Nacional de Chonnam (Corea del Sur) a través del ISAIAS FAST (Proyección de Evaluación Rápida), y a través de un estudio intensivo de campo (metodología mixta: cualitativa y cuantitativa). Se calculó una puntuación final de ISAIAS FAST (valor medio) para cada grupo,

incluyendo las puntuaciones medias de las 4 dimensiones de las CCI, y posteriormente las puntuaciones se integraron con la observación de campo para la interpretación.

Resultados. Las puntuaciones observadas en las tres universidades presentaron patrones diferentes, relativamente débil (siempre entre 2 y 3), lo que parecía típico de las universidades con políticas de internacionalización moderada, es decir, con un deseo de internacionalización que puede no ser plenamente cumplido teniendo en cuenta algunos obstáculos relacionados con la cultura organizacional de la institución. Se observó, también, una discrepancia entre las políticas de internacionalización y las prácticas de diferentes niveles de campus.

Discusiones y conclusiones. Los resultados cuantitativos parecían coherentes con las observaciones de campo en todos los aspectos. La metodología mixta de ISAIAS apareció como un método fácil y útil para evaluar las fuerzas, oportunidades, debilidades y amenazas (FODA) de los esfuerzos de internacionalización de estas universidades a través de la perspectiva de evaluación de desarrollo de las CCI de los estudiantes e investigadores / profesores. Sin embargo, para la comprensión de los valores obtenidos y de la situación holística de campus, las puntuaciones de ISAIAS FAST deberían ser combinadas con un estudio de campo en profundidad.

9.2. Estudio de campo en facultades especializadas (escuelas de odontología) en contextos asiático y europeo

El siguiente artículo se centró en otro aspecto de las principales cuestiones de investigación y recogió los datos sobre el proceso de la internacionalización y el desarrollo de las CCI, recopilados durante la investigación en las facultades especializadas de cuatro universidades diferentes en contextos asiático y europeo.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014;2(3):195-207.

El contenido de este artículo constituye la segunda parte de la sección

"Metodología y Resultados" de esta Tesis y proporciona datos y perspectivas sobre cuatro Escuelas de Odontología (respectivamente en España, Italia, Francia y Corea del Sur), en relación con sus respectivos campus generales y las culturas organizacionales y nacionales en las que estos están sumergidos.

Resumen del artículo parte 2

Objetivos. En la segunda parte de este estudio, el método ISAIAS se implementó globalmente a las escuelas de Odontología de cuatro universidades, para destacar el impacto de sus esfuerzos de internacionalización (con la perspectiva de desarrollo de ICC) en este entorno educativo especializado, en los contextos asiático y europeo.

Materiales y métodos. En cada uno de los campus se han seguido en profundidad un grupo de 60 estudiantes de último año de Odontología de las cuatro escuelas de Odontología implicadas (de la Universidad de Granada, España; de la Universidad Federico 2 de Nápoles, Italia; de la Universidad de París, Francia; y de la Universidad Nacional de Chonnam, Corea del Sur) a través de ISAIAS FAST y mediante el estudio intensivo de campo (metodología mixta: cualitativa y cuantitativa). Se calculó una puntuación final de ISAIAS FAST (valor medio) para cada grupo, incluyendo las puntuaciones medias de las cuatro dimensiones de las CCI, y posteriormente las puntuaciones se integraron con la observación de campo para interpretación y validación. Estos resultados se correlacionaron con los resultados anteriores, los que se habían obtenido en los campus generales de las universidades participantes.

Resultados. Las puntuaciones observadas en las cuatro escuelas de Odontología presentaron patrones diferentes, con valores relativamente débiles (siempre entre 2 y 3), lo que parecía típico de las escuelas con políticas de internacionalización moderadas, es decir, un deseo de internacionalización que puede no ser plenamente cumplido debido a la cultura organizacional de la universidad; discrepancias entre las políticas universitarias de internacionalización y las prácticas del campus.

Discusiones y conclusiones. En la segunda etapa de este estudio, la metodología mixta ISAIAS FAST ha sido implementada a un entorno académico muy especializado, las escuelas de Odontología, permitiendo destacar las similitudes y las principales características (también fortalezas, debilidades, oportunidades y amenazas) de la internacionalización de estas entidades, teniendo en cuenta su relación con el entorno

universitario general.

9.3. Estudio de campo en grupos de investigación y educación dentro de cuatro facultades especializadas (escuelas dentales) en contextos asiático y europeo

El siguiente artículo se centró en otro aspecto de las principales cuestiones de investigación recogiendo y exponiendo los datos sobre el proceso de internacionalización de la ES & I y el desarrollo de las CCI recopilados durante la investigación en cuatro grandes grupos de investigación y educación dentro de las facultades especializadas (Escuelas de Odontología) de tres universidades europeas y una coreana.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014; 2(3):209-23.

El contenido de este artículo proporciona datos y perspectivas sobre cuatro grandes grupos de investigación y educación dentro de las cuatro Escuelas de Odontología previamente investigadas (respectivamente en España, Italia, Francia y Corea del Sur) en correlación con sus respectivas cultural organizacionales de campus y culturas nacionales. La observación de estos grupos especializados proporcionó importantes perspectivas sobre los mecanismos cotidianos de internacionalización de la educación e investigación y desarrollo de las CCI.

Resumen del artículo, parte 3

Objetivos. En la tercera parte el método ISAIAS ha sido implementado entre los grupos de investigación de Implantes Dentales y de Biomateriales de cuatro universidades participantes en este estudio, para destacar el impacto de sus esfuerzos de internacionalización y de los líderes de estos procesos en los contextos asiático y europeo.

Materiales y métodos. Un grupo de 20 profesores / investigadores y de 20 estudiantes

de postgrado vinculados a los grupos de investigación y educación sobre implantes dentales y biomateriales de cuatro Escuelas de Odontología diferentes (Universidad de Granada, España; Universidad de Nápoles, Italia; Universidad de París, Francia; y Chonnam National University, Corea del Sur) fueron observados mediante el cuestionario ISAIAS FAST (Proyección de Evaluación Rápida) y mediante un estudio intensivo de campo (metodología mixta: cualitativa y cuantitativa). Se calculó una puntuación final de ISAIAS FAST (valor medio) para cada grupo, incluyendo las puntuaciones medias de las cuatro dimensiones de las CCI, y estas puntuaciones se integraron con la observación de campo para la interpretación. Los resultados fueron relacionados con los resultados obtenidos en los campus generales y Escuelas de Odontología de las universidades participantes y con los perfiles de los líderes locales de internacionalización en el campo.

Resultados. Las puntuaciones observadas en los cuatro ambientes académicos fueron diferentes entre los grupos y revelaron patrones muy diferentes. Los valores en la Universidad de Granada fueron los más altos de todos los grupos para el grupo de profesores / investigadores; sin embargo, revelaron el deseo de un mayor desarrollo de la dimensión internacional en el nivel de posgrado. Los valores de la Universidad de París y la Universidad de Nápoles fueron intermedios y revelaron un impacto positivo del liderazgo local cuando existía. Las puntuaciones observadas en Corea del Sur parecen bastante altas, revelando un deseo de internacionalización.

Discusiones y conclusiones. La presencia de líderes de internacionalización es claramente un factor importante para la mejora de las CCI de profesores / investigadores y estudiantes de posgrado en la dimensión de la educación e investigación en el campo de la Odontología de Implantes y de Biomateriales. El impacto de los individuos altamente motivados y su intensidad varían y dependen de la cultura académica y organizacional del Departamento de la universidad. La metodología mixta de ISAIAS es un método muy útil para evaluar las fortalezas, debilidades, oportunidades y amenazas de los esfuerzos de internacionalización de un grupo o escuela, pero requiere combinar los valores de FAST con un estudio de campo en profundidad, para determinar la situación exacta y posible método de mejora de desempeño de las entidades y sus interacciones con socios internacionales en el ámbito educativo y de investigación en la Odontología de Implantes y Biomateriales.

10. Resultados Generales y Discusión

La hipótesis principal de esta Tesis fue que la cultura nacional y la cultura organizacional impactan en la internacionalización de la ES & I y éstas tienen un impacto en el desarrollo de CCI entre la población universitaria. Para investigar esta hipótesis, la Tesis está basada sobre experiencias profesionales y de investigación en la internacionalización de la ES & I en los contextos asiático y europeo.

10.1. Diferentes enfoques de internacionalización y convergencias en contextos asiático y europeo

Todas las universidades que participaron en este estudio tienen un modelo clásico de internacionalización de la ES & I (Knight, 2015). Las instituciones optaron principalmente por un enfoque racional y un enfoque de actividad hacia la internacionalización. Las universidades asiáticas están en el proceso de introducir su convergencia y reconocimiento de cualificaciones dentro de la región, considerando la experiencia europea. Las universidades europeas implementaron administrativamente los Procesos de Bolonia y Copenhague. Por otra parte, la internacionalización de la ES & I tiene lugar en ambos continentes y en los últimos años la movilidad y la colaboración a través de investigación transdisciplinaria internacional han sido reforzada. Mientras que en Asia, los procesos de internacionalización están tomando patrones de la internacionalización anglosajona inmersa en los valores confucianos, en los campus europeos (sumergidos en los valores humanistas y en la lógica aristotélica) se puede observar más diversidad en el enfoque de la internacionalización de universidad. La enseñanza de la lengua inglesa y su uso durante las conferencias aumentó en ambos contextos, y muy significativamente en Asia. El aprendizaje de las lenguas extranjeras (además del inglés) también aumentó, especialmente de los países anfitriones (en ambos contextos). En el caso de Corea del Sur, casi todos los estudiantes que vienen a estudiar sus carreras aquí, tienen que aprender el Hangul; sin embargo, con el fin de atraer a los estudiantes internacionales, se han ofrecido algunos cursos en inglés. En Francia la lengua demandada en el mundo académico es el francés, en España el castellano y en Italia la lengua italiana. Aunque la movilidad de estudiantes e investigadores se ha incrementado en ambos continentes, en las universidades europeas que desde hace décadas preparan estas prácticas, se hace más fluida y ordinaria (aunque

todavía existen problemas de reconocimiento de exámenes pasados en el extranjero, de cambio de las notas y de periodos de formación).

Las universidades asiáticas comenzaron a implementar estrategias agresivas de internacionalización centradas en el reclutamiento internacional de estudiantes de primer año, especialmente los de países asiáticos, viendo en este enfoque una buena fuente de ingresos económicos. Para aumentar y difundir el atractivo de los campus coreanos se han ofrecido becas gubernamentales y universitarias a estudiantes internacionales. En el contexto europeo, se puede encontrar una mayor variedad de enfoques hacia la internacionalización para atraer a los estudiantes y académicos internacionales en el campus (enfoque económico, de reciprocidad, de intercambio y *portage*, de “internacionalización en casa”, fuente de diversidad para los estudiantes locales, mejora de visibilidad internacional, etc.), debido a que en algunos países la educación superior es gratuita o las tasas son significativamente bajas, especialmente en comparación con los EE.UU. o los campus del Reino Unido.

En ambos contextos, pero especialmente en los campus asiáticos (observaciones desde los campus), el personal administrativo y académico tiene una preparación insignificante e informal para trabajar en un ambiente intercultural. Los reglamentos administrativos juegan desventajosamente en caso de los extranjeros, para el desarrollo de una carrera académica en Corea. Por otro lado, se pueden observar buenas iniciativas en este ámbito: implicación del personal académico que obtuvo su diploma en el extranjero, o ha tenido una experiencia profesional internacional, académicos/investigadores extranjeros (un número muy limitado, la mayoría de los académicos extranjeros son de origen coreano), así como el trabajo de los estudiantes extranjeros en la Oficina de Asuntos Internacionales y el *buddy program* (para estudiantes y académicos). En el caso de las universidades europeas (participantes este estudio), la tendencia se centra también en la experiencia informal adquirida en las relaciones interculturales e internacionales (año sabático en el extranjero, colaboración en proyectos internacionales de investigación, talleres y reuniones internacionales o personal con doble nacionalidad y *native speakers*).

En el caso de la internacionalización de la investigación, pueden observarse algunas similitudes entre la Academia asiática y la europea: en ambos contextos se produce la americanización de la investigación. Cada vez más artículos tienen que ser

publicados en inglés en las revistas de alto impacto, que generalmente son estadounidenses. Existe un financiamiento público (aunque difícil de obtener) para animar la colaboración asiático-europea en la investigación (especialmente en TIC).

El juego de rankings, tal como se conoce hoy en día, también ha comenzado en el entorno norteamericano. En la actualidad, muchas universidades asiáticas y europeas trabajan sobre estrategias organizativas y académicas (a través de la creación de clusters interdisciplinarios, centros de investigación internacionales / globales, participación en proyectos internacionales de investigación, etc.) para obtener visibilidad internacional a través de diferentes rankings internacionales.

Otros elementos comunes observados en la internacionalización de la investigación, en ambos contextos, son: el incremento de producción científica - artículos o tesis doctorales preparados en el marco de programas formativos internacionales tales como maestría o doctorado, los que a menudo dan una oportunidad de elaborar unas comparaciones internacionales.

En ambos contextos se organizan reuniones internacionales, talleres y conferencias. Otro punto digno de destacar es la institucionalización de la investigación en las universidades asiáticas y europeas (creación de centros internacionales, oficinas internacionales para la gestión de los proyectos y ayuda en la preparación de los proyectos, por ejemplo el Programa Marco, donde una colaboración todavía limitada, entre Europa y Corea del Sur puede ser observada). Otra forma similar de participación internacional en la investigación es la colaboración en el nivel de los departamentos, así como los contactos personales entre académicos.

Un punto común se puede encontrar también en la forma en la que se evalúa la internacionalización de la ES & I. Principalmente, la evaluación tiene un carácter estadístico basando se en número de artículos publicados en revistas internacionales (tanto la evaluación interna como externa). Se utiliza los incentivos económicos y los puntos para currículum profesional. En el caso de la universidad francesa, la AERES (*Agence d'évaluation de la recherche et de l'enseignement supérieur*) ha elaborado una evaluación más específica y descriptiva de la internacionalización. Se trata de una evaluación cualitativa contextualizada y con indicaciones de mejora (especialmente el reporte del año 2009).

Una diferencia observada entre las universidades europeas, también fue anotada

en la Academia Coreana. Mientras que algunas universidades elaboran estrategias específicas para animar a los nuevos investigadores sin experiencia a escribir propuestas y participar en proyectos internacionales de investigación de alto prestigio (ejemplo, la Sorbonne Universités), otras enfocan su apoyo sobre los investigadores con experiencia previa en programas similares (ejemplo, la universidad española).

En Asia y en Europa, el esfuerzo de la internacionalización de la ES & I toma diferentes formas. En Asia, uno de sus principales objetivos es la educación de "líderes globales", el desarrollo de "competencias globales", mientras que en el contexto europeo dentro de la misión de una universidad se puede notar el desarrollo de: "competencias globales", "competencias interculturales", "ciudadanos globalmente competentes" o "ciudadanos globales". Esta diferencia de terminología refleja muy claramente las diferencias de objetivos y perspectivas entre los continentes y sus principales diferencias culturales influyendo el futuro que desean desarrollar.

10.2. Culturas nacionales y organizativas y componentes de las competencias interculturales en contextos asiático y europeo

De acuerdo con los resultados de esta investigación, se ha observado que en los campus asiáticos y europeos, tomando en consideración el impacto de la cultura nacional y organizacional sobre el desarrollo de CCI entre los diferentes actores del campus, los valores más altos han sido alcanzados sobre (1) **Actitudes** y en segundo puesto (2) **Habilidades** (con mayor variación entre las dimensiones de ICC en el contexto europeo). Por otro lado, las diferencias entre los campus asiáticos y europeos han sido alcanzadas especialmente en el desarrollo de las dimensiones de **Conocimiento y Comprensión** colocadas en la tercera posición en Asia y en la cuarta posición en los campus europeos. La dimensión de **Deseados resultados internos** (en los campus asiáticos se clasificó en la cuarta posición en el desarrollo de las CCI a través de las actividades curriculares y extracurriculares, mientras que en Europa el Conocimiento y la Comprensión llegaron a la cuarta posición y los Deseados resultados internos en la tercera posición).

Para una comparación más profunda de las diferencias y similitudes entre el desarrollo de los componentes de las CCI en contextos asiático y europeo, se analizó un grupo coreano y un grupo europeo [estudiantes universitarios de grado de Odontología

de la CNU (n = 60) y de la UGR N = 60)]. Los resultados mostraron que entre los componentes de las actitudes que toman un papel activo en el desarrollo de ICC en ambos contextos, los que más impacto obtuvieron en los campus fueron: en la CNU: (1) *el respeto por otras culturas* y (2) *el respeto por las personas de otras culturas*, mientras que en la UGR: (1) *la necesidad de competencias interculturales* en el futuro trabajo y, como en el campus coreano (2) *el interés hacia las personas de otras culturas*. El menor impacto de la cultura del campus (creada por las actividades curriculares y extracurriculares) en el desarrollo de la dimensión de las actitudes se observó en ambos campus sobre el mismo componente: *ha impactado en prejuicios y estereotipos*.

Los resultados mostraron que entre los componentes de la dimensión de habilidades que juegan un papel activo en el desarrollo de las CCI, el que tuvo más impacto en ambos contextos fue el mismo componente: (1) *capacidad de observación hacia personas de otras culturas*; mientras que en el campus de la UGR (2) *la capacidad de escucha hacia personas de otras culturas* se anotó en la segunda posición, en el campus de la CNU los estudiantes calificaron en la segunda posición (2) *la capacidad de autovaloración cultural*. El menor impacto de la cultura del campus sobre el desarrollo de los componentes de las ICC dentro de la dimensión de habilidades se observó en el campus de la UGR en caso de mejora de habilidades para *relacionar la información relacionada con diferentes culturas*; mientras que en el campus de la CNU - *analizar la información relacionada con diferentes culturas y analizar, interpretar y relacionar la información proveniente de diferentes contextos culturales*.

Otros resultados mostraron que entre los componentes de la dimensión de conocimiento y comprensión, que toman un papel activo en el desarrollo de las CCI en ambos contextos, los que obtuvieron más impacto en los dos campus fueron: *la comprensión de la cultura de los demás*. Mientras que los menos desarrollados en los campus fueron: en el CNU - *entender el impacto de la cultura en los contextos sociales e históricos y la mejora de las competencias sociolingüísticas*. En el campus de la UGR se observó el impacto más pequeño en: *entender mejor otras perspectivas acerca del mundo*.

En relación con el desarrollo de los deseados resultados internos, el componente de las CCI más desarrollado en ambos contextos culturales fue: *la empatía cultural*. Por

otro lado, los componentes menos alcanzados de CCI en el campus de CNU fueron: *modificación de punto de vista respecto a la comunidad cultural a la que pertenezco en algún aspecto y ser más flexible con la gente de otras culturas*; mientras que en el campus de la UGR se observó el menor impacto en: *ser capaz de analizar los contextos culturales desde mi herencia cultural y también desde fuera de la propia herencia cultural* y ligeramente superior evaluado (como en el caso de la CNU), *modificación de punto de vista respecto a la comunidad cultural a la que pertenezco en algún aspecto*.

Los estudiantes de la Facultad de Odontología de la UGR señalaron que las ICC son unas competencias importantes y necesarias en su futura vida profesional. Sin embargo, en el campus de la CNU, aunque el enfoque académico general hacia el desarrollo de CCI era positivo, los estudiantes de Odontología no lo perciben como una competencia muy importante para futuras prácticas profesionales. El componente más desarrollado de CCI en el campus español fue: *capacidad de observación hacia personas de otras culturas*, mientras que en el campus coreano: *el respeto por otras culturas y el interés hacia las personas de otras culturas*. El componente menos desarrollado de la CCI en el campus español fue: *entender mejor otras perspectivas acerca de mundo*, mientras que en el campus coreano el menos influenciado fue - *impacto en prejuicios y estereotipos*.

El desarrollo de las CCI en los campus coreanos es fuertemente alcanzado por el confucionismo coreano que forma parte de las metodologías de enseñanza-aprendizaje, relaciones profesor – estudiante, relaciones entre géneros, de la cultura organizacional de campus (mantenida fuertemente por los académicos y administrativos) y también coreano-extranjero teniendo en cuenta la armonía de grupo. La cultura nacional con un nivel alto de colectivismo, de la visión a largo plazo, de distancia al poder influye significativamente la percepción del mundo y desarrollo de las CCI.

Desarrollo de las CCI en los campus europeos es impactado por el humanismo, la cultura cristiana, la lógica aristotélica y las culturas nacionales y organizacionales.

10.3. Diferencias y similitudes en la internacionalización de los campus generales y facultades especializadas

Entre las **similitudes en la internacionalización** de la ES & I en los campus generales y facultades especializadas como las Facultades/Escuelas de Odontología

observadas durante esta investigación, se puede mencionar:

- ✓ Introducción del proceso de Bolonia, créditos ECTS y reconocimiento de cualificaciones dentro de la UE; similares iniciativas sobre el reconocimiento mutuo de los dentistas están comenzando a desarrollarse entre los campus de Odontología en ámbito asiático.
- ✓ La internacionalización de la ES & I depende fuertemente de los líderes de internacionalización que influyen de manera significativa la cultura de campus (la cultura nacional y la cultura organizacional de una universidad) a través de su personalidad y sus prácticas profesionales.
- ✓ Las CCI de los futuros profesionales se desarrollan a través de la cultura del campus (creada por la cultura nacional y organizacional), las oportunidades de contactos internacionales e interculturales, las actividades curriculares y extracurriculares, metodologías de procesos enseñanza-aprendizaje, y los patrones observados durante la clase, en el campus y en el lugar de prácticas profesionales.
- ✓ Falta de análisis de cultura de campus y de la consciencia de su impacto sobre la implementación de la internacionalización de ES & I, sobre el desarrollo de CCI y las prácticas profesionales.
- ✓ Falta de programas para el desarrollo de CCI. Las CCI, o competencia global - es un elemento, que supuestamente se desarrolla en la universidad; sin embargo, es muy difícil decir "cómo", "dónde" y "cuándo" se desarrolla esta competencia y cómo es evaluada.
- ✓ Falta de evaluación de las CCI. En caso de que son evaluadas: ¿quién las evalúa y cómo?, "¿cómo el evaluador ha sido formado para hacerlo?"
- ✓ Parece que el aprendizaje de las lenguas extranjeras se hace cargo de la responsabilidad relacionada con el desarrollo de CCI.
- ✓ El conocimiento de lengua y de cultura ("lengua", "comunicación", "cultura") percido como "*la mejor dificultad en la relación con los colegas extranjeros*".
- ✓ Este estudio mostró que las actitudes dentro del proceso de desarrollo de CCI fueron la dimensión más desarrollada en el campus general y la facultad de odontología en el contexto asiático y europeo.
- ✓ La movilidad académica internacional es practicada por los estudiantes de odontología, especialmente a nivel de postgrado. La misma regularidad esta

observada entre los estudiantes de los campus generales (por ejemplo, en París-Sorbonne la mayoría de las movilidades internacionales son realizadas en Master 1, Master 2). Sin embargo, la movilidad internacional (prolongada) en odontología en contextos coreanos y europeos es muy limitada, en comparación con la movilidad internacional dentro de otras disciplinas.

- ✓ Existencia de la política de desarrollo de las actitudes de aprendizaje a lo largo de la vida (variada entre disciplinas y universidades, sin embargo, en Odontología toma una dimensión muy significativa).
- ✓ Las metodologías de procesos de enseñanza-aprendizaje están fuertemente influenciadas por las dimensiones de la cultura nacional y los tipos de cultura organizacional de una universidad.
- ✓ El apoyo financiero para la internacionalización de la ES & I es recibido de fuentes externas e internas.
- ✓ Evaluación de la internacionalización de la ES & I es centrada en los datos cuantitativos (modelo clásico de internacionalización).
- ✓ Conferencias internacionales, talleres y Académicos extranjeros visitantes como herramientas de estrategia de internacionalización.

En este múltiple estudio de caso, de carácter internacional y transdisciplinario, entre **las diferencias principales** en la internacionalización de la ES & I entre el campus general y facultades especializadas como las Escuelas de Odontología, han sido destacados algunos aspectos importantes.

Las misiones de las cuatro escuelas dentales (participantes de este estudio) no se relacionan directamente con la internacionalización o el desarrollo de CCI, o líderes mundiales. Se centran principalmente en la educación de buenos profesionales que pueden dar un excelente servicio local y "más allá" (caso de CNU), así como en el desarrollo de la cultura de aprendizaje a lo largo de la vida entre los dentistas. Este último punto está relacionado con los talleres y conferencias nacionales e internacionales que ofrecen constantemente una formación y conocimientos sobre el cambiante mundo de la Odontología que los participantes desean tratar de aplicar en sus prácticas profesionales cotidianas. Este punto da la sensación de una perspectiva sobre la IES & I muy diferente de los conocimientos teóricos proporcionados en los campus

generales (disciplinas blandas), donde la dimensión internacional parece ser menos práctica. Esta atmósfera de modestia de enfoque intercultural e internacional que caracteriza a la Odontología y un campus universitario general (la internacionalización todavía se percibe como un valor añadido en diferentes facultades), es más ambiciosa en las facultades filológicas. Sin embargo: ¿son suficientes la literatura, la historia, los datos culturales, así como la teoría y la gramática de las lenguas extranjeras para decir que las competencias interculturales han sido desarrolladas entre los estudiantes y docentes investigadores? Pensando en las facultades de filología, la mayoría del personal académico (o todos) son nacionales y la presencia de hablantes nativos entre los estudiantes es muy limitada. Entonces, ¿cómo pueden ser practicadas las CCI de estos estudiantes domésticos en el campus?

El desarrollo de CCI en Odontología (en contextos asiáticos y europeos) no es una prioridad; sin embargo, el conocimiento del inglés se hace indispensable, especialmente las competencias de lectura y comprensión de la literatura relacionada con el tema. Recientemente, teniendo en cuenta los cambios demográficos en el continente europeo, la UE reconoció la necesidad de las CCI entre los profesionales de la salud (por ejemplo, un programa de Erasmus +).

La movilidad internacional entre los estudiantes de Odontología, particularmente en el nivel de grado, es muy limitada. La presencia de estudiantes extranjeros puede ser ligeramente más frecuente en el nivel de posgrado. El diploma internacional en Odontología (o doctorado internacional relacionado con Odontología) es muy limitado comparando con otras ciencias, donde la movilidad internacional durante el programa de doctorado se hizo casi obligatoria.

Sin embargo, la internacionalización en el campo de la Odontología da la impresión de pasar más fácilmente y "más profundamente" que en el caso de los campus generales (en comparación con las ciencias sociales, las humanidades y la educación, etc.). ¿Por qué? El conocimiento sobre técnicas, protocolos y materiales está bastante internacionalizado, aunque dominan prácticas locales. El impacto de usar este u otro material, éste u otro instrumento, se verifica y observa más rápidamente. En esta disciplina, las preguntas de académicos, estudiantes o dentistas con años de experiencia se centran en problemas concretos. Las respuestas y prácticas se elaboran a menudo localmente pero con el conocimiento del dominio extranjero (ejemplo de L-PRF Plasma

Rico en Placeta y en Leucocitos); o por el contrario, existen estándares internacionales elaborados a nivel mundial e introducidos localmente (ISO). Las preguntas y resultados en el campo de la Odontología son más táctiles, pasando así las fronteras de países y culturas, porque que el enfoque se centra sobre problemas muy concretos y no tanto sobre las posible diferencias culturales.

10.4. Consideraciones éticas y limitaciones potenciales

La colaboración de los participantes fue voluntaria. El estudio se llevó a cabo con la aprobación de todos los participantes de la investigación. Todos los datos de todos los encuestados durante el proceso de investigación se mantuvieron anónimos.

10.5. Perspectivas y evoluciones: una visión de la Universidad de Michigan

Esta Tesis profesional presenta los datos y las experiencias obtenidas en cuatro universidades ubicadas en cuatro países, con el objetivo de observar los patrones de internacionalización en el contexto asiático y europeo teniendo en cuenta las influencias culturales. No obstante, este estudio de campo se realizó en varias universidades del mundo a través del proyecto ISAIAS, y este trabajo constituye un valor añadido a la experiencia profesional acumulada durante la preparación de la Tesis.

Entre otros campus, la autora de esta Tesis trabajó durante 1,5 año en la Universidad de Michigan (UMich, USA), lo que ofreció una gran oportunidad para recopilar datos desde el interior sobre la internacionalización de una de las universidades más importantes de EE.UU. y una de las universidades más avanzadas en las estrategias y procesos de internacionalización de la ES & I a nivel mundial.

La misma metodología descrita en esta Tesis se implementó en el campus de la UMich, e incluso en un número mucho mayor de estudiantes considerando el apoyo de Colegas la Escuela de Odontología. Para el propósito de esta Tesis, las calificaciones de ISAIAS FAST fueron calculadas a partir de una muestra de tamaño similar a la de las otras cuatro Universidades participantes en esta Tesis.

Resumiendo, las puntuaciones observadas en la UMich fueron significativamente más altas que en otras universidades investigadas de esta Tesis. También se observó que las puntuaciones de la población general del campus en

la UMich eran aún más altas que las calificaciones (ya muy altas) calculadas en la Escuela de Odontología de UMich. Esto refleja muy claramente el considerable esfuerzo realizado por las direcciones universitarias desde hace más de 30 años para promover la internacionalización del campus, atraer estudiantes, *visiting scholars* y profesores de todas partes del mundo. Los estudiantes de la UMich donde la sensibilización sobre la diversidad es muy elevada, identifican la internacionalización del campus con la "*diversidad cultural*"; la Escuela de Odontología tiene una evaluación interna y externa en la que se tiene en cuenta la cultura de campus y el desarrollo de las CCI de los futuros dentistas.

Sin embargo, paradójicamente, a pesar de estos resultados bastante altos, las entrevistas en profundidad y la observación de la vida del campus revelaron una población muy dividida y presencia de choque cultural. Se supone que todo el mundo debe ser entrenado en un ambiente multicultural y consciente de las diferencias de percepción y acciones, pero la consecuencia parece ser que la población estaba muy dividida en grupos que realmente no intercambiaban y seguían muy separados. El efecto normativo de la cultura nacional estadounidense era bastante fuerte y facilitaba la interacción diaria, pero esta interfaz parecía ser principalmente políticamente correcta y profesionalmente impulsada. Como una paradoja interesante, parecía que en el ambiente intercultural más avanzado, los individuos eran entrenados para interactuar pero se mantuvieron muy divididos y con susurros fuertes de ser muy diferentes.

11. Conclusiones generales

Finalmente, esta Tesis profesional destacó: (1) el impacto significativo de las culturas nacionales y organizacionales en el desarrollo de las CCI, cuyos componentes parecían ser afectados en función de los contextos culturales (en los campus asiáticos y europeos en general y en las cuatro universidades en particular; sin embargo, las diferencias en el proceso de desarrollo de componentes de las CCI fueron menores de lo esperado), (2) las diferencias y similitudes en la internacionalización de la Educación Superior y de la Investigación en contextos europeos y asiáticos, por un lado, y por otro lado – (3) las diferencias y similitudes entre los campus generales y las facultades especializadas (específicamente las Escuelas de Odontología y los grupos de investigación especializados). Los resultados de esta experiencia son múltiples y

complejos, pero todos ellos nos recuerdan la expresión de Hofstede - la cultura es el software de la mente - entre continentes, entre países y entre las escuelas de un mismo campus. Debido a eso, la cultura nacional y organizacional debería ser considerada conscientemente por una institución tan importante como es una universidad.



1. General Introduction

1.1. A Professional Thesis based on international practices and experiences in the framework of Internationalization of Higher Education and Research

The development of internationalization of Higher Education and Research is a major event in the recent evolutions of the Academic communities, and this development is always difficult to assess by both internal and external evaluations. From inside, analysis is difficult as each member of an institution takes patterns and values from this institution and has difficulties to have distance and perspectives with its own University and national culture. From outside, observation remains too superficial, as the soul of an institution remains opaque and sometimes difficult to understand for outsiders lacking the historical and cultural backgrounds in which major institutions are evolving.

This Thesis was developed through my professional experiences and practices on various campuses worldwide - particularly in Spain (**Figure 1**), South Korea (**Figures 2 and 3**), France (**Figure 4**), Italy and USA (**Figures 5 and 6**) - and during the development of an international cooperation network of academic departments in 42 countries called the POSEIDO Project (Acronym for Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization)(**Figures 7 to 10**). This professional experience gave the opportunity to stay temporarily in major institutions, to be immersed and part of its stakeholders for some time but keeping enough distance in order to observe and reflect on the functioning and culture of the institutions.

These multiple field case studies investigated specifically the correlation between the national and organizational cultures, the development of intercultural competences of academic stakeholders (students, teachers/researchers, staffs) and the internationalization process in general (campus) and specialized (Faculty of Dentistry) academic environments, in Asian and European contexts. The Thesis was elaborated from 2011 to 2017 with long time stays on different campuses that took part in this study. The main data related to this part of the work are regrouped in 6 published articles, 2 of them with impact factor 1.802.

However, this work is first of all a professional Thesis built on 6 years of experience working and collaborating in different campuses and countries. This work includes also several other practical works:

- participation in the development of the POSEIDO Community - **Figures 7 to 10** (2 more articles and a work as an Editorial Assistant),
- management as a Guest Editor of a special issue in an international journal (Current Pharmaceutical Biotechnology, impact factor 1.802), coordinating the works from research groups from 9 different countries,
- and finally, as a major professional experience, the global field investigation of the Internationalization of Higher Education and Research Process of the whole University Paris-Sorbonne (Paris IV), under the supervision of Prof. Araceli Guillaume-Alonso, Vice-President for International Affairs of the Paris Sorbonne University and one of the key persons responsible for the development of the international scientific relations of the cluster “Sorbonne University” (Université Paris-Sorbonne, Université Pierre et Marie Curie, Université de Compiègne and others).

It can not be neglected here the origin and basis of the author’s professional knowledge in internationalization of higher education and research (assessment, innovation, management, contextualization, counseling for a university), which was trained in the framework of international courses and internships through the Erasmus Mundus Mundusfor Master run by University of Granada (Spain), Akershus & Oslo University College (Norway), University of Reims (France), University of Porto (Portugal) and Rovira i Virgili University (Spain). Many aspects of the theory of the impact of national and organizational culture (of a university) on the development of intercultural competences were drafted in the author’s master Thesis (Wisniewska, 2011), while this doctoral work represents the further development and implementation of this theory in different national and organizational contexts.¹

¹ The author’s interests in impact of culture and education on development of nations and their intercultural and international relations started much earlier, and their results were visualized in her bachelor Thesis about impact of Bushido ethos on development of Japanese Nation (2003), participation in *Socrates-Erasmus* and *Free Mover Programs* at UGR (2004-2006), and in a master Thesis focused on Muslim immigration in France, Germany, Spain and the UK and with perspectives for Poland (2006).

This Professional Thesis presents also a strong trans-disciplinary and international approach. These case studies take into consideration processes, policies, organization, practices, pedagogies and culture of institutions of higher education in the general campuses, but also focus on the specialized medical and dental fields, particularly in biomaterial sciences and implant dentistry, in the 4 participant Universities. Specialized fields are interesting to investigate in more details the mechanisms of internationalization, particularly concerning the impact of leaders of internationalization in the process.

As a whole, this Thesis offers a field investigation of the internationalization process and its correlation with the national culture and development of intercultural competences, through very practical perspectives based on experience in several academic environments during field investigation and professional activities in 5 countries on 3 continents.

The final perspectives offered by this Thesis are related to an experience at the University of Michigan (2015-2016), where the same field study was performed (**Figures 5 and 6**). The data related to this last University have not been published yet and are out of the scope of the initial Thesis project, but this information is important to feed the discussion and provide perspectives. Indeed, the modern paradigms of internationalization of higher education and research were developed in the Anglo-Saxon Universities, particularly the major United States Universities such as the University of Michigan, and what was observed on this U.S. campus gives considerable information on the current evolutions of the paradigm of internationalization, on the development of intercultural competences in the latest concept of diversity in Western Countries, and finally on the potential evolutions in the Asian and European campuses.

The current Theory of internationalization started in the U.S. campuses, and this is where this field study on 3 continents is logically finishing, to offer perspectives and some conclusions.



Figure 1. The University of Granada, Spain. **A.** University Buildings of the central campus in the city, with the typical alley of orange trees of Granada and the Office of International Relations on the right. **B.** Entrance of the Office of International Relations. **C.** Classical old buildings of the University inside the city - here the Faculty of Translation and Interpretation. **D.** The beautiful old building used as the School of Dentistry (Faculty of Odontology). **E.** Inside view of the Faculty of Odontology, with an old eclectic architecture. **F.** Patio for cafeteria and campus life in the School of Dentistry.



Figure 2. The Chonnam National University, Gwangju, South Korea. A. Main entrance of the main campus. The large statue on the campus alley is a symbol of the major role of this key Korean University in the Democratization movement against military dictatorship in 1980. **B.** International Office on the main campus. With the wish of development of the internationalization policies, the international office was placed in this new building some years ago. **C.** Student life at the East gate of the Campus, a

very young and lively place. **D.** Sports facilities within the campus. **E.** People at the Office of International Affairs of the CNU. **E'**. New Policy of the CNU (and many Asian institutions of higher education): to create Global Leaders. **F.** International events on the main Campus of the CNU (International Cuisine) organized by the Office of International Affairs.



Figure 3. Chonnam National University School of Dentistry, Gwangju, South Korea. A. This brand new Dental School and Hospital was finished in 2011 and is one of the most important and modern dental schools in South Korea. **B.** Scientific event in Seoul with Prof. Hee-Kyun Oh (white arrow), Dean of the CNU Dental School.

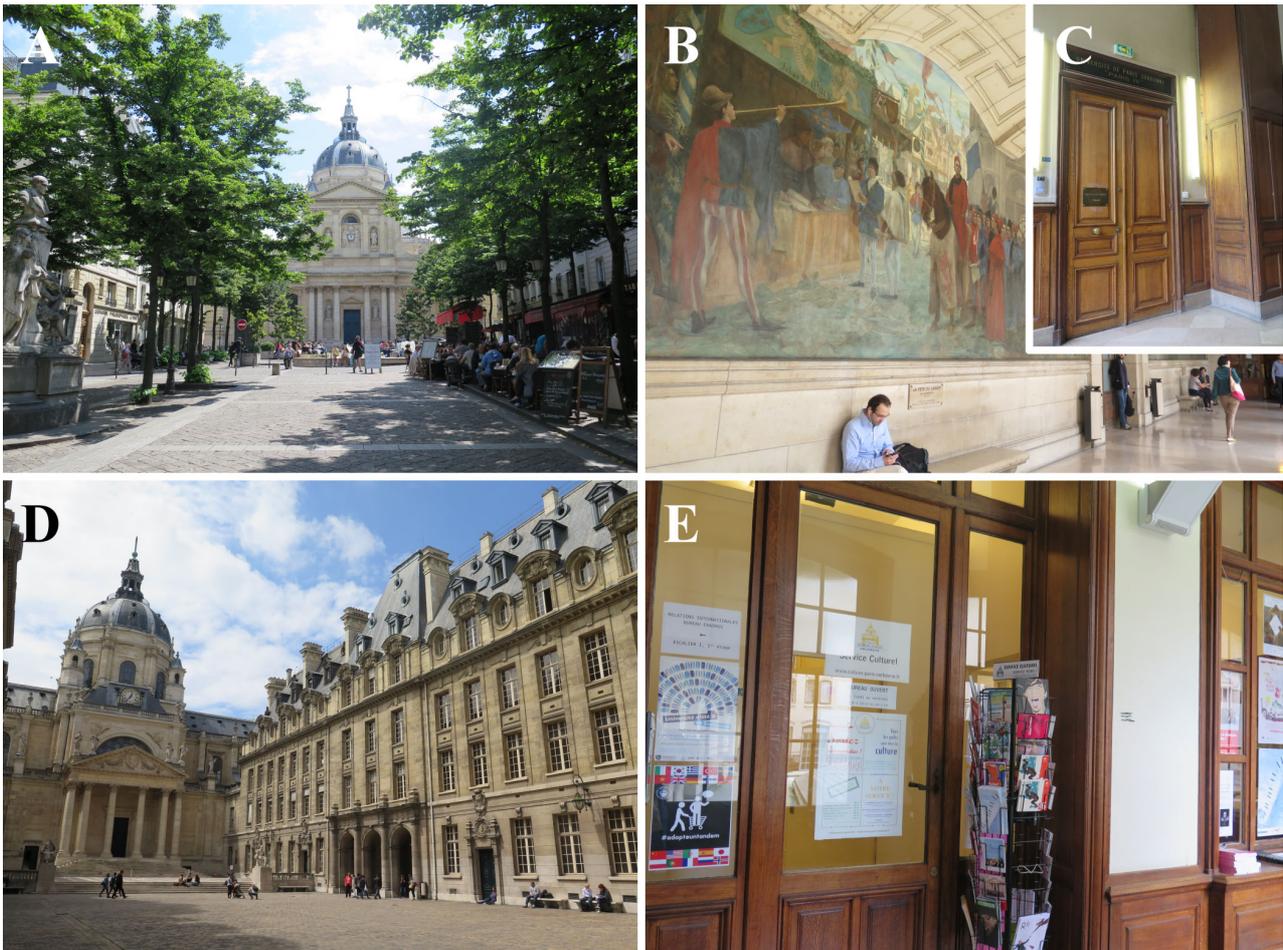


Figure 4. Paris Sorbonne University, France. A. View of the public old place in front of the Sorbonne chapel and building main entrance. **B.** Wonderful old stone and marble construction inside the Sorbonne building. **C.** Office of the Presidency, where is located Prof. Araceli Guillaume-Alonso, Vice-President for International Affairs and where was planned and discussed the report on Sorbonne internationalization presented in this professional Thesis. The Sorbonne historical building is the main administrative and management building of the Paris 4 University (where Faculties and courses are then spread all over Paris city). **D.** View of the historical internal course of the Sorbonne main building. **E.** Student Life and Access to the Office of International Affairs (directed by Mme Dolores Sobrino).



Figure 5. The University of Michigan, Ann Arbor, USA. **A.** The Student Union (Michigan Union) on the main campus, is a major hub for the student and campus life, and an old reference building where many renowned politicians went for policy speeches (for example Presidents Kennedy, Nixon, Barrack Obama, etc.). **B.** The main campus and Faculty of Law - charismatic old buildings by night. **C.** The UMich School of Dentistry, the best Dental School in the USA and in the 5 leading Dental Schools

worldwide. **D.** Group photo (2015) of the UMich Perio/implant Academic team with the postgraduate students (UMich hold the best postgraduate program in the USA). As a research scholar, the author of this Thesis (white arrow) was integrated in this group. On the first rank around: on the left, Prof. Laurie McCauley, Dean of the UMich Dental School. On the right, Prof. William Giannobile, Head of Periodontology and Oral Medicine Department, Prof. M. Maguire, and Prof. Hom-Lay Wang, a world-renowned scholar directing the UMich perio postgraduate program, ranked 1st in the USA. **E.** The Museum of Dentistry, one of the oldest worldwide, within the UMich Dental School. **F.** View of the student life facilities inside the UMich Dental School, with panels for Classes announcements, tables, lockers and all furniture.

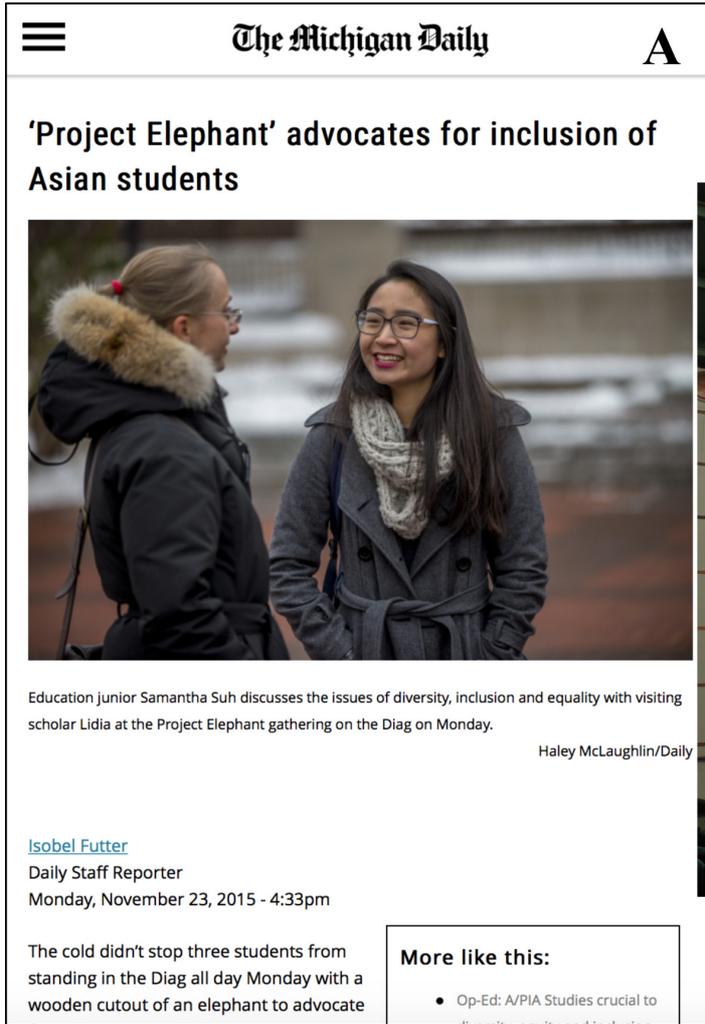


Figure 6. Debates on internationalization of higher education and issues of diversity, inclusion and equality are very strong at the University of Michigan, and were part of the duties and investigation of the author of this Thesis. **A.** View of the Michigan Daily journal (November 2015) about the issues of diversity and inclusion of students with Asian origin on the campus, in which the author of this Thesis was involved. **B.** Conference about the issues of diversity and inclusion of minorities and intercultural cooperation in Academia, organized in the Campus main Auditorium in presence of the President of the University and several other high-ranking Academic leaders of the country.



Figure 7. Development of the POSEIDO Community worldwide. **A.** Visit in 2014 of the POSEIDO Leader and Editorial Manager for China, Prof. Zou Derong, Head of Stomatology at Shanghai JiaoTong University, Shanghai, China. **B.** Visit in 2014 with Prof. Jean-Pierre Bernard (black arrow, Vice-Dean and Head of Somatology at the University of Geneva School of Dental Medicine, Switzerland and Co-Founder of the POSEIDO Community) of the POSEIDO Leader and Editorial Manager for Russia and Eurasia, Prof. Marsel Mirgazizov (white arrow), Head of the Russian Federal Research Fund in Implantable Biomaterials, Moscow, Russia. **C.** Visit in 2014 of the POSEIDO Leader and Editorial Manager for South America, Prof. Jamil Shibli (in the center), Head of Implantology and Periodontology at Garulhos University, Sao Paulo, Brazil. **D.** Visit of Prof. Francesco Inchingolo (white arrow), Head of the POSEIDO Research Center at the University of Bari, Italy, during a postgraduate course in 2017.



Figure 8. Development of the POSEIDO Community worldwide. A. Visit of the POSEIDO Leaders for Iran in 2015. Research dinner in Teheran with Prof. Sima Shahabi (woman with white arrow, Vice Dean for Research, School of Dentistry & Dental Research Institute, Tehran University of Medical Sciences, Tehran, Iran), in company of the famous Prof. Tomas Albrektsson (man with white arrow, Gothenburg, Sweden, one Founder of modern Implantology). **B.** Reception during the Meeting of the Iranian Academy of Periodontology (IAP) in Teheran, Iran, with Prof. Behzad Houshmand, President of the IAP and Head of the Periodontology Department at the Shahid Beheshti Dental School, Tehran, Iran.



Figure 9. Development of the POSEIDO Activities in Biomaterial research through ISO. Presentation of the new standard proposal (2014, Berlin) developed by the POSEIDO group about dental implant surfaces. The POSEIDO group was represented then through Scholars belonging to various delegations (France, Norway, Brazil, China, etc....). The author of this Thesis was then in the French delegation.



Figure 10. Development of the POSEIDO Community worldwide. International meeting on regenerative medicine strategies organized by the KUL (Catholic University Leuven, one of the 3 best dental Schools worldwide) and Prof. Marc Quirynen, Head of Periodontology in KUL, world-renowned scholar in periodontology and implant dentistry (white arrow) and POSEIDO Leader/Editorial Manager for West Europe. **A.** During a practical workshop. **B.** During a small group video workshop. The meeting held in October 2016 gathered 500 participants from 39 countries at the KUL in total (<https://kuleuvencongres.be/ENHD2018>).

1.2. Articulation of the main hypothesis of the Thesis, with the 8 articles and the Report on Internationalization prepared for the Paris-Sorbonne University

This professional Thesis is based on a scientific investigation during field case studies, but also on the author's multiple professional experiences in various positions and campuses worldwide. This Thesis contains 8 articles and a report of internationalization prepared for the Presidency of Sorbonne University. All articles and reports published during this doctoral period are connected to the issues of internationalization of higher education in the context of the development of intercultural competences, but some articles are particularly focusing on the specific hypothesis of this Thesis, to investigate, debate and discuss the main doctoral questions. These 6 articles serve as the main body of the Thesis, and answer specifically to the Thesis working hypotheses.

✓ **Nota Bene: the titles, introductory statements and conclusions of the articles may appear sometimes different from the core research questions of the Thesis, because these articles were designed for publication in biomedical journals. However, the data, results, discussions and perspectives of the articles are answering directly to the research questions and are included directly into this Thesis.**

1.2.1. Three articles for the introduction of this Thesis

The following 3 articles review and highlight the process of internationalization of higher education and research, the dependence with the development of intercultural competences and the difficulties of international cooperation in Oral and Maxillofacial surgery, particularly in the growing field of biomaterials. Moreover, the first article proposes also a methodology of evaluation of the internationalization of a scientific publication (remembering that it is a current center of interest in the literature on internationalization of higher education and research).

- **Wisniewska LM, Dohan Ehrenfest DM, Galindo-Moreno P, Domingo Segovia J, Inchingolo F, Wang HL, and Fernández-Cruz M. *Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and***

Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective. Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802.**

- Dohan Ehrenfest DM, **Wisniewska LM**, Cieslik-Bielecka A, Wang HL, and Fernández-Cruz M. *Editorial: Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International cooperation, translational research and transdisciplinarity.* Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802.**
- Dohan Ehrenfest DM, **Wisniewska LM**, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. *Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research.* POSEIDO. 2014;2(3):167-77.

The content of these articles serve as a part of the introduction of this Thesis, as they give a global overview of the current problematic, particularly oriented to the medical and dental fields.

1.2.2. Three articles in the Methodology and Results of this Thesis

These 3 articles present comparative, transversal case studies of the Chonnam National University (CNU, South Korea), the University of Granada (UGR, Spain), the University of Paris (Paris 4 and 5, France) and the University Federico 2 of Naples (UNINA, Italy) on general campuses and in dental schools. The combination of the data and results from all these campuses guide to the answer for our all research questions.

✓ The following article focused on the main research questions of this Thesis and gathered the data of these field studies about internationalization of higher education and research and the development on intercultural competences in the **general campuses** of 3 different Universities, in European and Asian contexts:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant*

dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score. POSEIDO, 2014;2(3):179-94.

The content of this article serves as the first part of the “Methodology and Results” section of this Thesis, and provides data and perspectives on **3 general campuses** and national cultures.

✓ The following article focused on another aspect of the main research questions and gathered the data about internationalization process and development of intercultural skills, collected during investigation in **specialized faculties** (dental schools) in 4 different Universities, in European and Asian contexts.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014;2(3):195-207.

The content of this article serves as the second part of the “Methodology and Results” section of this Thesis, and provides data and perspectives on **4 Schools of Dentistry** (respectively in Spain, Italy, France and South Korea) in correlation with their respective campuses and national cultures.

✓ The following article focused on another aspect of the main research questions and gathered the data about internationalization process and development of intercultural skills, collected during investigation in **4 major research and education groups within specialized faculties** (dental schools) in 4 different Universities, in European and Asian contexts.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant*

dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. POSEIDO, 2014; 2(3):209-23.

The content of this article serves as the third part of the “Methodology and Results” section of this Thesis, and provides data and perspectives on 4 major research and education groups within the 4 previously investigated Schools of Dentistry (respectively in Spain, Italy, France and South Korea) in correlation with their respective campuses and national cultures. The observation of these specialized groups provided important perspectives on the daily mechanisms of internationalization.

✓ These 3 articles answer directly to the main objectives of this Thesis. The general discussion section of the Thesis will make the synthesis of all these results, as data are spread between the 3 levels of analysis: general campus, specialized Faculties, and specialized research and education groups.

1.2.3. Two collateral articles, illustrating professional practical experience

The following 2 articles were published as a part of this practical professional experience, and participate to the discussion about internationalization of higher education and research in the perspective of the development of intercultural competences, but do not specifically answer to the precise questions of the Thesis.

- Sammartino G, Del Corso M, **Wisniewska LM**, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine.* POSEIDO. 2014;2(2):105-15.
- Dohan Ehrenfest DM, **Wisniewska LM**, Pinto NR, Mirgazizov MZ, Zhang CQ, Piattelli A. *The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity.* POSEIDO. 2014;2(4):225-31.

The content of these articles was not directly introduced into this Thesis, as it does not answer directly to the research questions, but the articles are provided at the

end of this work, as an illustration of the author's practical involvement in the development of this international academic Community based on intercultural cooperation during the author's doctoral period.

1.2.4. Official report for the Presidency of Paris Sorbonne University

The final part of this professional Thesis is the presentation of the official report on the Internationalization of Higher Education and Research Process of the whole University Paris-Sorbonne (Paris IV), under the supervision of Prof. Araceli Guillaume-Alonso, Vice-President for International Affairs of the Paris-Sorbonne University.

Wisniewska LM, *Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne (Paris IV) in Paris.* Research project prepared for the *Service des Relations Internationales* of the Université Paris-Sorbonne (Paris IV). Paris 2014/2015. Updated in 2016.

This work represents a significant practical professional experience² and an illustration of the skills developed during this doctoral time (See Annex 3).

1.3. The POSEIDO ISAIAS Project

This Thesis offers a quite unique field experience as it gathers data from 5 major Universities, in 3 different continents, and their respective dental schools (including major specialized research groups in applied biomaterials and implant dentistry) where the author had the opportunity to be immersed professionally during a significant period: University of Granada (Spain), University of Paris (France), Chonnam National University (South Korea), University Federico II of Naples (Italy) and University of Michigan (USA).

This position of insider/outsider and the possibility of gathering so much data and field experience is very rare and would never be possible without a vector for this professional experience: the POSEIDO ISAIAS Project.

² Professional report on the internationalization of research was prepared previously by the author of this Thesis for the International Projects Office (Oficina de Proyectos Internacionales de la UGR) in 2010. <https://latlablidia.files.wordpress.com/2012/07/lidia-wisniewska-informe-de-practicum-de-la-ofpi-2010-doc6.pdf>.

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) is an international scientific network of Academic Departments and Scientific societies and was developed as a consortium of Academic entities sharing the responsibilities of the global functioning of the network (Dohan Ehrenfest et al., 2013a). As a global interacademic experience, the POSEIDO could have faced the stress and problems related to intercultural cooperation. However, the awareness of the big need for the intercultural competences and experience of its members allowed to overcome most of the difficulties up to now among the 40 countries actually participating to this network, resulting in a smooth collaborative activity, particularly in the field of biomaterial research (Dohan Ehrenfest et al., 2013b; 2013c; 2014a; 2014b; 2014c; 2014d; 2014e). It was hypothesized that the specific personality of the local leaders of internationalization of the groups joining the POSEIDO was at the origin of this smooth cooperation.

The POSEIDO community therefore funded the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards) in order to evaluate the degree of internationalization and intercultural sensitivity of the community members worldwide, and therefore develop new strategies and standards for the development of intercultural competences among members, partners and friends, in order to promote smoother and more efficient global cooperation in the field of implant dentistry and biomaterial research and education (Koehn, 2011).

The ISAIAS project functions as an international informal working group about the internationalization of higher education and research in general, and its impact in dentistry in particular. This group is developing new concepts, methods and instruments of evaluation of the internationalization of an academic environment (University, campus, laboratory) and its impact on the perceptions and behaviors of all academic stakeholders (particularly students, teachers and researchers). It serves also as a tool to develop new strategies and standards to maintain the intercultural equilibrium of the Consortium and to promote the development of intercultural competences among members. Behind the numbers and indexes that can be calculated within this project, the ISAIAS office is first of all a group of colleagues in charge of monitoring members and Communities, to prevent conflicts and find satisfactory solutions for everyone, based on the respective cultural background of each partner.

The ISAIAS logo (**Figure 11**) is representing 6 smiling faces in different colors, connected on and through the lines of a cloud. There is here a small reference to the Olympic flag; like for the Olympic flag, the colors should not be specifically associated with a population or geographic area. The 6 round faces refer symbolically to the main world geographic areas. The cloud and the smile are referring to an expected Harmony through this partnership. They also illustrate the notion of network, and the decentralized nature of this International Consortium, with all partners equal. Finally, the thin cloud line connection between the faces recalls also the fragility of this intercultural channel between partners, and the need to make efforts to maintain it. The whole logo represents somehow this vision of “intelligent internationalization” of higher education and research through networking of leaderships (giving the pattern to other stakeholders involved in the process), as an equilibrated and harmonious Community.

Figure 11. The ISAIAS logo



Source: POSEIDO Foundation (Geneva, Switzerland), 2013

The acronym ISAIAS is easy to remember as it recalls the name of an important Prophet of the Bible (using the orthography used in Latin, Spanish and many other languages), who is actually shared between the 3 major monotheist religions. There were obviously no religious considerations in the choice of this acronym, as it would go completely against the good sense rules of neutrality in the development of intercultural

cooperation, even if this is perceived as an historical and not conflicting character for most stakeholders.³

The idea was first of all to have a general acronym easy to remember for the whole project, but the members supporting this project also considered that the name of this historical character was suiting very well the function of this project. Indeed, the Prophet Isaias was important in the religious traditions mostly for the accuracy of his predictions and for his announcement of the coming of a World of Peace among the Nations. In this sense, this acronym reflects the idea that the ISAIAS scores, developed as various indices and standards of internationalization through the development intercultural competences, are a way to predict the level and evolution of a process of internationalization of higher education. It also recalls that efforts in terms of development of intercultural sensitivity within the Academia remain the key for smoother and more efficient interactions and collaborations between researchers, teachers, administrative staff and finally populations, even if they remain culturally very different and with the wish to remain so. Somehow, the instruments that will be developed with the ISAIAS project are expected to promote understanding and cooperation in the respect of cultural diversity within a research and education network, what is the most adequate approach in the current globalized but more and more multipolar World. Culture is the software of the mind (Hofstede, 2001; 2010); the ISAIAS project has been funded to develop a software for efficient inter-academic higher education and research cooperation, particularly within a specialized community like POSEIDO.

³ We gathered opinions of the different stakeholders about the ISAIAS acronym, which gave us very positive feedback.

2. Internationalization of Higher Education and Research and Development of Intercultural Competences

2.1. Introduction

The process of internationalization of higher education and research is one of the strongest evolution of the Academic world worldwide of last decades (Deardorff et al. 2012), as the consequence of the general process of globalization of the economy of sciences and knowledge (Altbach & Knight, 2007). This process is however often complicated due to the very wide cultural differences and cultural stereotypes (Kruger, 1996; Lyons & Kashima, 2001; Wisniewska et al, 2014a; 2014b; 2014c; Bebbington, et al., 2017) between the various stakeholders of the Academic environment, teachers, researchers and students (Knight, 2004; Olson & Kroeger, 2001). These national cultural differences of perception and action, and the different organizational cultures of each country and institution are often very strong barriers for a smooth and efficient international cooperation (Kim, 2005).

In the last years, many research projects have been developed to assess the intercultural competences in various professional environments (Deardorff et at. 2012; Knight, 2001; INCA, 2004; OECD, 2016; UNESCO, 2013). In 2004, Deardorff et al. proposed the list of components of the intercultural competences (Deardorff, 2004; 2006), based on the studies done in American context, which involved renown international educators and 29 American Universities involved actively in the process of internationalization of higher education. This study still serves today as the reference for the definition of what are the components of intercultural competences (Deardorff et al., 2012). It was developed as a way to evaluate the impact of the internationalization efforts of the universities on the students (Deardorff, 2004; 2006).

Based on the concepts and key elements pointed out by Deardorff (2009), a questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences had been developed, statistically tested and validated between the University of Granada (Spain) and the Oslo and Akershus University College (Norway) (Wisniewska, 2011). This questionnaire (contextualized and validated) was then selected as a first instrument for the ISAIAS

project for the screening assessment/evaluation of the internationalization process of a University through the development of intercultural competences among the Academic stakeholders. The questionnaire can be spelled in various parallel forms for students or for Academic professionals (researchers, teachers, professors, administrative staff). Using this questionnaire, the first method of evaluation developed by the ISAIAS global research group was the Fast Assessment Screening Test (FAST) Score.

2.2. Understanding the dimensions of intercultural competences (ICC)

In this study, the definition of intercultural competences proposed by Deardorff was used,⁴ as an ability to communicate effectively and appropriately in intercultural situations based on one's intercultural attitudes, knowledge, skills and reflection abilities. The 4 dimensions of ICC can be defined as followed (Deardorff, 2006; 2013):

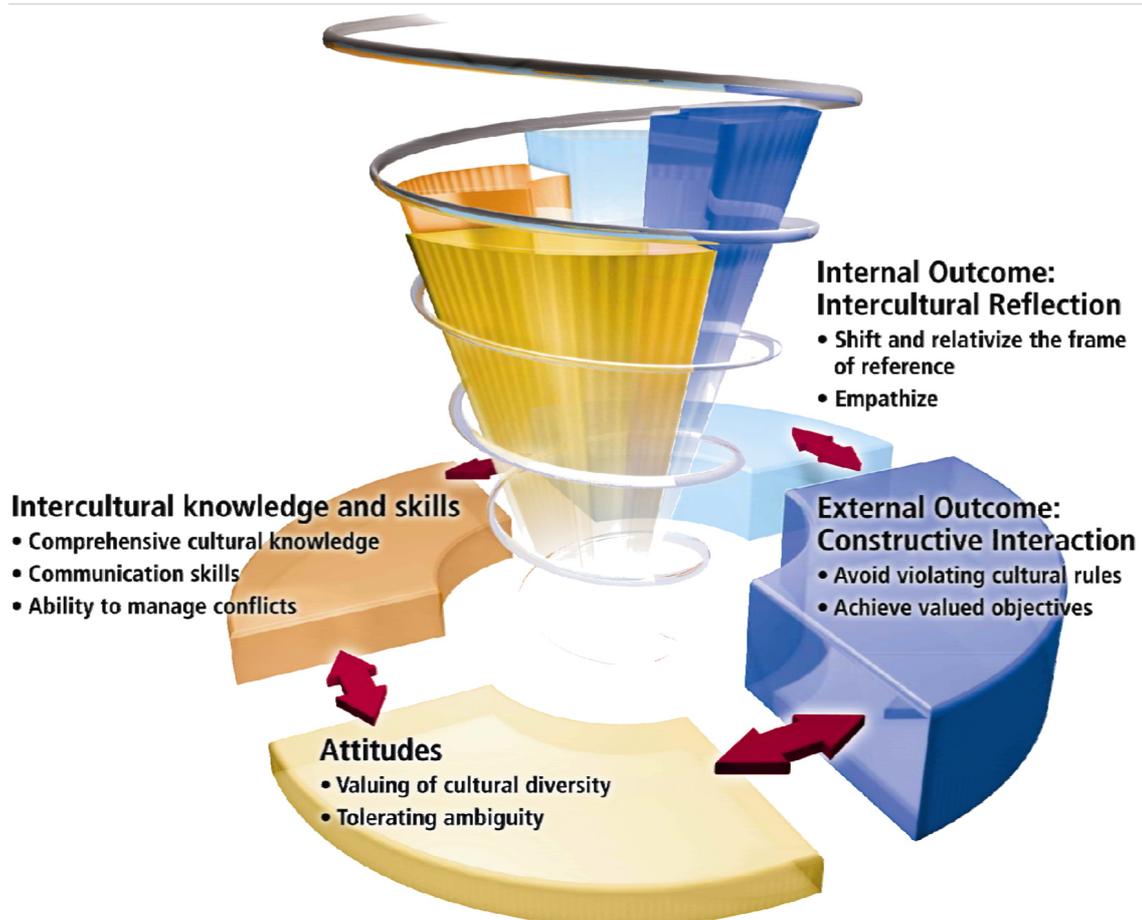
- **Attitudes.** Deardorff considers the positive attitude toward intercultural situations as a basis for intercultural competence. Valuing cultural diversity, tolerating ambiguities, general openness are the key elements of this dimension. Positive motivation, general openness, curiosity and ability to interact with unprejudiced manner accompany to the learning process that tolerate ambiguity.
- **Knowledge and comprehension.** Intercultural knowledge (about our own culture and culture of others) permits us to acquire specific skills to be able to enter into conversation and interaction. Understanding of others worldview, understanding of the impact the culture has on behavior and communication are key elements of this dimension.
- **Skills.** The ability to listen, to observe and to interpret, to relate cultural elements and to evaluate are the key points of this dimension. Thought these skills are not specific only to intercultural competence, they are very important to processing knowledge about one's own culture and other cultures (Deardorff, 2009).
- **Desire Internal Outcomes.** It is understood as a reflection on intercultural interactions. The results of the development of attitudes, knowledge and skills

⁴ Deardorff presented this definition of intercultural competences upon which leading U.S. intercultural experts have reached consensus (Deardorff, 2004). This definition of the intercultural competences is widely used by many scholars in all continents and it goes with the Doctoral Thesis objectives.

related to different cultures impact strongly the ability to change perspective and to take a relative position toward of own cultural references. It leads to flexibility and adaptation to new intercultural situations.

The results of the **learning spiral of intercultural competences** (as described by Bertelsmann, 2008) are the **external outcomes** experienced by others. They correspond to the ICC Deardorff defined as a constructive interaction, which avoids violating cultural rules and allows achieving positive valued objectives. It implies that, why *effectiveness* can be determined by the individual, the *appropriateness* can only be determined by other person (Deardorff, 2009).

Figure 12. The Intercultural Competence Learning Spiral



Sources: Bertelsmann, 2008 (on the basis of Deardorff, 2004)

According to Nieto (2004), culture is constantly changing, then individuals must master the ability to deal with ongoing changes. The development of this kind of competences should have multiple approach and challenging cultural environment. Their acquisition should enrich learners while passing through different dimensions in an upward spiral of learning (**Figure 12**). The learning spiral visualized that acquisition of ICC is closely related with life long learning and takes part of ongoing personal and professional development. Only when learners have had an opportunity of long, diverse involvement in intercultural interaction composed of different values, behaviors, cultures and patterns which can be experienced on the home campus or abroad, the ICC can be developed (Wisniewska, 2011).

3. Internationalization of Higher Education and Research: European and Asian Paradigms

3.1. Internationalization endeavors in Europe and Asia

In the age of globalization, the internationalization of higher education and research is listed as one of the principal objectives of majority of the academic institutions in the World (Deardorff et al., 2012; Barao et al. 2012; Byun et al., 2011; Knight, 2004, 2015; de Wit, 2010, 2011a, 2011b; de Wit et al., 2015; Madera, 2005; Teichler, 2009; University of Oxford, 2015; Wisniewska, 2014a, 2014b, 2014c). There are many definitions of internationalization of higher education and for the purpose of this study it was used the definition proposed by Knight (2004: 11; Raabe, 2010) and largely used among scholars, who see this complex phenomena as *“the process of integrating an international, intercultural or global dimension into the purpose, functions or delivery of higher education.”*

Moreover, through the literature there is a lot of discussion regarding to the distinction between the terms of *globalization* and *internationalization*, however, very often they are used interchangeably. In this study, the distinction between these terms is perceived following Gacel-Ávila (2005: 124) who highlighted that, internationalization *“refers the relationship between nations, which promotes recognition of and respect for their own differences and traditions, whereas globalization does not tent to respect differences and borders, thus understanding the bases of the very same nation-states, and leading to homogenization.”*

The European universities started to be involved strongly in internationalization since 1998 with the Bologna and Lisbon processes and Copenhagen frameworks, working in common Hellenic-Roman civilization background. At the same time, Asian campuses started to introduce the western paradigm of internationalization of higher education, and they contextualized it into their own environment (Altbach, 2004). The Asian countries have been internationalizing their universities, using Asian’s meetings of collaboration, and within the background of Confucian civilization (Kim, 2010; Lee, 2001).

Last years, while the European mobility programs were actively extended to

third countries (for example Erasmus Mundus, Erasmus Mundus External Co-operation Window, Tempus and Erasmus+), the **Association of Southeast Asian Nations - ASEAN** states encouraged domestic students to study in Asia rather than going to Western institutions. In order to promote Asian mobility and academic integration across Southeast Asia, a “Common Space of Higher Education” has been established.⁵ Influenced by Europe’s successful development of the Bologna Process and European Higher Education Area, a credit transfer protocol is already in implementation state. While European strategy of 2020 planned to increase the students mobility within the EU and to the third countries till 20% of student population (for example: program Erasmus +), the two new Asian programs to increase student mobility within Asia have started: “ASEAN International Mobility for Students” and “Passage to ASEAN”. Among the 59 universities from seven countries (old and new participants of the two mentioned programs), all of them provide virtual tours and study tours for all students across the ASEAN. There is still a low level of mobility within the region if we compare with the case of the EU universities, however, exceptions are already noticed in the actions of the Malaysian and Indonesians universities (University of Oxford, 2015) and these are taken as models to be followed.

Since 2008, in order to strengthen collaboration between Asia and Europe, numbers of Conferences in the framework of the **Asia-Europe Meetings (ASEM)** (officially established in March 1996) were held yearly. Nowadays the ASEM meetings include 48 members: the EU, the European Commission, seven members of the ASEAN, China, Japan, South Korea, India, Mongolia, Pakistan, ASEAN Secretariat, Australia, New Zealand and Russian Federation (joined in 2010), Bangladesh, Norway and Switzerland (joined 2012), as well as Croatia and Kazakhstan (joined in 2014). The Meetings focus on further interactions in the Educational, Professional, Cultural and Social Pillar, through common work on “Quality Assurance and Recognition”, “Engaging Business and Industry in Education”, “Balanced Mobility” and “Lifelong Learning including Technical and Vocational Education and Training” (ASEM, 2008; 2010; 2012; ASEMM1, 2008; ASEMM2, 2009; ASEMM3, 2010).

The Asia-Europe Foundation - ASEF was established for the promotion of mutual understanding between Asia and Europe through intellectual, cultural and people

⁵ It includes Brunei, Burma, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Thailand and Vietnam. University of Oxford. (2015). International Trends in Higher Education 2015.

to people exchanges. It was founded in 1997 by voluntary contributions from the member governments and they are financing its projects. Since its creation the ASEF implemented 650 projects which engaged over 17 000 participants and impacting indirectly wider audience from Asia and Europe (ASEF www.asef.org).

3.2. South Korea – European Union collaboration in Higher Education and Research

The EU is encouraging strong economic and political relations with the Republic of South Korea. Education, science and technology, human rights, fights against terrorism, energy security and climate change issues are important areas of this collaboration. The importance of this partnership has been recognized with the establishment in 2010 of the **EU-Korea Framework Agreement**⁶ in order to facilitate the cooperation.

The **European Union – South Korea Free Trade Agreement (FTA)** between the EU and the South Korea represented the first trade deal of EU with an Asian country and has been applied since 2011 (formally entered into force in 2015).⁷

Since 2014, in the framework of the EU **Partnership Instrument (PI)** for cooperation with third countries, a number of projects emerged between the EU and South Korea. Among most important actions should be mentioned **EU Gateway to Korea**⁸: it is an initiative funded by the EU with the aim to help the 28 countries of the EU establishing long-lasting business partnerships in South Korea.

Concerning Higher Education and Research field, the EU and the Republic of Korea over recent years have been developing cooperation and exchange, especially through **Erasmus +** program and the **Industrialized Countries Instrument-Education Cooperation Programme (ICI-ECP)**. These actions have helped to develop joint degrees, partnerships and mobility programs which encourage academic exchange and prepare students for globalized economy.

Among other programs which prepare framework for formal cooperation between Korea and the EU should be mentioned:

⁶ Framework Agreement between the European Union and its Member States, on the one part, and the Republic of Korea on the other part

http://www.eeas.europa.eu/archives/docs/korea_south/docs/framework_agreement_final_en.pdf.

⁷ European Commission Trade http://trade.ec.europa.eu/doclib/docs/2011/october/tradoc_148303.pdf.

⁸ EUGATEWAY Business Avenues <https://www.eu-gateway.eu>.

- International Credit Mobility (Student mobility between Programme and non-EU countries),
- Erasmus Mundus Joint Master Degrees (EMJMD),
- Joint Doctoral Programs,
- Maria Skłodowska-Curie actions as a research fellowship program,
- Jean-Monnet Program with objective of teaching and research in the field of European studies,
- A Protocol on cultural cooperation under the EU-Republic of Korea Free Trade Agreement [granting co-production and the promotion of audiovisual works of the EU and the South Korea; Creative Europe Programme (2014-2020)],
- EURASIAPAC – EU-ASIA-PACIFIC Cooperation Strategy; this project has been supported by the European Commission (EC) under FP7 with the objective to contribute to the initiatives of cooperation on ICT research between EU-ASIA-PACIFIC countries (between them Republic of Korea, Australia, New Zealand and Japan). The Horizon 2020 continues these actions in the field of ICT.⁹
- JSTCC – the EU-Korea Joint Science and Technology Cooperation Committee, composed of members from the EC’s DG R&I (European Commission Directorate-General for Research and Innovation) and DG Info (Directorate-General for Information Society & Media), and from the Ministry of Education, Science and Technology and Ministry of Knowledge Economy of Korea. It organized other aspects of the European-Korean cooperation on the basis of Korea S&T Agreement with Europe in 2008. The major thematic areas of discussions were focused on energy, nanotechnology, ICT and mobility (EU-ASIA-PACIFIC Cooperation Strategy, 2011).
- EUNIC – European Union National Institutes for Culture - Korea is a network of National Institutes for Culture from the member states of the EU in Korea. The EUNIC Cluster in Korea has organized festivals, concerts and film screenings.
- EU in Korea – Delegation of the European Union to South Korea is one of the EU diplomatic missions located in Seoul. It represents the EU in South Korea

⁹ EU-ASIA-PACIFIC Cooperation Strategy (2011) www.eurasiapac-fp7.eu

and informs the EU on political, economic, and social aspects and trades development in Korea, maintaining at the same time contact with principal players of the political and public life, economy, society, business and higher education. It promotes the EU's policies in all areas and runs press and information activities in the framework of the mentioned objectives.

- **Science and Technology (S&T) Cooperation between Korea and EU.** The first contacts between Korean and European researchers and S&T authorities had place in the 1990s. With the growing importance of mutual collaboration the S&T area was included in the EU-Korean Framework Agreement on Trade and Cooperation (2001). In FP6, Korean participation in European research was increasing and the Korean National Contact Points (NCPs) were established. In order to strengthen S&T cooperation between South Korea and Europe, the EU launched projects such as:

- ✓ KORIDOR – Stimulating and Facilitating the Participation of European Researchers in Korean R&D Programmes.¹⁰ This project was created by an expert working group, which brought leading actors from Korean and European S&T area. Its main purpose was to study perceptions and existing problems in order to bring new recommendations for future collaboration; for more information:
www.access4.eu/southkorea/620.php
- ✓ KORANET Korean scientific cooperation network with the European Research Area (run 2009-2013 under 7FP); for more information:
www.koranet.eu and Dall et al. (2013).
- ✓ KESTCAP Korea-EU Science and Technology Cooperation Advancement Programme (run 2008-2012 under 7FP) with specific objectives focused on: development of sustainable S&T cooperation strategies, dissemination of information and promotion of cooperation as well as organization and support for cooperative events between Korea and the EU; for more information www.cordis.europa.eu.

¹⁰ KORIDOR project partners are: KIST Europe Korea Institute of Science and Technology Europe Forschungsgesellschaft MBH (KIST Europe), International Bureau (IB) of the German Federal Ministry of Education and Research BMBF) at the German Aerospace Centre (DLR), Centre National de Recherche Scientifique (CNRS), Korea Institute for the Advancement of Technology (KIAT) and National Research Foundation of Korea (NRF) www.access4.eu/sothkorea/231.php.

Moreover, it promoted participation of Korean researchers in European R&D programs, for instance FP and EUREKA.

- ✓ EUREKA Multilateral International Collaborative R&D Programme - within its framework, the specific objectives of Korea were first to advance into European market and train human resources in the international competitiveness; objectives were also to reach the global standards met mostly in advanced countries and to promote international cooperation programs in R&D; for more information: www.access4.eu.

- **EU-Republic of Korea (ROK) cooperation in education** is on the way but still is limited. At the 2013 EU-Republic of Korea Summit,¹¹ policy dialog has been promoted in order to strengthen cooperation in higher education. On November 11th 2013, a Joint Declaration was signed in order to exchange best practices as well as to increase students and staff mobility between educational institutions of the EU and ROK. According to the European Commission Education, Audiovisual and Culture Executive Agency,¹² since 2008, 47 EU and 31 ROK institutions have been involved in 13 projects with **1141 student and 445 staff mobilities**. Moreover, there have been five Masters and two Joint Doctorates run (since 2009) under Erasmus Mundus Program, where **74** scholarships were awarded to the Korean students. Afterwards, since 2010, four partnerships which involved 6 Korean institutions have been set up, what permitted to provide scholarships to **34** Korean nationals.¹³

In March 2016 in Brussels, the first policy dialog took place, where practical ways of improving the EU - Korean cooperation in higher education through engagement in exchange of the best practices, as well as policy review and knowledge building and sharing were discussed. The next meeting has been planned to take place in South Korea.¹⁴

¹¹ Paragraph 7 of press release, 8 November 2013, https://ec.europa.eu/education/policy/international-cooperation/korea_fr.

¹² EACEA, http://eacea.ec.europa.eu/bilateral_cooperation/eu_ici_eap/index_en.php

¹³ European Commission, Education and Formation, https://ec.europa.eu/education/policy/international-cooperation/korea_fr.

¹⁴ Ibidem.

3.3. Language and Intercultural Competences

The use of English language on the big scale - especially in Asian environment and also in the European context - became one of the most visible changes in higher education landscape. The significant, quick increase of number of international students in European and in Asian context has been taking place. Formation of new global leaders is the principal objective of the Asian universities. These initiatives are strengthened by the “Atlantic Trust” (2009) - collaboration between the American, British universities and Asian universities for the development of a global civil society, which would bind universities and countries together through common values and principles, and through English language.

However, the linguistic skills and many international students on the campus are not enough to build fruitful collaboration (Harari, 1989; Deardorff, 2009; Wisniewska, 2011; Wisniewska 2014a; 2014b; 2014c; 2014d). Intercultural competences (ICC) have widely been recognized as an essential parameter for a peaceful coexistence in a diverse world (Art. 26.2, 1948; Preamble, 1945; UNESCO, 2013). Numerous policy papers and recommendations of international organizations, such as “The White Paper on Intercultural Dialogue” (Council of Europe, 2008), the Constitution of UNESCO (1945) and the Universal Declaration of Human Rights (1948) have also expressed this need very clearly. In order to educate intercultural competent professionals, universities choose different approaches to internationalization, different rationales and strategies (Cho, 2010; Kim, 2001; Mergner, 2011; Deardorff, de Wit et al. 2012; Knight, 2004). Various elements of internationalization of higher education were developed, for example: internationalization of curriculum, academic mobility of students and staff, international research/educational projects, etc. However, it is difficult to mention any innovation in this matter. Some countries like the United States, Canada, Australia, Norway (between others) focus on more active approaches to internationalization called “internationalization at home” (Deardorff et al., 2012; Jon, 2013; Knight, 2008a; 2008b; Koehn et al., 2011; Beelen et al., 2015) in order to give intercultural development opportunities also to these student population who does not have the possibility to study abroad.

Huge resources are involved in internationalization efforts. How to evaluate their results? The statistics related with mobility and international conventions are not

enough. Looking at the ICC development among campus population, as a result of internationalization efforts, is perceived as an adequate approach (Deardorff, 2004; 2006; Wisniewska, 2011; 2014a; 2014b; 2014c).

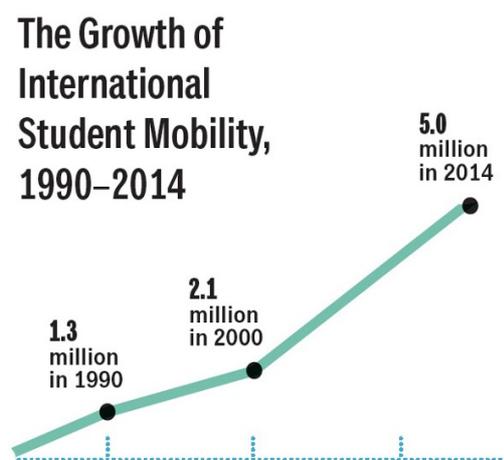
This Thesis is taking this approach and moving further in order to observe and analyze (and make aware) how the national culture, as well as organizational culture are impacting the development of the ICC.

3.4. Education in movement (statistical evidence)

This doctoral Thesis is focusing on the culture of the campus (national and organizational) and the ICC, which are developed during years of the participation in its life (curricular and extracurricular activities). A part of the organizational and academic strategies, campus' culture is created also by the foreign visitors, students, administrative staff and faculty, who are in constant contact with domestic stakeholders of the campus, as well as the campus' culture in itself. Taking into consideration these aspects, some statistics related with students global mobility as well as dentists mobility are presented below.

The global population of students who decide to study abroad is constantly rising. In 2014, statistics informed about 5 millions, while in 2000 it was 2.1 millions, international mobile students (annual increase 10%; see the **Figure 13**).¹⁵

Figure 13. The growth of International Student Mobility 1990-2014



Sources: ICEF Monitor, 2015

¹⁵ In 1975, the number of students enrolled outside their country of citizenship was 0.8 million; in 2012, it increased to 4.5 millions (ICEF Monitor, 2015).

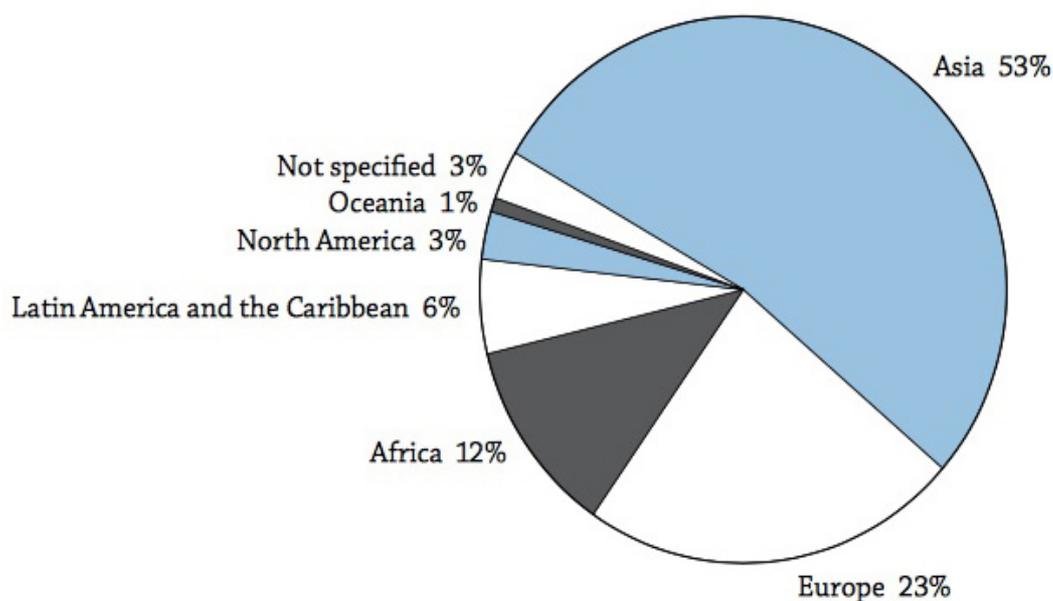
The OECD projected that in 2025 international students mobility will reach 8 millions per year (Oxford, 2015).

The most mobile students come from Asia, with China, India and South Korea at the top (**Figure 14**). One in six international students is Chinese, and Asian students account for 53% of all students studying abroad (**Figure 14**). It should be highlighted that not all of these students are traveling far: for example, Japan and South Korea accept a high number of students from the neighboring countries (81% of international students in Japan and 75% in South Korea) (University World News, 2014).

After Asians, the most mobile students are Europeans (23%), who move mostly within the EU members following the educational policies of the EU (**Figure 14**). Last decade, the European students were encouraged by the EU policies to go also to third countries and it could be observed in the growing statistics on international student mobility.

The African students account for 12% of all students studying abroad, and their directions of mobility are often related with postcolonial links of knowledge and language, mostly French, English and Spanish.

Figure 14. Distribution of foreign students in tertiary education, by region of origin (2012). Distribution of foreign students enrolled worldwide

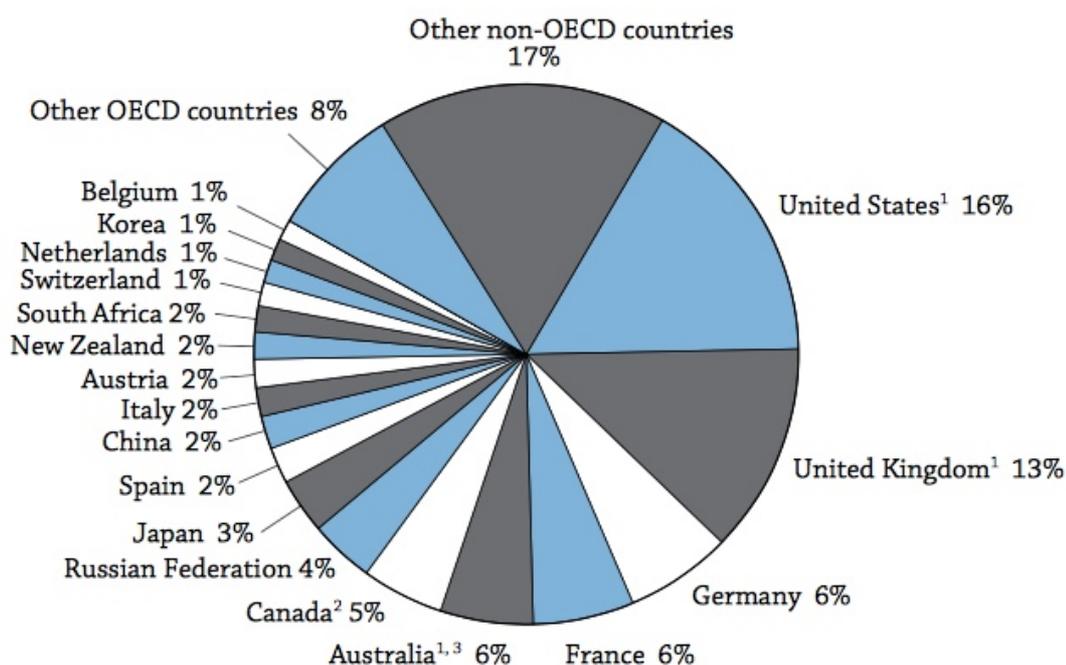


Source: OECD. Table C4.3. (www.oecd.org/edu/eag.htm)

The North American students account for 3% of all students studying abroad, and the present American universities' programs and activities encourage largely for overseas experiences.

On the global scale, the balance of host countries is starting to change. However, Europe is still the top destination region, hosting 48% of all international students (**Figure 15**). 21 European members host 98% of foreign students enrolled in the EU countries. "Some 74% of foreign students enrolled in EU 21 countries come from another EU 21 country, demonstrating the effect of EU mobility policies" (OECD, 2014).

Figure 15. Distribution of foreign students in tertiary education, by country of destination (2012). Percentage of tertiary students reported to the OECD who are enrolled in each country of destination



- Data related to international students is defined on the basis of their country of residence

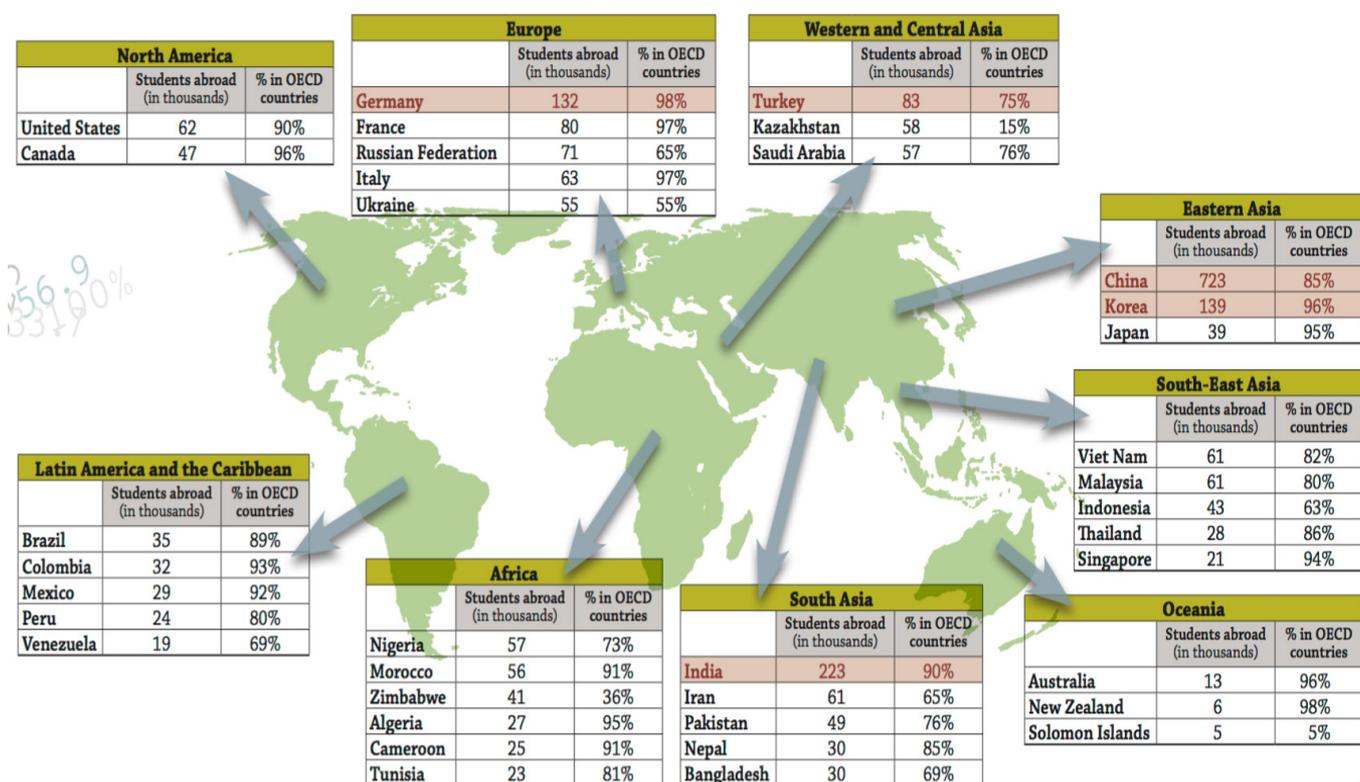
- Year of reference 2011

Source: OECD (www.oecd.org/edu/eag.html)

Still the USA remain the most popular destination country for the international students (16% of all international students), followed by the UK (13%), Germany (6%), France (6%) and Australia (6%), where half of the international students takes degrees from these countries (**Figure 15**). However, during last years, the statistics on mobility for the previously mentioned Anglo-speaking countries are declining, while the Australians and Canadians campuses gained international incomers.

The most students sent abroad are nationals of the Asiatic countries: China, India, South Korea (**Figures 14 and 16**). Among European countries, German students are the most mobile, followed by French students, Russian and Italian students (**Figure 16**). Turkey sent 83 thousands students abroad, and the number of Nigerian students (57 thousands) is the highest among African origin mobilities according to the data of the OECD from 2011 (**Figure 16**).

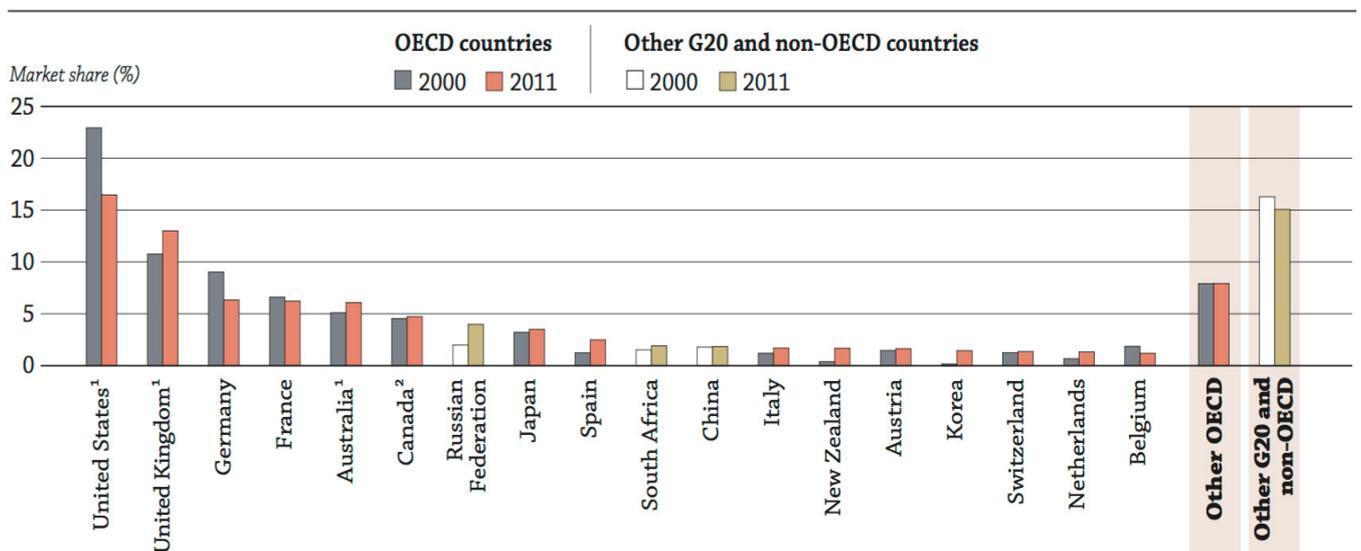
Figure 16. Top countries of origin of foreign students, by regions of the world (2011)



Note: Countries in red are the overall top countries of origin
 Source: OECD and UNESCO Institute for statistics (2013)

In the last decades new players have appeared on the international education market, such as Australia, New Zealand, Spain, the Russian Federation and, more recently South Korea too. On the other side, the share of international students in some of the most attractive countries like Germany and the United States has declined (Figure 17)(OECD, 2013).

Figure 17. Trends in international markets shares (2000-2011)
Percentage of all foreign tertiary students enrolled, by destination



Note: Year of reference of data for countries other than OECD and G20 is 2010.

1. Data relate to international students defined on the basis of their country of residence. For the United Kingdom, data for 2011 is based on citizenship.

2. Year of reference 2010 instead of 2011.

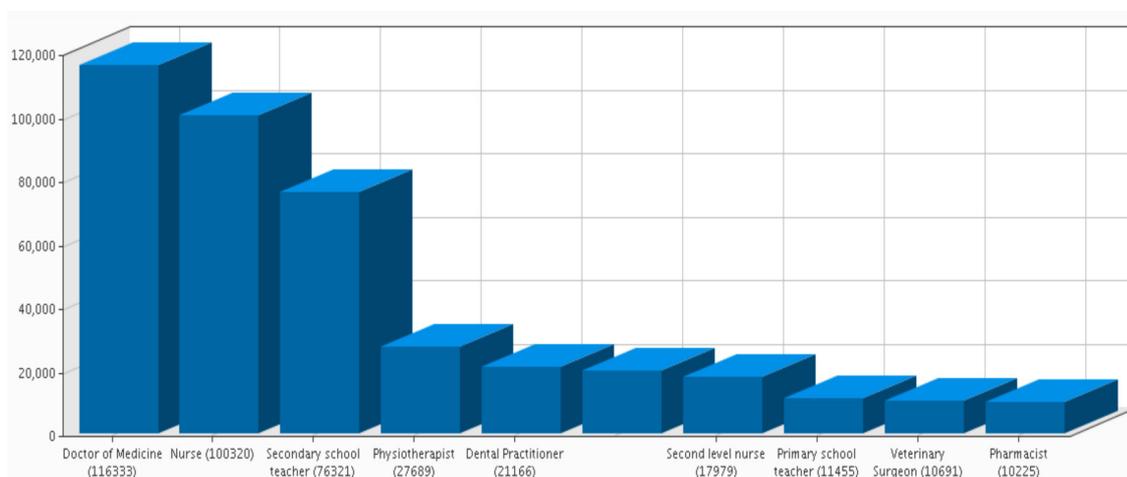
Countries are ranked in descending order of 2011 market shares.

Source: OECD, and UNESCO Institute for Statistics for most data on non-OECD countries. 2013 (www.oecd.org/edu/eag.htm)

3.5. Mobility of health professionals in the EU – the case of Dentistry¹⁶

According to the European Commission Regulated Professions Database (“establishment”),¹⁷ the most mobile professions in the last 15 years (2001/2002-2016), within the EU, the EFTA and Switzerland apart of Secondary school teachers were health professionals such as Nurses, Doctors of Medicine, Physiotherapists and Dental Practitioners (21 166 recognitions) (See **Figure 18**).

Figure 18. Statistics on most mobile professionals, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment within the EU Member States, the EFTA and Switzerland (2001/2002-2016)



Source: European Commission. Regulated Professions Database

www.eceuropa.eu (Seen 30.III.2017)

Focusing just on the EU Member States, it can be noticed that 16278 Dental Practitioners received recognition of their qualifications for the permanent establishment in the EU (**Figure 19**) in the same period, 2001/2001-2016. This fact is worthy to be highlighted taking into consideration that mobility among students of Dentistry, especially at the graduate level is very limited. In this case, the most significant academic environment where intercultural competences can be developed is home university.

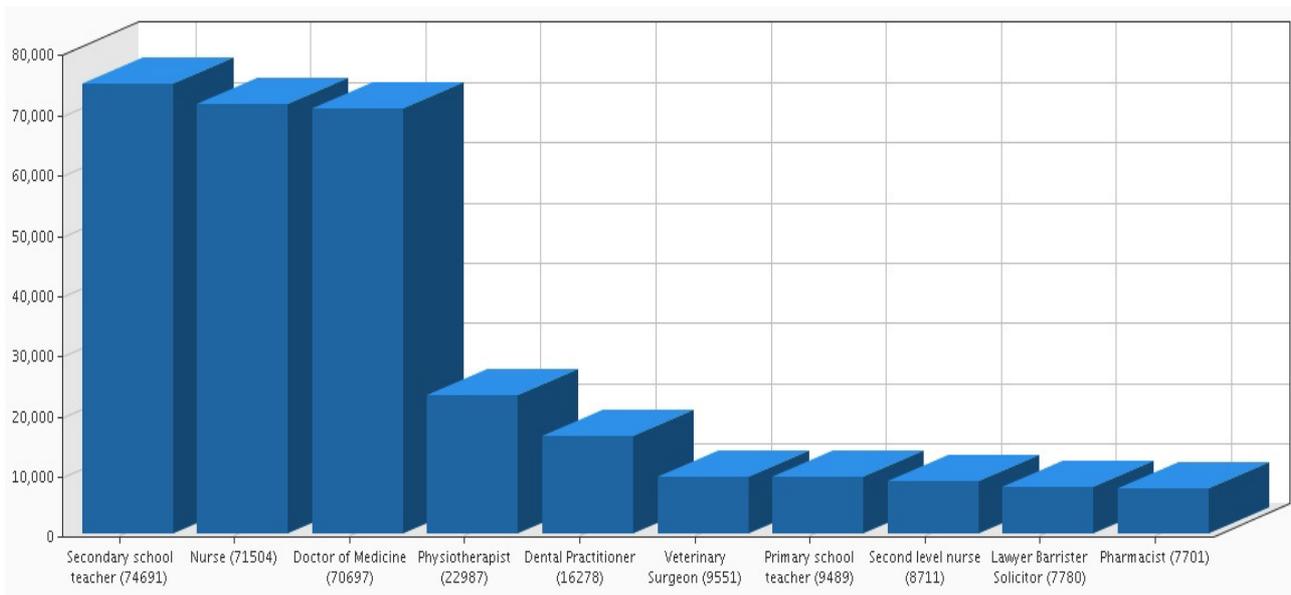
¹⁶ In this chapter, the statistical data take into consideration only permanent establishment within the EU, the EFTA and Switzerland. It does not take into consideration short mobility of the Dental Professionals which exists.

¹⁷ <http://ec.europa.eu/growth/tools-databases/regprof/>.

In the statistics provided by the European Commission on the official mobility Regulated Professions Database, taking into consideration last 6 years (2010/2011-2016), about 13497 Dental Practitioners with diplomas from the EU, the EFTA and Switzerland received recognitions of professional qualifications for permanent establishment within these three zones (**Figure 20**).

Taking into consideration the Dental Practitioners from the EU Members States moving to another EU member, 10361 Practitioners received their professional recognitions (**Figure 21**).

Figure 19. Statistics on most mobile professionals, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment within the EU Member States (2001/2002-2016)¹⁸

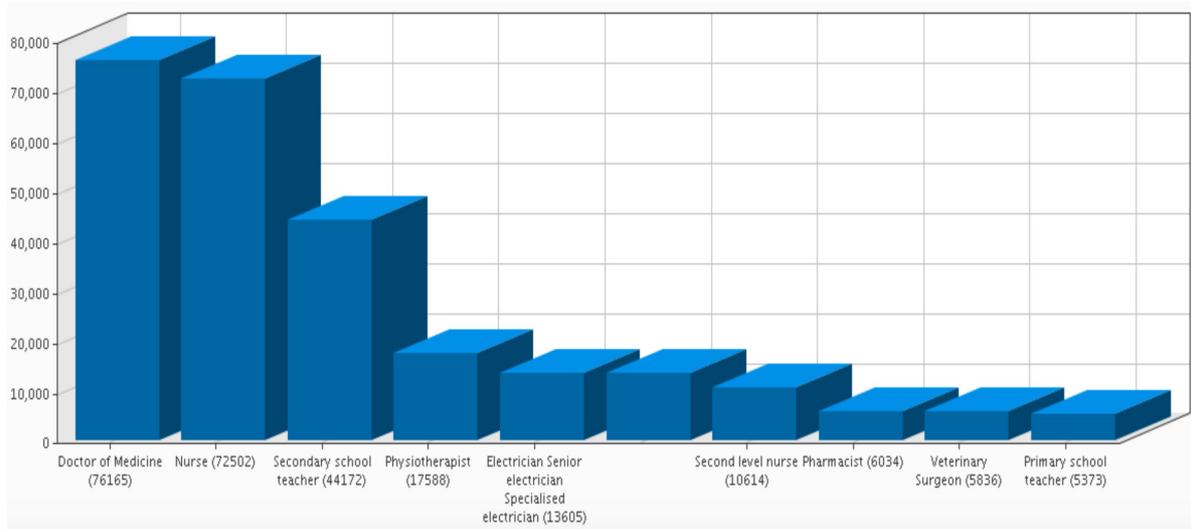


Source: European Commission. Regulated Professions Database

www.eceuropa.eu (Seen 30.III.2017)

¹⁸ Professionals are ranked by number of decisions taken on recognition of professional qualifications for the purpose of permanent establishment with the EU Member States, EEA countries and Switzerland. The number of decisions is indicated in brackets under the professions.

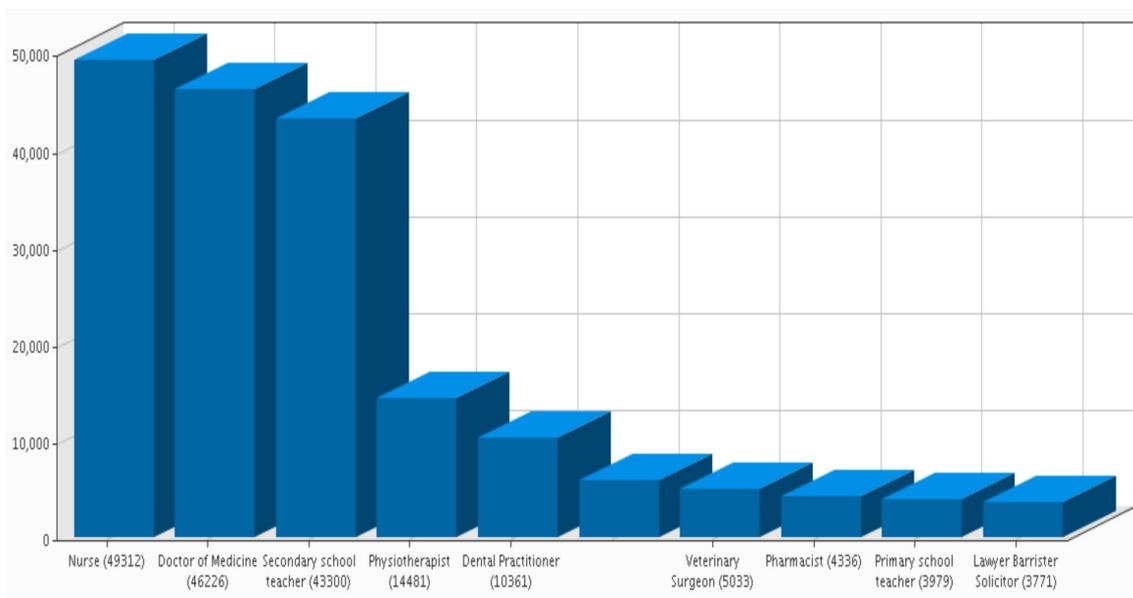
Figure 20. Statistics on most mobile professionals, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment within the EU Member States, the EFTA and Switzerland (2010-2016)



Source: European Commission. Regulated Professions Database

www.eceuropa.eu (Seen 30.III.2017)

Figure 21. Statistics on most mobile professionals, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment within the EU Member States (2010-2016)



Source: European Commission. Regulated Professions Database

www.eceuropa.eu (Seen 30.III.2017)

On the global scale, the representation and discussion on oral health policy, research, training and dental profession is framed by the World Dental Federation (FDI) www.fdiworldental.org, which is composed of dental associations from all over the World. On the European level, the FDI has its equivalent focused on the issues of European dentistry called FDI European Regional Organization (ERO) www.erodental.org.

Another body involved in the shaping of European policies in Dentistry is the non-profit association called the Council of European Dentists (CED),¹⁹ which represents interests over 300,000 dentists across Europe at the EU level. The CED meets twice per year in order to discuss the EU policies with implications for regulation of health services professions in general and dental services in particular. The CED's principal objectives are focused on development of policies in order to ensure high standards of oral health as well as to promote the interests of the dental profession in the EU (Council of European Dentists, 2015).

The recognition of professional qualifications in dentistry (in the context of the EU) is regulated by Directive 2005/36/EC²⁰ as amended by Directive 2013/55/EU (PQD). This directive described the rules, which are followed by a host Member country for recognitions of professional qualifications obtained in another Member State, allowing to the holder of these qualifications to continue the same profession in the host Member State.

About the recognition of Professional qualifications obtained in a third country informs also the same Directive (Articles 2(2) and 3(1)(a) of the PQD).²¹

In the EU, there is a system of automatic recognition of professional qualifications for seven sectorial professions, and between them for dentists.²² In order to work in another EU country, dentists must apply to the authority that oversees the profession in that country, providing documents proving their education and qualifications. The authority must acknowledge that application within 1 month and assess the application to be able to decide whether to give the automatic recognition

¹⁹ Council of European Dentists, www.cedentists.eu.

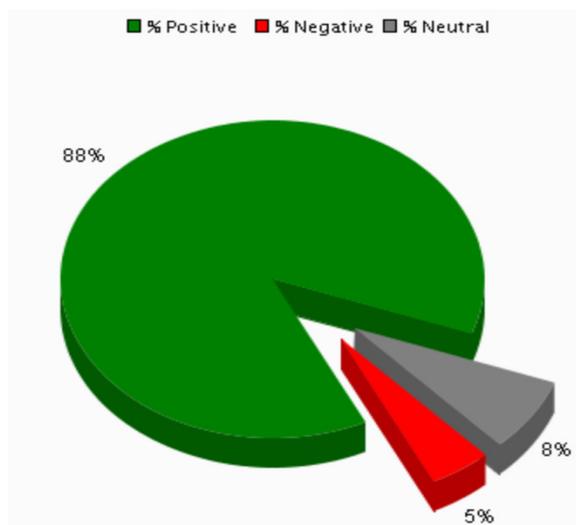
²⁰ Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications (Text with EEA relevance). Official Journal of the European Union of 2005, L 255, p. 22.

²¹ Council of European Dentists. Manuel of Dental Practice 2015. Edition 5.1.

²² The seven professions which have automatic recognition of professions in the EU are: nurses, midwives, doctors, **dentists**, pharmacists, architects and veterinary surgeons.

within 3 months.²³ If exist substantial differences in education or training, or their duration between the country where the diploma was received and the host country, the professional dentist who is interested in recognition of qualifications has to do some additional training required by the official institution which is responsible for the process of recognition (for example Ministry of Health, or professional chamber/Order of dentists, etc.). According to European Commission, 88% of applications are recognized, 5% are negative and 11% are neutral (**Figure 22**).

Figure 22. Decisions taken by host countries on recognition regime of Dental Professionals in the EU, the EFTA and Switzerland (2010-2016)



Source: European Commission

<http://ec.europa.eu/growth/tools-databases/regprof/index.cfm>

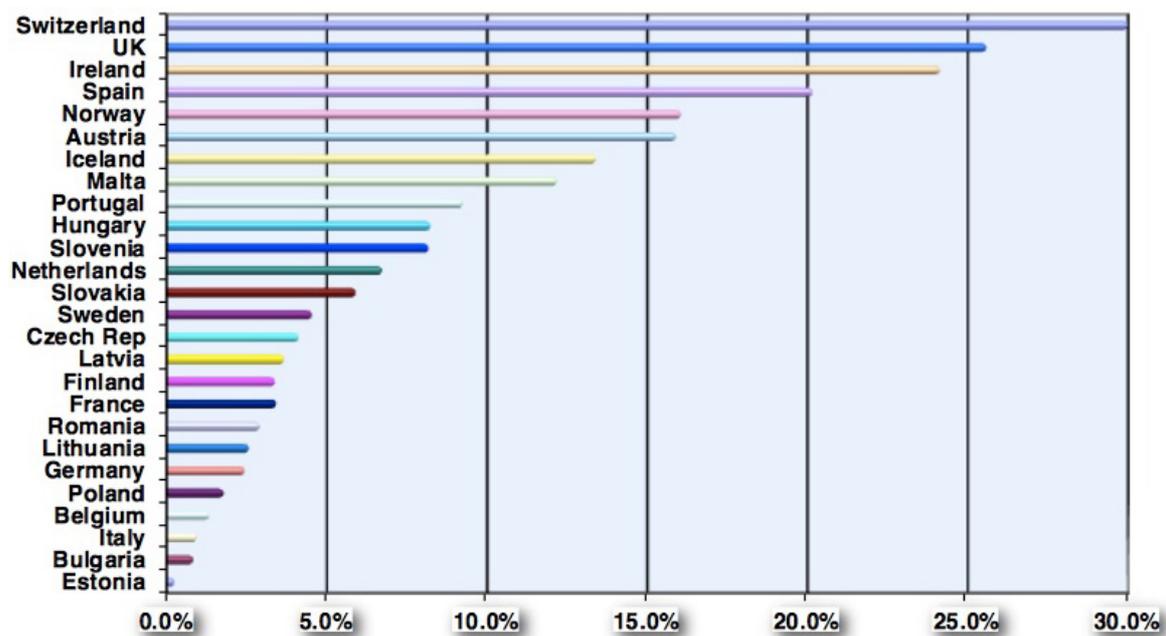
The EU Directorate General for Education and Culture funded an innovative European initiative called DentEd, in order to promote a common approach to dental education across Europe. Many dental schools in the EU were supported by visiting teams of dental academics, international conferences on trends and standards in dental curricula over six years. This work on dental education continues through the Association for Dental Education in Europe (ADEE) (EU Manual of Dental Practice 2015: 36).

²³ European Commission. *Recognition of professional qualifications in practice*. Automatic recognition. www.ec.europa.eu.

Since the introduction of “Acquired Rights”, the movement between EU/EEA countries for a professional reason as a dentist is much easier. The reports of the numbers of overseas dentists²⁴ working within the borders of EU and EEA are presented in **Figure 23**. As can be seen, the biggest number of overseas dentists - over 30% - chose as a destination country Switzerland and about 26 % UK.

To highlight the professional permanent mobility of Dental Practitioners in the countries which are more specifically observed in this Thesis, it should be mentioned that according to the Council of European Dentists in the Manual published in 2015, Spain had 20%, France had about 3.5%, and Italy had about 1% overseas dentists (**Figure 23**).

Figure 23. The proportion of “overseas dentists” in each country



Source: Council of European Dentists. Manual of Dental Practice 2015

Edition 5.1. 2015:41

²⁴ “Overseas dentist” in this Source of information refers to dentists who have received their basic dental education in any country other than listed in the **Figure 23**, even if they are nationals of that country. A dentist who is not a national of the country, but obtained his/her qualifications in that country was considered as an “overseas dentist” in these statistics. No figures were available for Croatia, Greece and Denmark. Cyprus, Lichtenstein and Luxemburg do not have their own dental schools – as all dentists are perceived as overseas (according to Council of European Dentists), they were not presented in the list. (Manual of Dental Practice, p. 41).

Figure 24. Statistics on mobile dentists, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment within the EU Member States for the period 2001-2016 and 2015-2016

COUNTRY OF QUALIFICATION	HOST COUNTRY									
	FRANCE		ITALY		PORTUGAL		ROMANIA		SPAIN	
	2015-2016	2001-2016	2015-2016	2001-2016	2015-2016	2001-2016	2015-2016	2001-2016	2015-2016	2001-2016
FRANCE			69	546	13	216	1	47	117	897
ITALY	209	2193			1	119	3	81	267	1834
PORTUGAL	43	2062	28	109			*	1	200	340
ROMANIA	33	2815	377	6315	*	12			249	982
SPAIN	144	4994	1083	4934	56	1331	*	34		

- “There are not decisions available”
- Decision taken by host country - “ALL”
- Profession – “Dentists”

Source: Own elaboration on the bases of the European Commission Regulated Professions Database www.eceuropa.eu (Seen 30.III.2017)

In the line of the purpose of this Study, the **Figure 24** has been prepared. Statistics on mobile dentists, on the basis of decisions taken on recognition of professional qualifications for the purpose of permanent establishment (do not take into consideration statistics form temporary mobility) within the EU Member States for the period 2001-2016 showed that cultural proximity and language help in choosing country of destination for dentists. In **France**, most of the foreign dentists (data about EU trained dentists) came from Spain (4994), Romania, Italy and Portugal. In the case of **Italy**, they came mostly from Romania (6315), Spain, France and Portugal.

In the case of **Spain**, most of the foreign dentists (with origin from the EU) came from Italy (1834), Romania, France and Portugal. Lack of data about Korean dentists mobility to the EU or the European Practitioners to **South Korea** has been noticed.

Irene A. Glinos (2015) from European Observatory on Health Systems and Policies observed that, there is a risk that free health workforce mobility disproportionately benefits wealthier Members of the EU/ EEA at the expense of less

advantaged EU members and may feed disparities such as redistribution of the resources from poorer to wealthier countries of the EU.

3.6. Mobility of dental practitioners – Asian context

ASEAN members observing the practices and experience of the EU in Dental Education and Practices took the initiative of geographical Asian convergence for Dental Practitioners. The ASEAN **Joint Coordinating Committee on Dental Practitioners (AJCCD)** was created under the umbrella of the Healthcare Services Sectorial Working Group (WSSWG). The AJCCD discuss matters for facilitation of cooperation on Mutual Recognition Agreement (**MRA**) on Dental Practitioners. The MRA was signed in 2009.

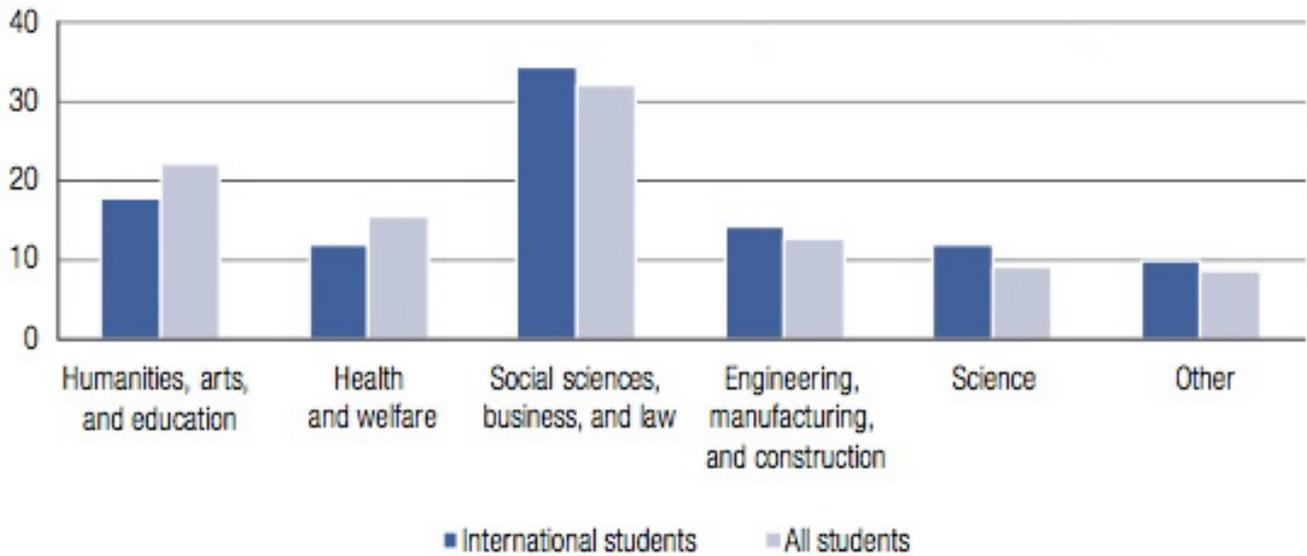
The principal objectives of MRA (which goes in line with the ASEAN Vision 2020 on Partnership and Dynamic Development) are to facilitate the mobility of dental practitioner within ASEAN, to enhance exchange of expertise on standards and qualification as well as to promote best practices among dental services and promote education and training for dental practitioners.²⁵

In relation to mobility of dentistry students in the Asian countries, the short period mobility (example one or two weeks) between Asian universities can be mentioned among good practices in this matter.

Unfortunately, there are no data available on field of study by origin of students in order to see how extensively the field of study chosen by Asian students differs from the field chosen by students from European countries. However, it can be noticed already that the less chosen disciplines of study abroad were Health, Welfare and Humanities, Arts and Education (**Figure 25**). The most demanded disciplines by foreign students were social sciences, business and law. There has been some concern about potential abuse of the student channel as an easy and less controlled way for labor migration (OECD, 2014).

²⁵ More information can be seen: ASEAN Mutual Arrangement on Dental Practitioners www.asean.org; The AJCCD regularly exchanges information on the policies related to dental practitioners (between Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam), for example: Policies of Temporary Licensing/Practicing privilege for Foreign Dental Practitioners; Requirements for Registration/Licensing Process; Types of Registration and Licensing Period and Extension for Foreign Practitioners; Requirement of Continuous Professional Development (CPD), Malpractice Insurance and etc.

Figure 25. Main fields of Study of International Students, 2009



Source: OECD Education Database, in OECD, 2014

Figure 26. Main Asian Origin Countries of Migration (in general) to the OECD, 2011

	Immigration into OECD countries (thousands)	Rank	% of total OECD inflows	Expatriation rate (per million population)
People's Republic of China	529	1	10.3	394
India	240	4	4.7	196
Philippines	159	6	3.1	1,702
Pakistan	105	11	2.0	605
Viet Nam	94	13	1.8	1,072
Asia	1,597		35.6	414

OECD = Organisation for Economic Co-operation and Development.

Source: OECD International Migration Database in OECD, 2014

Unfortunately there are no data available on professional mobility by origin of labor migrants from Asia, in order to determine the number of eventual Dental Practitioners with Asian qualifications recognized in the EU, EEA and Switzerland. According to the OECD, apart from EU labor mobility, labor migrants from Asia are the most important source of migration for employment to OECD countries. People's Republic of China, India, Philippines and Pakistan are main countries of Asian

immigration (**Figure 26**), while taking into consideration the European continent as a destination point, United Kingdom, Germany, Italy, Spain and France are their main host countries (**Figure 27**).

Figure 27. Main Destination Countries of Asian Migration to the OECD

	Immigration from Asian countries	% of inflows from Asia to OECD
United States	373	23.4
Republic of Korea	254	15.9
Japan	200	12.5
United Kingdom	196	12.3
Canada	119	7.5
Australia	105	6.5
Germany	88	5.5
Italy	68	4.3
Spain	48	3.0
France	19	1.2
New Zealand	19	1.2

OECD = Organisation for Economic Co-operation and Development.

Source: OECD International Migration Database in OECD, 2014

Taking into consideration these growing numbers of mobilities (students and labor migration), the need for interculturally competent citizens is increasing as well.

4. Internationalization of Higher Education and Research in Oral and Maxillofacial Sciences

4.1. Dental Biomaterials Education and Research: the modern paradigm

In Dentistry and Oral and Maxillofacial Surgery, the development of new biomaterials and biotechnologies had a considerable impact in the evolution of the therapeutic strategies, increasing considerably the treatment options and improving their reliability and long-term outcomes (Albrektsson et al., 2000). In the last 30 years, the research and education related to implantable materials in their various forms introduced a real paradigm shift in the daily practice of clinicians, but also in the organizational culture of the dental sciences and in the related dental industry. The most significant evolutions in last years have been observed particularly in periodontology and oral and maxillofacial surgery, with the considerable development of dental implants, bone and soft tissue materials and regenerative medicine strategies (Del Corso et al., 2012; Simonpieri et al., 2012). All aspects of implant dentistry represent nowadays a considerable volume of scientific literature (with a large number of specialized journals for example, most of them in the highest impact factors of the dental sciences), continuing education courses and meetings (Dohan Ehrenfest et al., 2010; Coelho et al., 2009).

However, research on oral biomaterials is nowadays more and more complex, far from the empirical enthusiastic beginning that allowed the main early discoveries (Dohan Ehrenfest et al., 2010). This period of maturity implies a quest for a better understanding of the molecular, cellular and pharmaceutical aspects of these materials, in order to refine and sometimes redefine the classical concepts and develop new ideas (Del Corso et al., 2012). This research also implies a significant cost and investment, a difficult effort in a time where resources become more scarce and split between more research groups. Global competition, both Academic and Industrial, also affects the potential resources that can be allocated to the development of new concepts and products.

This is a new parameter that appeared in the history of this field: in a multipolar World, the Industry and Academic Communities are no more concentrated in a few countries (Barao et al., 2012). No one can claim to be right alone; leadership is shared and clearly debated. This is a positive evolution, what offers more diversity in opinions, allow new ideas to grow and spread, and this is a needed ground for innovation. However, consequently, the development of new materials and paradigms requires nowadays cooperation at a global scale to create a real concrete impact. This implies to learn to share and work together in our research projects, to discuss together and to promote these new concepts together in the world scientific cacophony, particularly through education efforts.

The modern paradigm in research for biomaterials in general, and in oral and maxillofacial applications in particular, implies global cooperation in research and education (Sammartino et al., 2014). Behind the theoretical concept, this approach raises many difficulties, particularly the capacity of intercultural cooperation (Dohan Ehrenfest et al., 2014f). This notion of Internationalization of Higher Education and Research is in fact a very important, concrete and actual topic for most Universities (and for the specialists in the sciences of education) as, despite their efforts, it is still a major challenge for everyone (Altbach et al., 2007; Kim, 2005; Moon, 2016; Kim, 2016; Chan, 2012; Deem et al., 2008). In the field of oral and maxillofacial biomaterials and biotechnologies, the internationalization of higher education and research is quite inhomogeneous and difficult, despite the official efforts to promote it and the misleading appearance.

4.2. International Cooperation in Biomaterial Research: the ISO example

4.2.1. The development of ISO standards

An interesting illustration of the relevance and challenges of internationalization of research and education in the field of oral biomaterials can be observed in a major institution developing standards on all aspects of biomaterials: the ISO (International Organization for Standardization). ISO is the world largest organization for the development and publication of international standards. As an independent non-governmental organization coordinated from a central secretariat in Geneva,

Switzerland, ISO is built as a network of national standards entities representing their respective countries on the global scene. ISO was created in 1947 with 25 member countries, with the objective to facilitate the international coordination and unification of industrial standards. Nowadays, the ISO regroups national standard entities from 164 countries and published almost 20 000 international standards covering most aspects of technology, manufacturing and business. The same mechanisms of standardization are applied from medical devices and food safety to electronics, and help to secure the products and services of daily life.

International standards define the state of the art specifications for products, services and good practice. In a globalized economy, the international standards serve to secure the exchanges of products between countries with different organizational cultures and levels of control, but with similar objectives of security and efficiency. Therefore a standard should be considered as a major instrument of safety and simplification of international trade.

However, international standards are slow to prepare, particularly because they require a global consensus. Each ISO commission regroups representatives from all stakeholders of a field - users (clinicians in this case), industrials (e.g. implant companies), researchers and academic experts – in order to gather the expertise needed to elaborate a useful and applicable standard and a reference document. But the interests of producers and users may not be the same (if a standard impose more restrictions and controls to the manufacturer); the opinions between countries and Experts can be very different also. The consensus on a very extensive and accurate standard is always difficult to achieve.

4.2.2. Illustration of the limits of international scientific cooperation

The development of ISO standards illustrates very well the difficulties of international cooperation in education and research, particularly when considering molecular, cellular and pharmaceutical aspects of biomaterials in dentistry and oral and maxillofacial Surgery.

In the field of dental biomaterials, the number of usable standards is very small, and their content remains very basic. If we consider the wide field of dental implants and related implantable materials (such as bone substitutes and membranes) - one of the

most active research and education field in dentistry today - we can count only 7 active international ISO standards at this time, and very limited perspectives of new projects. This ensemble is very small, considering that implantable materials represent the largest amount of new products and publications today in dentistry, and one of the most competitive and active industrial fields. Moreover, the 7 current standards in the “dental implants” section (ISO TC106/SC8) have limited impact and are not qualitative: they mostly describe basic information of technical files such as packaging, sterilization, basic mechanical testing, etc.

The current standards produced through ISO TC106/SC8 are as follows:

- ISO 22803:2004 - Dentistry - Membrane materials for guided tissue regeneration in oral and maxillofacial surgery - Contents of a technical file.
- ISO 14801:2007 - Dentistry - Implants - Dynamic fatigue test for endosseous dental implants.
- ISO 22794:2007 - Dentistry - Implantable materials for bone filling and augmentation in oral and maxillofacial surgery - Contents of a technical file.
- ISO 10451:2010 - Dentistry - Contents of technical file for dental implant systems.
- ISO 11953:2010 - Dentistry - Implants - Clinical performance of hand torque instruments.
- ISO 16498:2013 - Dentistry - Minimal dental implant data set for clinical use.
- ISO 19429:2016 - Dentistry - Designation system for dental implants.

When considering specifically the considerable field of bone biomaterials and membranes for bone regeneration, only 2 standards are associated to this domain in the previous list (both minimal standards limited to the description of the content of technical file). This situation at the ISO illustrates very well the difficulties – and sometimes impossibility – of international scientific cooperation in very accurate fields. In theory, ISO meetings should offer the opportunity of creating chains of inter-laboratory testing between scientific stakeholders (particularly universities from different countries and cultural areas); but practically, ISO standards remain very superficial and do not investigate molecular, cellular and pharmaceutical aspects of implantable biomaterials (Wisniewska et al., 2017).

However, international cooperation is not only a problem of cultural area. When considering the European standards related to the previously described fields, we can observe that the difficulty to cooperate and fin agreements remain very strong also between countries part of the same European cultural area. For example, the project of reshaping the European standard and directive on dental implants “**EN 1642** - Dentistry - Medical devices for dentistry - Dental implants” is a work on progress since more than 5 years and is still delayed due to disagreements on the very nature of the project.

Despite these failures, many groups continue to try to promote inter-laboratory testing and new standards for biomaterials, sometimes even outside of the ISO. This is difficult leadership to take, but some success can be observed. For example, the OASIS group (Open-Access Standards in Implantable Systems) developed recently an interesting standard for the accurate analysis of dental implant surfaces termed ISI (Implant Surface Identification) Standard (Dohan Ehrenfest et al., 2014a, 2014b, 2014c, 2014d, 2014e, 2010). This system was acclaimed by professionals (users, some administrations and industries) and used as a scientific academic standard; it was proposed to ISO in 2015, but has not reached the final form of an ISO standard yet. When analyzing the example of ISI, it can be observed a strong leadership of some scientific stakeholders within an academic network, and the gathering of many partners to reach such an interesting result. However, this international cooperation appeared to be quite exceptional.

5. Internationalization of Higher Education and Research: Assessing Efforts for International Scientific Cooperation through Publications

Internationalization of higher education and research is nowadays a major objective in most Academic environments worldwide, and it has a significant impact in the development of innovation and the growth of industrial stakeholders, for example in the field of implant dentistry and implantable biomaterials. It is a common governmental policy in most countries to promote and incent the search for real international cooperation (Deardorff et al., 2012; Byun et al., 2011; Bennett et al., 2004; ASEM, 2008). To develop biomaterials research and to promote innovation requires wide resources, and in theory, international cooperation should be an efficient way to improve efficiency. However, this remains quite theoretical, as can be observed in major examples such as ISO. Practically, to evaluate the real level of international cooperation is always a challenge, and the real benefits of the internationalization process are sometimes difficult to evaluate and quantify.

In the last years, the quantity of international publications and their quality (theoretical quality judged mostly through bibliometric parameters such as impact factor of the journal and number of citations of an article) became the new gold instrument for the evaluation of the scientific production of a University. However, the level of internationalization of research and education in a scientific field is often neglected and remains a hidden parameter, which is worth some analysis. Publications reveal considerable information on the real effort for international scientific cooperation of institutions and scholars.

5.1. Using the SCIENTI System to assess the scientific cooperation effort

In order to evaluate the intensity of the Internationalization Efforts in Research and Education, some analytical methods were developed to screen the international literature in a scientific field, and to highlight the degree of international and intercultural cooperation. The SCIENTI Score (Scientific Cooperation Internationalization Effort & Network Test & Index) has been developed through the

ISAIAS program for this purpose; it is a good illustration of the methodology to use, and the complexity of assessing the “sincerity” and strength of scientific international cooperation. The SCIENTI Score can be applied to general medicine and dental journals, and point out very clearly the differences of collaboration in these domains.

The SCIENTI System is a simple statistical instrument to analyze the internationalization level of an article, a journal or even a field at different times in history. To determine the score of a publication (or by extension of any document from an education/research work), the composition/characteristics of authorship and the main affiliation and cultural area of each author of the article must be observed and classified following 2 rules (rule of Diversity and rule of Majority), as defined in the **Table 1**. To highlight the score of a journal (or several journals of the same field) during a period of time, the SCIENTI score of each article of this journal must be determined and the mean value SCIENTI score of this ensemble of publications can be easily calculated.

The choice of the item to score is important and must be decided with care when using this analytical method. In general, original research and review articles represent more significant scientific endeavors than letters or short items, and therefore are more representatives of the real state of cooperation. However this is not always exact, as some journals are exclusively built on a letter format for example. In the examples given in this article (**Table 2**), all calculations were based only on original research and review articles, what remains the most classical basis of comparison, particularly between different profiles of journals.

The SCIENTI System: how to determine the internationalization score of a publication/education/research work	
Score composing the Index	Characteristics of the article <i>A Group is defined as a research/education administrative entity (e.g. clinic, institute or university). Ex: 2 Departments from the same University = same Group.</i>
0	All authors from the same Group.
1	Rule of Diversity: Authors belong to at least 2 different Groups, but all Groups in the same country. <i>Rule of Majority: No Group has the majority of authorship.</i>
2	Rule of Diversity: Authors belong to at least 2 different Groups, located in at least 2 different countries in the same cultural area. <i>Rule of Majority: No Group has the majority of the authorship.</i>
3	Rule of Diversity: Authors belong to at least 2 different Groups, located in 2 different cultural areas. <i>Rule of Majority: No Group has the majority of the authorship.</i>
4	Rule of Diversity: Authors belong to at least 3 different Groups located in 3 different cultural areas. <i>Rule of Majority: No Group has the majority of authorship.</i>
5	Rule of Diversity: Authors belong to at least 4 different Groups located in at least 4 different cultural areas. <i>Rule of Majority: No group has the majority of authorship.</i>

Table 1. Rules of evaluation of the characteristics of authorship to determine the SCIENTI score of a publication. The main affiliations and cultural areas of the authors of the article must be observed and classified following 2 rules (rule of Diversity and rule of Majority).

The analysis of the authors' affiliations can sometime be a bit confusing and complicated (many authors are disclosing several affiliations nowadays). When authors have multiple affiliations, it cannot be considered as an intrinsic cooperation (a cooperation with themselves): it would create a bias, as an artificial cooperation. Therefore, the main affiliation of each author only shall be used (in general the first one, or the one most represented in the group).

To determine the SCIENTI score of an article, the analysis of authorship requires to follow 2 rules:

- the rule of Diversity: how many groups, from how many countries or cultural areas, are part of this work.

- the rule of Majority: no group should have the majority of authorship. The majority is defined as 50%+1 unit. The rule of majority highlights if a study is a real cooperation or if it is the work of one group shared with frequent outside collaborators.

- If a work fits in one category "rule of Diversity", but does not fulfill the rule of Majority, then the score is diminished by 1. The score falls into the preceding category and gets the associated score. For example: one article is prepared by 3 groups - one Italian, one Korean and one Brazilian (3 cultural areas) - but the Brazilian group is in majority. Then the SCIENTI score is $4-1 = 3$.

5.2. Defining the cultural areas in international cooperation

The definition of the cultural areas (needed in the SCIENTI system) is a very complex, debatable and tricky parameter. Many countries are geographically neighbors, but do not share, or claim to not share, the same cultural background. Their national cultures developed during centuries are different. Even if their physical proximity on the map has been facilitating collateral influences, however, the cooperation sometimes is very difficult between many close countries. On the contrary, some groups of countries, while sharing quite different cultural or geographical patterns, are very active in cooperation (for example the European group, or some countries of the Commonwealth), as they share similar political systems that promote their collaboration. For the purpose of the ISAIAS Project funded by the POSEIDO Foundation, a map of the general cultural areas based on the observations and experience in scientific cooperation was suggested (**Figure 28**). It voluntarily does not

make a strict list of countries per group, but shows different areas recovering several countries and crossing each other. There is no ideal wording or separation for defining such parameter or area, as most neighbor countries influence each other. Moreover, some Universities have branches in other very different countries (for example, NYU and NYU Abu Dabi), while the entities belong in reality to the same cultural area. With this flexible way of separating main areas, it remains easy to determine what are the different cultural groups – as they often appear well identified in the scientific international literature. This approach gives some space for the freedom of interpretation by the users of this SCIENTI index and to adjust accordingly.



Figure 28. SCIENTI system map of the general cultural areas in scientific cooperation (ISAIAS Project, POSEIDO Foundation)

5.3. SCIENTI scores between categories of journal and periods

The SCIENTI scores of international scientific publications reveal very clearly the recent evolution of internationalization of higher education. A few examples of SCIENTI scores (calculated only with original research and review articles) from the 2014 content of 2 major medical and dental biomaterials journals (and one journal more specialized in cooperation) are provided in **Table 2** for illustration.

If we compare for example the scores of articles published in the Clinical Oral Implant Research (COIR), the best dental journal (or one of the best depending on the yearly classification) specialized in implantable materials and clinical research, between year 2004 and year 2014, the SCIENTI scores almost doubled moving from 0,65 in 2004 (6 issues per year) to 1,13 in 2014 (6 issues in 6 months). As a general observable movement, publications appear more opened and internationally driven nowadays than 10 years ago.

However, despite this improvement, the SCIENTI score of the COIR journal remains in reality much lower than what could be expected, proving that international cooperation in implantable materials research remains superficial, with teams working more as competitors than as partners.

The score of this dental journal COIR can be compared with smaller specialized journals such as POSEIDO, which is specifically designed to promote internationalization of higher education and research and intercultural cooperation. This is a cooperative platform to promote debate and discussion between groups, and it is therefore the exact contrary from the traditional journals promoting more individualism and competition between groups. This is clearly observable in the SCIENTI scores, POSEIDO journal (all issues in 2014) showing a SCIENTI score of 4.05, almost 4 times higher than the COIR journal during the same period (6 issues from January to June 2014, score of 1.13), with particularly a few major articles regrouping a wide international team of co-workers.

Finally, the SCIENTI scores of the COIR can also be compared with the scores of a major medical journal such as the Lancet, the most important medical journal for clinical research (impact Factor 39.207) with the New England Journal of Medicine (Impact Factor 59.558). In a comparable 6 months period, the monthly COIR published in 2014 almost the same quantity of original research articles or review than the weekly

Lancet journals, but the SCIENTI score of the Lancet is almost the double of the COIR score. This confirms again that the scores observed in the dental journals remain particularly low despite the political pressure and industrial need for internationalization, revealing the difficulties of cooperation in dental biomaterials research in a globalized world highly competitive for resources and scientific legitimacy. On the contrary, medical cooperation seems much more opened, the Lancet articles presenting often extensive multi-centric studies, with authors and teams coming from many continents and sometimes with shared leaderships in authorship. It reveals that medical sciences - at least at the high level encountered in the Lancet - needs structurally international cooperation and becomes de facto more open to international co-leadership than the research in oral and maxillofacial implantable biomaterials.

The examples presented and discussed above illustrate very concretely the current state of the international cooperation effort in dental biomaterials research, and the SCIENTI score is a very useful instrument to assess the situation in a field in general.

Journal & Year	Lancet 2014	COIR 2004	COIR 2014	POSEIDO 2014
SCIENTI Score	2,05	0,65	1,13	4,05

Table 2. SCIENTI scores of 4 different journals (mean value, original research and review article only). The Lancet articles (weekly) were analyzed during the first 6 months in 2014. The COIR articles in 2004 were released bimonthly, and the 6 issues of the year were analyzed. The COIR articles in 2014 were released monthly, and only the first 6 issues were used (to compare with the same quantity of articles than in 2004). All articles from POSEIDO journal (quarterly) in 2014 were analyzed.

International cooperation in education and research is nowadays needed for successful research, innovation and discoveries, as a needed path for increasing resources and share new ideas in the globalized scientific and industrial world. This obvious paradigm shift is spreading in the medical field where this cooperation is developing at the highest research levels. However, despite the political and industrial

pressure (Kim, 2005; Barao et al., 2012), this movement of internationalization remains limited or at least superficial in many academic fields, particularly in the example of dental research (Wisniewska et al., 2014a; 2014b; 2014c). The various markers of internationalization (such as the SCIENTI score of publications) and practical examples (such as the ISO database and the industrial market analysis) analyzed and reported in this Thesis, highlight very clearly the current endeavors in the internationalization of education and research in the field. National culture and its impact on the development of intercultural competences have a major impact in this situation.

6. General Objectives of the Thesis

The main hypothesis of this PhD Thesis is that the internationalization of higher education and research is impacted by the national culture and organizational culture of a university, and that both cultures have an impact on the development of the intercultural competences of the campus population.

The objectives of this thesis were:

- to observe which components of the intercultural competences participants of the internationalization processes developed on Asian and European campuses;
- to observe how the national and organizational cultures of the campus influence the development of the intercultural competences;
- to find out the differences and similarities in internationalization of higher education and research in European and Asian contexts;
- finally, to observe the differences and similarities in the internationalization of general campuses and specialized faculties (Models: Dental Schools and Implant Dentistry Research and Education Groups), to investigate how the specific ecosystem of a specialized field and local leaderships of internationalization impact the general patterns of internationalization met at a University.

An ethnographical case study approach was used and a mixed methodology of evaluation of the internationalization of a campus has been developed. A quantitative methodology using the ISAIAS (Intercultural Sensitivity Academic Index & Advanced Standards) FAST (Fast Assessment Screening Test) questionnaire and a qualitative approach (observation, participation and interviews, etc.) were applied on a population of students, faculty and staffs. Data were gathered during professional activities on the general campuses and in dental schools in Spain (University of Granada), South Korea (Chonnam National University), France (Paris University) and Italy (Federico 2 Naples).

Main data were regrouped in 3 articles, answering directly to the main objectives of this Thesis. The general discussion section of the Thesis will make the synthesis of all these results, as data are spread between the 3 levels of analysis: general campus,

specialized Faculties, and specialized research and education groups.

This work highlighted that the national and organizational cultures of each university impacted the development of intercultural competences of the participants, each component of intercultural competences being affected differently. However, even if these European and Korean Universities have different patterns, this field study and FAST scores highlighted that institutions and groups were facing similar difficulties. The comparison between general campus, specialized Faculty and research/education groups revealed that development of intercultural competences and internationalization of research and education are critically dependent on the presence of local leaders of internationalization in the various disciplines.

Finally, this thesis is completed by a Report about Internationalization prepared for the Presidency of the Paris-Sorbonne University (Annex); the analysis of the general campus and of the various specialized schools or groups revealed the same observations, i.e. the national and organizational cultures of this major historical University affect the development of intercultural competences and their components in a specific way on the campus, and the development of internationalization and its impact are strongly dependent on the presence of a leadership of internationalization at the ground level of each group.

7. Theoretical Framework of this Thesis

This chapter will present the theoretical background of this doctoral Thesis. Responding to research approach - process and competences development approach to internationalization, some literature about importance of campus culture in development of interculturally aware professionals will be brought (Manning et al., 1991; de Wit et al., 2015a, 2015b). To make the match between culture of the campus and development of intercultural competences among its population, the diversity *impact theory* of Gurin (1999; Gurin et al., 2002) based on *developmental growth* of Piaget (1971) was used.

The theoretical framework on impact of national culture and organizational culture on development of campus culture and through it development of intercultural competences among campus population will be presented. The impact of both national and organizational culture on internationalization of higher education and research and through it on development of intercultural competences on the campus will be taken into consideration.

The theory of internationalization of higher education and research with special focus on campus internationalization will be presented.

The next important point of this theoretical framework will be dedicated to intercultural competences: its intercontinental definitions, their process development and their possible ways of evaluation.

7.1. Matching the research objectives with theoretical framework

The main hypothesis of this PhD Thesis was that the internationalization of higher education and research is impacted by the national culture and organizational culture of a university and that both cultures impact development of intercultural competences of the campus population.

In order to meet our main hypothesis the research questions of our study were as followed:

- 1. Which components of intercultural competences participants of the internationalization process developed on Asian and European campuses?**

2. **How national culture and organizational culture of the campus influence the development of intercultural competences (South Korea, France, Italy and Spain)?**
3. **What are the differences and similarities in internationalization of higher education and research in Asian and European contexts?**
4. **What are the differences and similarities in the internationalization on general campuses and specialized faculties (Dental schools and Implant Dentistry Research and Education Groups)?**

However to be able to answer for these questions firstly other questions should be answered:

- How national and organizational cultures impact development and implementation of internationalization of higher education and research on general campuses of the Granada University, Paris-Sorbonne University, Chonnam National University?
- Which dimensions of intercultural competences are developed on the general campus among academic staff who participate in international research projects of the Granada University, Paris-Sorbonne University, Chonnam National University?
- Which dimensions of intercultural competences are developed on the general campus among students (through curricular and extracurricular activities) of the Granada University, Paris-Sorbonne University, Chonnam National University?
- How dental schools of the Granada University, Paris University, Chonnam National University and Federico II University internationalized higher education and research taking into consideration impact of national and organization culture?
- What is the development of intercultural competences (through curricular and extracurricular activities) among dentistry students on the campuses of the Granada University, Paris University, Chonnam National University and Federico II University?
- What kind of internationalization strategy in higher education and research is implemented in highly specialized faculty like dentistry of the Granada

- University, Paris-Sorbonne University and Chonnam National University, taking into consideration impact of national and organization culture on the process?
- What is the impact of participation in international research projects on development of intercultural competences among academic staff of specialized dental implants group?
 - What is the development of intercultural competences (through curricular and extracurricular activities) among postgraduate students in dental school of the Granada University, Paris University, Chonnam National University and Federico II University?

At the beginning of this chapter should be mentioned that the theoretical framework which has been chosen for argumentation of the proposed research hypothesis is composed by the diverse theories that were built by Scholars from different countries, however, mainly from the USA and Europe cultural contexts. Being aware, that concepts emerge in certain historical, economical and social contexts, the nationalities of their authors will be mentioned as a form of information about the background of those terms or theories. Some of the concepts are more universal while other less. Some of the concepts/ terms are used in different parts of the World while having different meanings that are shaped by national narratives and practices.

The French term “culture” has Latin origin “*cultura*” and has been firstly used in middle XV century. The term “*internationalization of education*” was created on the USA campuses, similarly like the term of “*intercultural competences*” or “*global competences*.”

The chapter will be divided in five main points that brings short explanation of the theoretical framework of this Thesis (**Figure 29**).

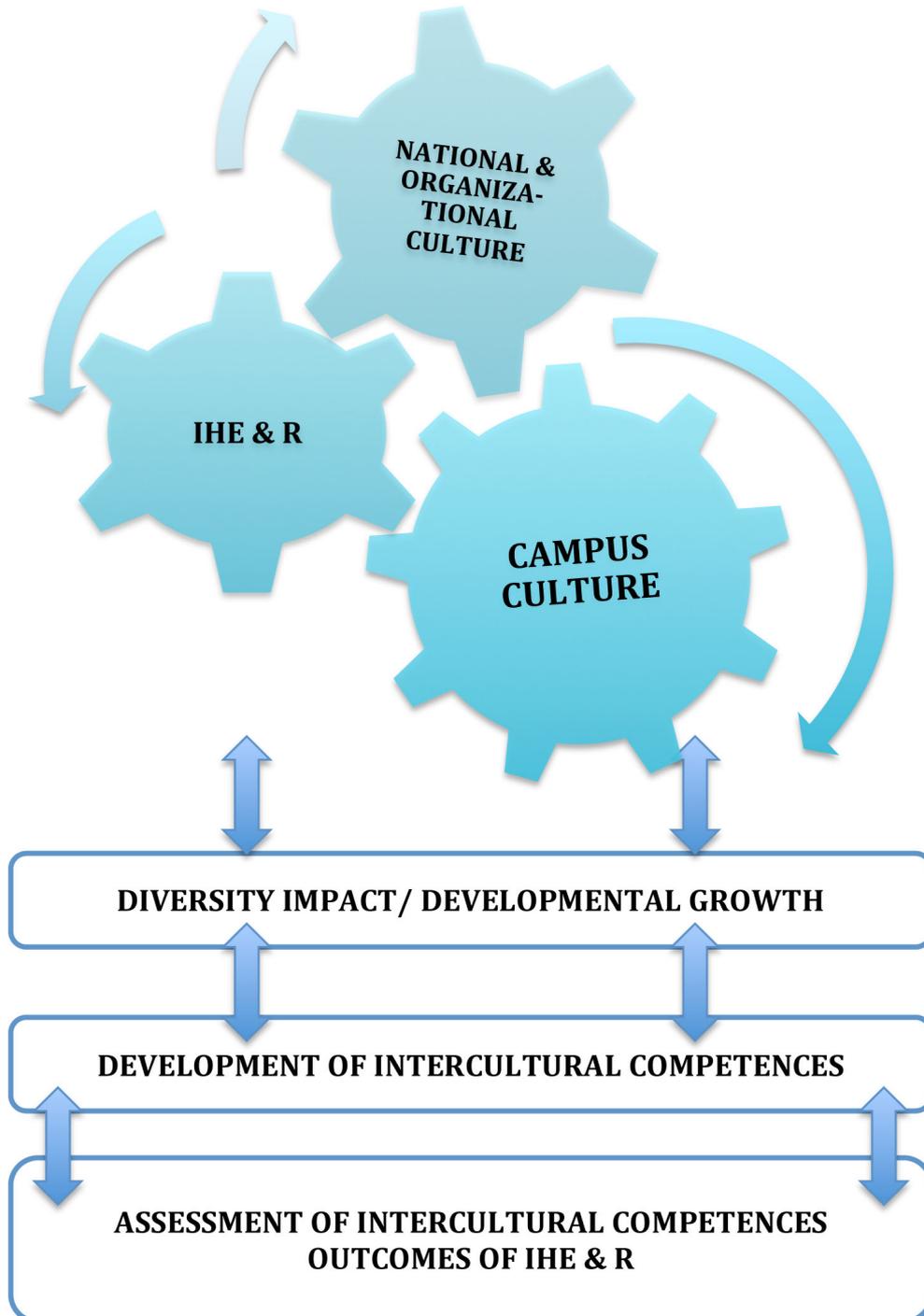
- a) Significance of campus culture in the development of attitudes towards diversity and intercultural competences among participants of a campus will be explained by the theory of diversity impact of Gurin (Gurin et al., 2002) based on the theory of developmental growth of Piaget (1971).

- b) Theoretical framework for the internationalization of university proposed by Keller (1983), Davies (1990), de Wit and Knight (de Wit et. al., 2010). This point helps to understand and analyze how different actions of internationalization efforts (planned factors) are planned and implemented in order to develop specific culture on the campus; in this Thesis it was consider that, very complex outcome of internationalization efforts with which development of cultural diversity goes hand in hand on a campus, can be assessed through development of intercultural competences (ICC) among campus' stakeholders.
- c) The role of national culture (Hofstede, 2001, 2010), organizational culture (Handy, 1995; Schein, 1992) and Confucians values (Lee, 2001) in Korean academic environment as unplanned factors (called also in this work "silent factors") which take active role in the creation of the campus culture, in the implementation of internationalization strategy and through these processes in the impact on the development of ICC among stakeholders.
- d) The components of the intercultural competence proposed by Deardorff in her PhD Thesis (2004) will be used in order to see the impact of campus culture created by internationalization efforts (planned factors) and national and organizational culture on the development of ICC among campus population (in case of this study: students and academic staff of general campuses, students and academic staff of specialized (dentistry) campuses).

Figure 29. Creation of university culture and its impact on the development of intercultural competences among campus population

Assessment of internationalization of higher education through evaluation of intercultural competences among campus stakeholders

Process and competences development research approach



Sources: Own elaboration

7.2. Role of diversity impact and developmental growth in the development of intercultural competence on the campus (campus culture)

Last decades *multiculturalism* became one of the important objectives educational institutions and universities have all over the world. Before the theories that built theoretical framework of this Thesis will be presented, the relationship between educational institution and *multiculturalism* will be brought.

7.2.1. University versus Multiculturalism

There is two different discourse about intercultural education, universality and multiculturalism – the American and Francophone. Where in this debate is situated Asia?

According to the American Scholar - Strong (1986, as quoted in, Manning & Coleman, 1991) “*multiculturalism is proposed as a goal toward which higher education institutions can grow.*”

“The multicultural organization is one which is genuinely committed to diverse representation of its membership; is sensitive to maintaining an open, supportive and responsive environment; is working toward and purposefully including elements of diverse cultures in its ongoing operations; and . . . is authentic in its response to issues confronting it.” (Strong 1986: 367).

As it could be appreciated above, this definition involved communication, knowledge of different culture, as well as appreciation of differences. A multicultural organization is one, which understood the cultural dynamic and interplay among cultures as well as that organization is productive, inclusive and effective. This kind of organization values the achievements and talents of all communities perceiving them as one of its ethical and moral purpose.

On the other side, French Scholar Martine A. Pretceille intents to show that intercultural education is characterized by two conflicting approaches – an exacerbation of differences and a universalism, that tends to be confused with the ethical principle of university. For her “*learning to observe, listen, and be attentive to others is the way in which we express otherness, why avoiding what one may call the ‘learning of a culture.’ This experience has to be acquired and developed.*” Thus, taking into consideration

culture does not mean the mere introduction of an additional variable, but mainly aims to build up a humanism of the otherness (Pretceille, 2011:91).

Below, the theories that will be presented show how a university and its institutional approaches face the challenges of internationalization related closely to cultural diversity. Reflection on examination of approaches helps to find out the most adequate strategy the university would like to move for.

7.2.2. What is the impact of campus culture on its population?

Like many universities in major cities, one university is a micro-cosmos of the world. After all, *“the word “universe” is in university, so universities are in the world and the world is in the university”* wrote Sadlak (2007). The more diverse the World is, the more diverse will be campus population. *“The multicultural environment is not a perfect place”* stated American scholars in 1991 (Manning & Coleman-Boauwirtght, 1991). The diverse preferences and perspectives involved in its cultures make from environment chaotic and difficult to administer place. In organizations, where people have similar cultural backgrounds and cultural values, some consensus and agreements can be ensured. In case of *“building consensus in a multicultural organism it is a practiced art”* highlighted American scholars already with the end of the previous century (Manning & Coleman-Boauwirtght, 1991), and still this observation and opinion is very actual. Moreover, with the enlarged people mobility and focus on internationalization of higher education, this situation is becoming more and more present in the European and Asian campuses. Even if the European or Asian contexts are still very different than American one, however, the internationalization theory which started in American campuses became to be more and more present in the education of other parts of the world. Taking into consideration this fact, some lessons can be learned.

7.2.3. What elements impact culture of university campus?

In last decades researchers and managers have examined the concept of culture in a variety of settings in order to develop more consistency and productivity in the workplace (Schein, 1992; 1999). At the university level, culture can be defined as the certain values that leaders tray to incorporate in their organizations (Fralinger & Olson,

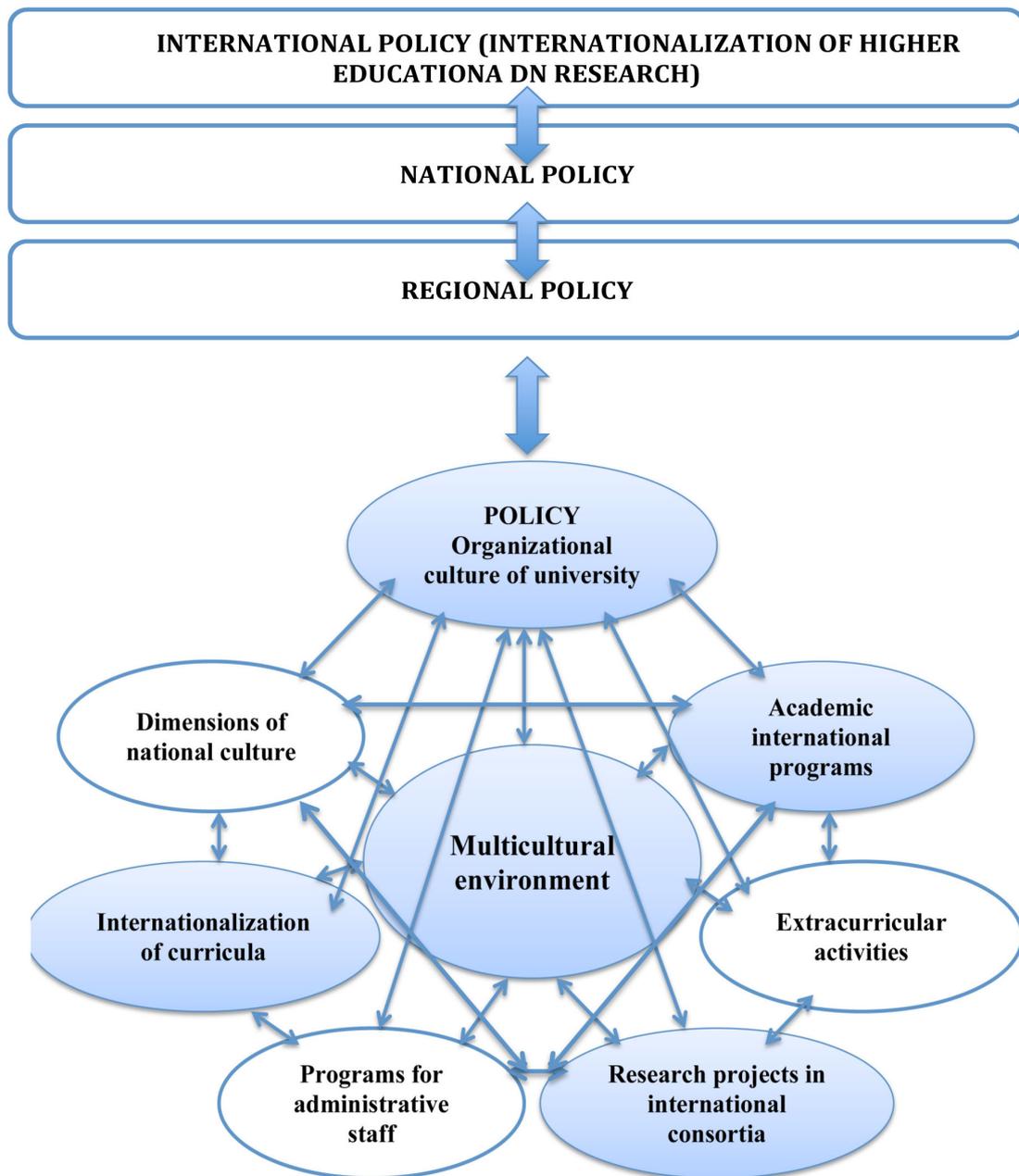
2007; Wisniewska, 2011; Wisniewska, 2014a; 2014b, 2014c). The culture of a campus is seen also as the **values and beliefs of university stakeholders** (leaders, administrative and academic staff, students, board members, support staff), based on tradition and communicated verbally and nonverbally (Deal & Kennedy, 1982; Bartell, 2003). Organizational culture (values and beliefs) is a primary component of decision-making process in university (Tierney, 1988; Bartell, 2003; Fralinger & Olson, 2007; Wisniewska, 2011; Wisniewska, 2014a; 2014b; 2014c). In order for administrators, faculty, and staff to effectively coordinate an efficient academic environment, constant assessment of culture and changes is necessary (Fralinger & Olson, 2007).

Many factors impact culture created on a campus. They could be unplanned factors (such as national culture and geographical context, some aspects of organizational culture), as well as planned factors (internationalization strategies, some aspects of organizational culture such as missions, visions, policies, etc.) (Wisniewska, 2011). The principal hypothesis of this research was that national culture and organizational culture impact development of intercultural competences on a university campus. Through the analogy, where national culture impact (1) organization culture (Schein, 1992; Hofstede & Bond, 1988; Hofstede et al., 2010), (2) economic policy (Wursten, 2016), (3) change management (Wursten, 2008), (4) leadership styles (Wursten, Lanzer & Fadrhonc, 2010), (5) education (Wursten & Jakobs, 2013), and (6) culture in higher education (Smerek, 2010) it was hypothesized that national culture impacts also development of intercultural competences on a campus through planned and unplanned factors which build its culture.

According to Wisniewska's research (2011), among the elements which influence development of multicultural environment on campus and through it development of intercultural competences among campus population should be mentioned: planned factors - policy of internationalization of higher education and research, national policy, regional policy, policy of a university and its organizational strategies such as international strategies and others, academic international programs, extracurricular activities, research projects in international consortia, formation programs for academic and administrative staff, internationalization of curricula, internationalization of curricula and unplanned factors – dimensions of national culture

and organizational culture which impact silently all planned initiatives and their implementation on the campus as well as unplanned elements (**Figure 30**).

Figure 30. Process of Internationalization of Higher Education & Research, and development of multicultural environment; Impact of national and organizational culture on development of intercultural competences



Source: Adjusted (updated) from Wisniewska, 2011

This Doctoral Thesis will investigate more in depth how national and organizational culture impact development of intercultural competences on the Asian and European campuses, as well as if exists any difference in development of ICC in relation to their cultural context.

Apart of human interaction and invisible, however, existing elements of the campus culture such as patterns of institutional history, mission, norms, traditions, values, practices, beliefs and assumptions which guide the behavior of individuals and groups, Kuh mentioned also **physical settings and artifacts** as a elements of culture of higher education institutions (Kuh, 1993, p. 2). These very often visualized national culture and aperture toward international dimension as well as other cultures (Wisniewska, 2011).

In the context of a campus culture, physical artifacts are the very fixed and semi-fixed elements as defined by Rapaport (1982). Usually they have functional purposes and are capable of conveying nonverbal messages about campus culture (Hormuth, 1990; Kuh & Whitt, 1988; Strange & Banning, 2001). Banning and Bartels (1997) defined physical artifacts as these that make up an institution's physical environment. These also will be taken into consideration in this Doctoral Research.

It could be observed that in a mono-ethnic countries dominates one culture on the campus - it is national culture (example, South Korea; Middle and East Europe countries). In the countries where historically the society is composed of many different cultural groups (example the USA, Canada, Australia), the campus culture has become to reflect this diversity, mostly through the physical presence of the diverse population. In both cases a strong national paradigm is present (example, the USA²⁶). There is also a case of the countries that their societies become very multicultural²⁷ during last decades and their campuses represent that phenomenon in the framework of national culture (example, Norway, Nordic countries, France). There are also campuses which cultural diversity is enriched mostly by international students (examples: Spain, Italy).

²⁶ In the United States campuses the literature on the subject mentions *dominant culture*- as a “*White culture*” (Manning et al., 1991).

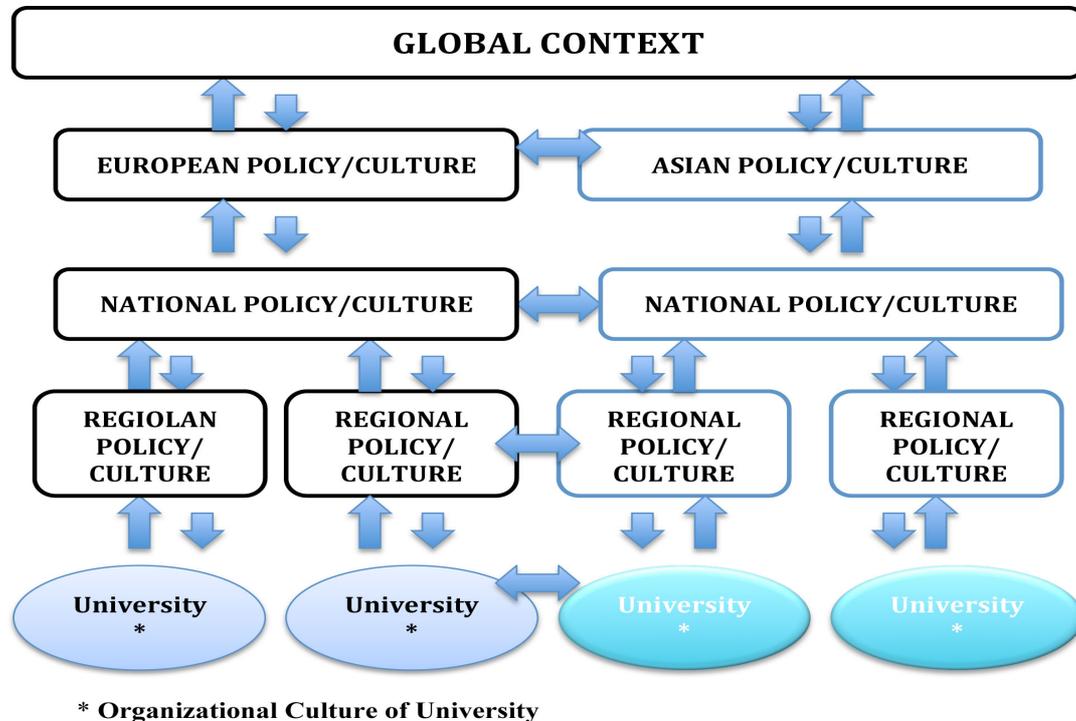
²⁷ The term multiculturalism has been used in Europe to describe the changing cultural composition of the populations.

There is no doubt that the characteristics of campus culture (national culture and organizational culture) form the basis for ways of behavior and action in educational institution. Followed that, it is logical that campus' culture has formative character on its populations: students who spend 3 or 4, 5 and more years of their study on the campus, and administrative, as well as academic staff who spend many years (sometimes whole life) in its environment. The ways of actions become a norm against which behavior is shaped and judged. Traits and actions, which differ from those seen as a norms are perceived as abnormal and generally rejected. According to the Giroux and Wills (1988, 1977; quoted in Manning et al. 1991) takes time and efforts to teach cultural norms. People learn it whole life and the university period is one of the most important in educational process of the future professionals.

“The reality of a predominant culture on campus can create a hostile and potentially dangerous environment” (Fleming, 1984) or welcome international dimension and cultural diversity. If the students, with different cultural backgrounds cannot find anything to identify with on the campus, they will feel isolated, alienated, invisible, and perceived that they are not welcomed - wrote Fleming about these experiences observed on the American campuses (Fleming, 1984). Moreover, existence of administrative and economical problems provokes frustration and even depression. Those impact academic performance and even lead to drop out. Furthermore, the interactions among different stakeholders on the campus they can encourage or discourage intercultural attitudes.

Following Manning (Manning et al., 1991: 370) it could be considered that, culture of a campus will change depending on recognition of the needs, as well as planned and introduced strategies. Furthermore, following the process approach to internationalization (this study is based on), should be said that global, international, national and regional policies shape decisions, which will be taken in order to develop strategic planes of higher education institutions and its stakeholders, and vice versa; global awareness among campus population about university policies and culture, regional policies and culture, national policies and culture, international policies and diverse cultures permit to take the most adequate decisions for shaping own and society future (**Figure 31**).

Figure 31. Contextual dependencies in the process of internationalization of higher education and research and its impact on the development of intercultural competences on a university campus



Source: Own elaboration

7.2.4. How the campus culture impact development of intercultural competences? The Theory of the diversity impact/ developmental growth

In the XXIst century, university becomes an institution in charge of educate competent professionals and citizens for the future World. The European Policy papers (Bologna, Copenhagen, Lisbon processes) help in recognition of qualifications between countries facilitating mobility of the European citizens. The European experiences convinced Asian region to develop similar educative convergence within Asian countries. However, how really Asians and Europeans universities preparing its population (students, administrative and academic staff) to face challenges of massive educational and professional movements? How they are assessing the impact of the internationalization efforts on their campus population?

The countries with major level of multiculturalism in societies have noticed, that simple recognition of the hard skills between states is not enough, in order to efficiently perform in a workplace. The flexibility, needed in a host place as well as among incomers, is still something to be learned. Some of the universities from the USA, Canada, Australia and Nordic European Countries replied to this challenge by creation of diversity on their campuses (inclusion policies), where cultural interaction and efficacy can be learned.

As Grutter and Bollinger (2003: 306, 616) said *“Diversity promotes learning outcomes and better prepared students for a constantly increasing diverse workforce, for society and for the legal profession (...) it is clear that (...) increasingly global market can only be developed through espouse to widely diverse people, culture, ideas view points; (quoted in Wisniewska, 2011). This sort of thinking was taken very seriously also in Asia, where global competency becomes very attractive and fashionably world within Academia.*

However, following the literature on the subject can be noticed, that efficient internationalization where everyone would like to educate global leaders, it is not easy. According to Jayakumar (2008: 617), despite the long-term efforts in the field of intercultural, international and inclusive education, the USA colleges are failing to educate students, who can *“work effectively with individuals whose norms, preferences, beliefs, styles, and values are quite different from their own”* (Wisniewska, 2011).

On the other side, *“Study of college students has demonstrated a relationship between campus racial diversity and student growth, in both personal and academic spheres, during the college years”* (2004; Engberg, 2007; Gurin 1999).

Hence, Gurin, Dey, Hurtado & Gurin (2002) developed a theoretical foundation for explaining the benefits of racial diversity on educational outcomes rooting in theories of cognitive development (developmental theory) and social psychology. In other words, these scholars presented the theory of impact of multicultural environment on students' development. Gurin et al argued that traditional age college student are at step of life when they poses the developmental maturity to go through a greater understanding of themselves, and how they fit into the world around them (Ericson, 1946; Gurin, 2002; Wisniewska, 2011).

Moreover, the *Developmental theory* (Piaget, 1971) explained that, people generally operate in a state of automatic thinking governed by previous learning, schemes, stereotypes and scripts (Langer, 1978; quoted by Jayakumar, 2008). However, discontinuities in the cycle of automatic responses (provokes in this case by the diversity environment) promote active thinking and **developmental growth** (Piaget, 1971). According to that theory (developed in Swiss environment), most people grow up in a bit isolated environments such as their family or their neighborhoods (Orfield, 2001; Jayakumar, 2008). Gurin et al (2002) argued that exposure to cultural and racial diversity facilitates this valuable state of disequilibrium. These changes occurred in the minds cause great anxiety and discomfort, and **those elements stimulate active thinking.**²⁸ Following this theory, when students need to negotiate and process differences between their current experience in college environment and what they used to at home, a state of disequilibrium is created and cognitive growth is accelerated (Piaget, 1971; Gurin, 1999, Gurin et al. 2002; Hurtado, & Ponjuan, 2005; Jayakumar, 2008; Wisniewska, 2011).

Over last years, the literature on internationalization of higher education and research focus on the assessment of the internationalization. In 2004, Deardorff in her Ph.D. research hypothesized how intercultural competences of students could be evaluated as outcomes of internationalization efforts run on the campus. In other words, it was a theoretical step towards *evaluation of diversity impact build at a campus* (Wisniewska, 2011).

Following Deardorff's study (2004), it can be observed that specialist in the internationalization of education (in the United States campuses) agreed on the assessment of the internationalization efforts of the campus, through assessment of intercultural competences. These findings were convenient to this (our) research and they were used largely to meet the first objective of this study: "to observed which components of the intercultural competences participants of the international processes developed on Asia and European Campuses" as well as other objectives which were

²⁸ Similar argumentation can be found in theory of cognitive dissonance proposed by Robert Festinger in 1956. "It refers to the discomfort felt when there is a discrepancy between what you already know or believe, and new information. It occurs when there is a need to accommodate new ideas. The vital thing is knowing how to drive a kind of intellectual wedge between current beliefs and 'reality.'" Festinger, Leon, Henry W. Riecken, Stanley Schachter, "When Prophecy Fails: A Social and Psychological Study of a Modern Group that Predicted the Destruction of the World", University of Minnesota Press (1956). Reissued in 2008 by Pinter & Martin, cited in Wursten, 2008.

possible to reach through the assessment of the intercultural competences among different populations of the researched campuses.

In next subchapter it will be theorized the impact of national and organizational culture on the campus culture and methodology of teaching-learning process and through these on the development of intercultural competences among campus stakeholders. Afterwards, some definitions of intercultural competence regarding geographical positions of their authors will be presented (having into consideration context of their emergence), secondly the process of ICC development will be present using Deardorff's model and finally some way of assessment of ICC will be brought.

7.3. Impact of national culture and organizational culture on campus culture and the development of intercultural competences

Cultural analysis of higher education institutions began in the 1960s with research of Clark (1963), Clark and Trow (1966) and Riesman and Jencks (1962:104) seeing “*the extent that a college is a subculture, with its own idiosyncratic customs and concerns, an anthropologist can study it in much the same way that he studies a primitive tribe or community*” (quoted in Smerek, 2010). In the 1980s the cultural perspective rapidly expanded (Allaire & Firsirotu, 1984; Barley, Meyer & Gash, 1988; Denison, 1990, Weick, 1985; cited in Smerek, 2010). In that era culture awoken a big interests among business managers because of the Japan's economic success (Ouchi & Jaeger, 1978). Organizational scholars seen it as a new perspective to understand organizations (Alvesson, 1993; Jelinek, Smircich & Hirsch, 1983; Schein, 1996; cited in Smerek, 2010). The most important academic items in this subject were Ouchi's *Theory Z* (1981), where he described approach observed among Japanese companies about psychological well-being of the employee. Furthermore, should be mentioned *In Search of Excellence* (1982) prepared by Peters and Waterman and *Corporate Culture* (1982) by Deal and Kennedy (Smerek, 2010).

In organizations of higher education, culture is shaped by many complex internal and external influences. Within the organization, culture is a result of an organization's unique history (Clark, 1970, 1972), its leadership (Schein, 1983, 1984, 1985, 1990,

1992) and critical events (Pettigrew, 1979; cited in Smerek, 2010). According to Van Maanen & Barley (1984, 1985) culture is also shaped by subcultures of faculty and administration. Within these groups, faculties have their own cultures related with disciplinary identities (Bacher, 1981, 1987, 1989; 1994; Lee, 2004), and administrators are divided also into functional grouping (Smerek, 2010).

About state of organizational theory in Higher Education (especially in American context) widely published Peterson (et al., 1986) and Bastedo (et al., 2012, 2005, 2007, 2009), among others.

Passing to the era of internationalization Martin Bartell (2003) proposed a university culture based framework build on Sporn's (1996) organizational culture typology focus on the relationship between strength of university culture and adaptability of university environment and innovation.

To meet second, third and fourth objective of this Thesis where the national and organizational culture will be taken in the consideration,

- ✓ 2nd objective: *“to observe how the national and organizational culture of the campus influence the development of the intercultural competences among campus population”*,
- ✓ 3rd objective: *“to find out the differences and similarities in internationalization of higher education and research in European and Asian contexts”*,
- ✓ 4th objective: *“to observe the differences and similarities in the internationalization of general campuses and specialized faculties”*,

the results of Deardorff's study (2004) about evaluation of intercultural competence as outcomes of internationalization processes and proposed in her study the list of components of intercultural competences, were used.

As suggested Wisniewska's research (2011, 2014a, 2014b, 2014c), national culture and some of the elements of organizational culture (described by Handy, and analyzed later on in this doctoral Thesis) are unplanned factors which impact the international strategy and development of the ICC. It was hypothesized for the objectives of this Thesis, that unplanned factors called also in this research “silent

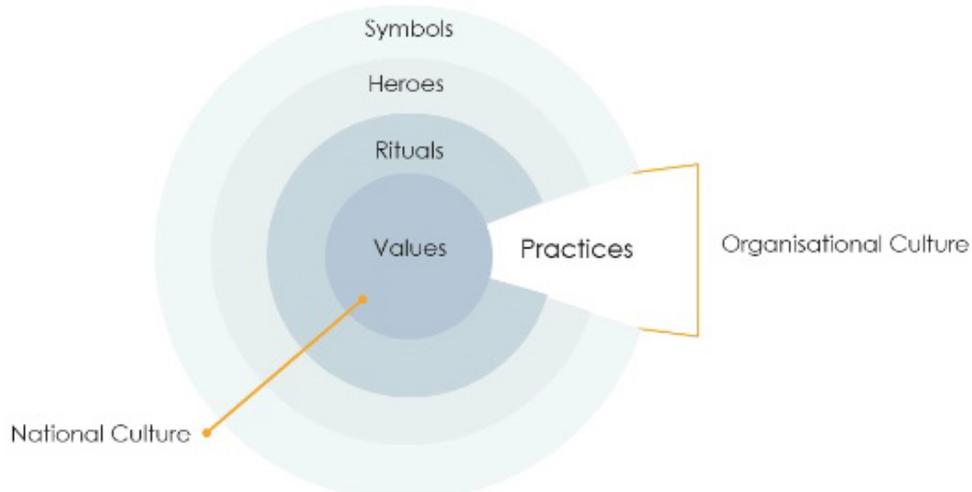
factors” impact and determine approaches to, development, implementation, results and evaluation of the internationalization of higher education, as well as development of ICC among campus population. Very limited number of studies about impact of national culture on organizational culture of a university was found (Smerek, 2010). Barbara Fralinger and Valerie Olson (2007) published an article in which they try to determine how departmental culture affects the perceptions, thoughts, and feelings of students. No study on impact of national and organizational culture on development of ICC has been found. It is especially important as in the literature on the IHE&R or development of ICC lack of studies or rapports which treat national and organizational culture shows indirectly - the lack of awareness among leaders of university and other stakeholders about importance of these unplanned, however, existing factors.

7.3.1. National cultures and its impact on campus culture and development of intercultural competences

For analyzing impact of cultural and organizational contexts on a campus climate and through it on ICC development, it was taken one of the leading paradigms in the cross-cultural research – Hofstede’s theory of cultural dimensions (2001, 2010). Hofstede (Dutch social psychologist) defined culture as “*the collective programming of the mind that distinguishes the members of one group or category of people from others*” and this definition match to the objectives and approaches of this study. Moreover, his concept of **dimension of culture** – perceived as a basic problem to which different national societies have over time developed different answers – match and serve very well to this comparative international study case.

Hofstede’s study visualized culture as model of an onion (**Figure 32**). This research focused principally on values, which impact practices (rituals, heroes, symbols) and organizational culture.

Figure 32. Different levels of culture



Sources: Hofstede, 2010

Four independent dimensions identified by Hofstede in a study which involved over 76 countries were: **Power Distance** (large versus small), **Uncertainty Avoidance** (strong versus weak), **Individualism versus collectivism** and **Masculinity versus Femininity**. Later on, fifth dimension influenced by Confucian culture (study supervised by Hofstede) was added – **Long Term Orientation versus Short Term Orientation**. Original data were based on a large IBM database for which 116,000 questionnaires were used in 20 languages. In 2010 (Hofstede, et al., 2010), **Indulgence versus Restraint** dimension was added. The positions were expressed in score on a 0-100 point scale. The results of this study were already validated against 40 cross-cultural studies in different disciplines. This conceptual framework has been used in the first author's research on the evaluation of the internationalization in Norwegian and Spanish campuses (Wisniewska, 2011) and it will be used in this Thesis to analyze differences in internationalization processes of higher education and research (on the campuses) and intercultural competences development in different cultural contexts.

a) The Power Distance (PDI) dimension expresses the degree to which the less powerful member of a society agrees and expects that power is distributed unequally. The place people take in the society or organization is accepted and does not need further justifications. In the translation of this dimension into our study at the level of

the organization in the educational institution it is very visible in the relations between subordinates and superiors. A large gap means that managers often do not share their knowledge with the staff, the feedback is rarely present, because the supervisors do not accept the fact that they could learn something from subordinates. On the other side, the subordinates do not have habit to show their knowledge, because they do not wish to be perceived that they are more skilled and resourceful than the supervisors. They are afraid that, it could negatively affect their possible future promotions (Michailova & Hutchings, 2006; Wisniewska, 2011; 2014a; 2014b; 2014c). This cultural dimension impacts significantly the implementation of internationalization efforts in the university on the administrative, academic and students level. The same gap is taught in the teaching-learning process. The methodology of teaching within higher power distance culture is usually teacher centered with limited group discussions and enforced memorization. The teacher as representation of power is always “right” and cannot show hesitations or lack of knowledge because it would be perceived as an incompetency. The international collaboration between members of university with high power distance and low power distance is challenging.

While the work on this PhD Thesis was in progress, the article of Wursten and Jacobs (2013) about the impact of culture on education has been published. Their contribution to this subject (based on Hofstede’s theory of cultural dimensions) goes exactly with our international observations and objectives of this Doctoral Thesis. Many studies have highlighted already the influence of the faculty (teachers) on the internationalization outcomes and development of intercultural competences, mentioning this group as a crucial in these complex processes (Gopal, 2011).

Wustern and Jacobs’ work verbalized the silent force of the culture in the teacher-students practices, while, it was hypothesized in this Thesis that the national culture of pedagogy/methodology impacts development of intercultural competences. These Dutchman trainers in intercultural management (with over twenty years of experience in the field) presented relation between national culture and education in the following way (**Figure 33**).

Figure 33. Implications of Power Distance on Teaching

Implications of Power Distance on Teaching	
Low	High
Student oriented. Premium on initiative	Teacher centered. Premium on order
Teachers expect student to initiate communication	Students expect teacher to initiate communication
Teacher expect students to find a new paths	Students expects teacher to outline paths
Students allowed to contradict & criticize	Teacher never contradicted to criticized
Effectiveness of learning is a function the amount of two-way communication	Effectiveness of learning is a function of the excellence of teachers

Sources: Wursten & Jacobs, 2013

b) Individualism versus collectivism (IDV) – in highly individual societies (Western countries) this dimension creates the culture where individuals are expected to take care of themselves and their close family. In collectivism the links between people, families, and groups are much stronger and the expectation of look after in exchange for loyalty is very present. People self image will be defined in terms of “I” or “we”. In individualist culture values are focus on the person, while in collectivist culture person identity comes from social networks. There is also a difference in communication styles between more individualist cultures (more explicit communication) and collectivist culture (more implicit communication).²⁹

The collaborative learning becomes very fashionable in the era of internationalization of higher education. Generally, it could be assume that the processes of knowledge generation and its transfer into the community are favored by collectivism.

²⁹ Implicit communication – contains facial expressions, gestures, body languages, postures, vocal qualities in order to make message the most rideable. While, explicit communication is about what a manager says or writes and usually are very straightforward, clear and direct.

Figure 34. Implications of Collectivism vs. Individualism on Teaching

Implications of Collectivism vs. Individualism on Teaching	
Collectivism	Individualism
Students only speak up when called on by the teacher	Students speak up in response to general invitation by the teacher
Individuals only speak up in small groups	Individualist will speak up in large groups
Formal harmony in learning situations should be maintained at all times	Confrontation and challenge in learning situation can be brought into the open
Neither teacher nor student should ever be made to lose face	“Face consciousness” is weak
Teachers expected to give preferential treatment to some, e.g. based on ethnic affiliation or recommendation	Teachers expected to be strictly impartial

Sources: Wursten & Jacobs, 2013

In relation to collectivism vs. individualism dimension, Wursten and Jacobs (2013) observations are presented in **Figure 34**. It can be perceived that the characteristics which has been brought in the **Figure 34** in relation to teacher-students relationship is similar to the relations which are developed and maintain on different levels of the society, firstly between parents - children and later employee and employer. They will be closely related to other cultural dimensions.

Last years, the literature on teaching-learning process enforced group-work and group collaboration. The companies are looking for the professionals who have developed collaboration skills in order to facilitate creativity and the effectiveness through common problem solving. People from individualist societies can have very well trained collaborative skills. But what is happening when they face someone (or they are in) from highly individualistic environment or someone who think and behave differently than his/her previous groups did?

c) Dimension of uncertainty avoidance (UAI) (strong versus weak) expresses the degree to which the members of the society feel uncomfortable with uncertainty and ambiguity. The question always present in this dimension will be related to how the

societies deal with uncertainty of the future. Countries that try to control future keep rigid codes of beliefs, behaviors and usually are not open towards new (not matching with their) behavior and ideas. On the other side, the countries with low UAI are practicing relaxing attitudes, where the practice is perceived as more important than principals.

In relation to uncertainty avoidance dimension, Wursten and Jacobs observations were presented in **Figure 35**.

Figure 35. Implications of Uncertainty Avoidance on Teaching

Implications of Uncertainty Avoidance on Teaching	
Low	High
Students comfortable in unstructured learning situations <ul style="list-style-type: none"> - broad assignments - no timetables 	Students comfortable in structured learning situations <ul style="list-style-type: none"> - precise instructions - detailed assignments - strict timetables
Teachers allowed to say “ I do not know”	Teachers expected to have all the answers
good teachers use plain language	Good teachers use academic language
Students rewarded for innovative approaches	Students rewarded for accuracy
Teachers view intellectual disagreement as stimulating	Teachers vie intellectual disagreement as personal disloyalty

Sources: Wursten & Jacobs. 2013

d) The main characteristic of male femininity vs. masculine culture (Hofstede, 2001; Hofstede et al. 2010) is its strong orientation to promotion and high level of assertiveness. This may be an obstacle in the process of internationalization of the campus, where responsibilities for these actions are carried out by various offices. This characteristic of the dimension can disturb also in international cooperation, as well as intercultural team work. On the other hand, **women’s culture** fosters the development of cooperation through common knowledge (Hofstede et al. 2010).

In relation to femininity vs. masculinity dimension, Wursten and Jacobs (2013) observations were presented in **Figure 36**.

Figure 36. Implications of Femininity vs. Masculinity on Teaching

Implications of Femininity vs. Masculinity on Teaching	
Feminine	Masculine
Teachers use average students as norm	Teachers use best students as norm
System rewards student's social adaptation	System rewards academic performance
Student's failure in school a relatively minor accident	Students failure in school a severe blow to student self imagine
Students try to behave modestly	Students try to make themselves visible
Students choose subjects out of interests	Students choose subjects for career reasons

Source: Wursten & Jacobs, 2013

e) The long-term-orientation vs. short-term normative orientation (LTO) (Hofstede, 2001) is the extent to which a society takes a future-oriented perspective. Societies prioritize differently the past, the present and the future. Societies who score low on this dimension prefer to maintain time-honored traditions while looking at the changes with suspicion. On the other hand, those who have high scores take a more pragmatic approach. They encourage for the efforts in modern education as a way to prepare for the future.

This dimension offers a great propensity for employees to actively participate in slow, long internationalization process. The members of the short-term-oriented societies may be reluctant to participate in internationalization efforts, especially in situations, when the effects are not visible immediately (Wisniewska, 2011).

In relation to long-term orientation vs. short-term orientation, Wursten and Jacobs observations were presented in **Figure 37**.

Figure 37. Implications of Long Term Orientation on Teaching

Implications of Long Term Orientation on Teaching	
Low	High
Focus on asking “Why”?	Focus on asking “How”?
Students want to find the one and only solution	Different answers possible. “Many truths”
	Strong emphasis on education as obligation to presents and society
Stability rated as the most important virtue	Perseverance rated as the most important virtue

Sources: Wursten & Jacobs, 2013

7.3.2. Organizational culture and its impact on campus culture and development of intercultural competences

In order to address the second research objective:

*“to observe how the national and **organizational culture** of the campus influence the development of the intercultural competence”*

besides of the national culture (which was presented above), the concept of organizational culture should be evoked.

The organizational culture of an educational institution is another important dimension that need to be taken into consideration in the planning of internationalization of education and research (Bartell, 2003), intercultural collaboration between universities or between universities and other kind of institutions. The impact of organizational culture should be also considered in the process of intercultural competences development as it is influencing strongly climate of the campus (Wisniewska, 2011; 2014a; 2014b; 2014c).

In order to analyze organizational culture of a campus it was convenient for this study to follow the division of organizational culture on unplanned factors (called also in this study “silent factors”) and planned strategies (Wisniewska, 2011) such as internationalization of campus/internationalization of higher education and research.

The theoretical framework for the analysis of the unplanned factors of organizational culture of a campus (in this study) will be given by the theory of organizational culture of Schein (1992, 1999) and Handy (1981, 1986, 1995).

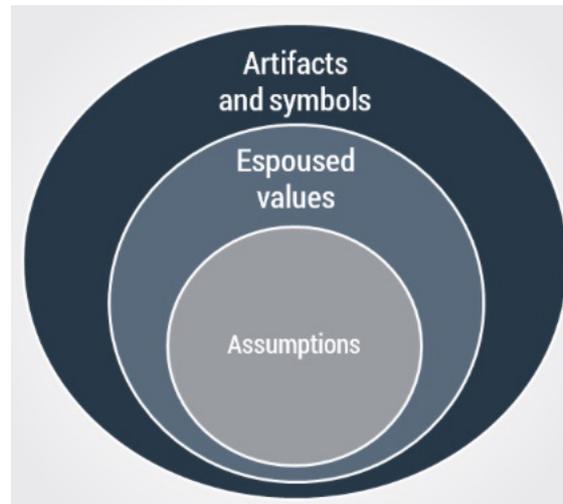
According to American professor Henry Schein³⁰ (1999, 2004) **Organizational culture** is a dominant set of values and standards of conduct specific to the organization encouraged by assumptions about the nature of reality and showed through artifacts-external, artificial creations of the culture. Awareness of the organizational culture helps in the making decision process and reduces misunderstandings, conflicts and frustrations between participants of the process (Wisniewska, 2011).

On the university campus, such as in other institutions, organizational culture is embedded in national culture. The Schein's model of organizational culture (**Figure 38**) shows similarities with onion model of Hofstede's national culture. The most visible elements of both cultures (such **artifacts, symbols**, architecture, clothing, structure) they are in external layers of the models, while the values and assumptions are in the core of the models. They are felt and seen by the all stakeholders of a campus.

Espoused values concern values, standards and rules of conduct. The way the university introduces strategy of internationalization (pedagogical and organizational), objectives as well as philosophies and how the university communicates to different stakeholders of the campus (administrative and academic staff, students, visitors) - following the hypothesis of our study - impact development of intercultural competences.

³⁰ Henry Schein – American renowned professor at the MIT Sloan School of Management. He researched extensively in the field of organizational management. His theory of organizational culture was originated in 1980's.

Figure 38. Organizational culture model levels of Schein



Source: Organizational culture model (Schein) [www.toolshero](http://www.toolshero.com)

The situation can become problematic and the strategies can fail their goals if there is not common line between managers and the basic assumptions of the university. The deepest basic underlying assumptions are very difficult to recognize within, however, they strongly impact unconscious behavior of all stakeholders. They are very important element of campus culture as they are shaping perspective of the world of the people who works here and those who came here to be trained.

In order to better visualize, analyze and understand the culture of a campus as well as offices, schools, faculties which shape also university environment, this study found very useful the theory of culture proposed by Handy (1991; 1986; 1995). His theory was used in the study on organizational culture of Norwegian and Spanish campuses (Wisniewska, 2001). According to Charles Handy³¹ [1995; who followed work by Dr. Roger Harrison (1972; 1995)], four types of organizational culture that explained differences between institutions or offices of same institution, can be mentioned: *Zeus Culture*, *Apollo Culture*, *Aphrodite Culture* and *Dionysus Culture*. In the processes of internationalization of higher education and research, intercultural competences development and international cooperation, the awareness about their existence and its recognition within own institution is a key issue for success and further planning.

³¹ Charles Handy born in 1931 in Irish family; philosopher and specialist in organizational behaviour and management.

In order to bring closer theoretical framework of **organizational culture** according to which the data from the campuses participated in this case study were analyzed, the four Handy's models will be shortly presented (Handy, 1995).

a) The Zeus Culture known also as the Club Culture or Power Culture characterized the existence of a so-called a “*circle of power*” or a “*group holding power*.” Handy illustrates this culture as a spider's web with the most important spiders sitting in the center (**Figure 39**). Control radiates from the center and through the use of personal contacts over procedures. Followers often come from Zeus' family and friends (Handy, 1995 [1978]).

This culture is created and characterized by personality of Zeus, who own control of the processes and the effects. The functioning of institutions depends on his personality. If Zeus leaves its place it is usually due to health problems or by moving to higher position. The nature of the relations prevailing in Zeus's culture institution is characterized by: *apathy, passivity, and lack of involvement as well as discouraging*. This culture appears mainly in some types of institutions (but not only) such as: police, political grouping, army and start-ups situation of all sorts, where the command center needs quick decisions (Handy, 1995).

Figure 39. Zeus Culture (the Power Culture, the Club Culture)



Sources: Handy, 1995: 14³²

³² Handy's book "Gods of culture" first time was published in 1978, 1985, 1991 and 1995. The version used in this work was edited in 1995. The book is using names of the Greek gods in the name of the organizational philosophy; however, most of the examples are drawn from the USA. He studied management in the USA (Handy, 1995:vi).

b) Following Handy (1995), the **Apollo Culture** is often called the culture of transparency and the Role Culture. It is based on a clearly defined power and hierarchy (the director, deputies, heads of teams, their deputies, etc.), which approach on the definition of the job to be done. All positions have clearly described tasks so everyone knows requirements for transition to a higher level. The highest position is not available anywhere in the world and very often depends on the political key. The **Apollo's cultures are observed in the offices and universities. This is the culture of bureaucracy**, represented by the image of the Greek temple, where the pillars visualized the functions and divisions, and these are the strength of the temple (**Figure 40**).

The main characteristic of the Apollo's culture is a control of the process. Apollo check it only to see if the process and the job has been held in accordance with the law; the effectiveness is not important because in this culture the efforts focus on order. *The Apollo style is excellent when one can assume that tomorrow will be like yesterday* (Handy, 1995). Stability and predictability are assumed and encouraged and they are efficient in the environment where the life is predictable. "They usually respond to a changing environment first by ignoring it and then by doing more of what they are already doing. It is a culture which need specific reflection and reflection in the era of internationalization of higher education and research.

The key word in this culture is **law** related with functioning of the institution, because of that, a change is possible just by change of the law.

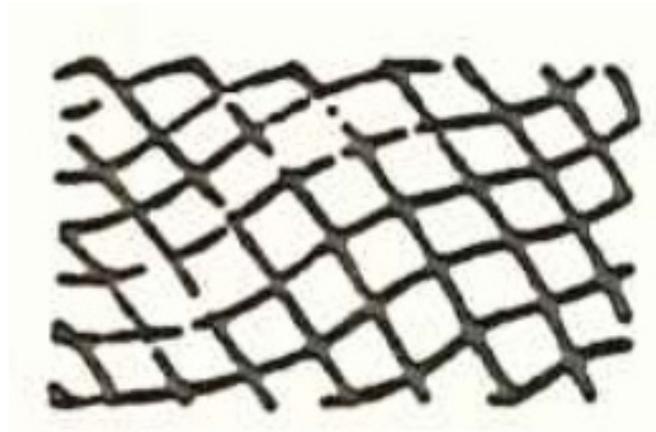
Figure 40. Apollo's Culture (The Role Culture)



Sources: Handy, 1995: 17

c) **The Athena Culture** called also Tasks Culture it is an *experts' culture*. It sees management as the continuous and successful solution of problem, where it is important firstly identifies the problem and after allocates adequate resources solve them. It's flexibility is allows to an institution to change easier. The symbol given by Handy to this culture is a net (**Figure 41**) because it draws resources from different parts of the organization. Contrary to Apollo Culture, the power lies at the interstice of the net, not at the top. Each unit is self-contained, having specific reasonability with the line of general strategy of institution.

Figure 41. Athena Culture (the Tasks Culture)



Sources: Handy, 1995: 21

Priority of this culture is to fluently solve the problems and the leader of project depends on the type of problem or task. This culture recognizes just expertise (talent, creativity, fresh approach, new intuition) as the base of power and influence.

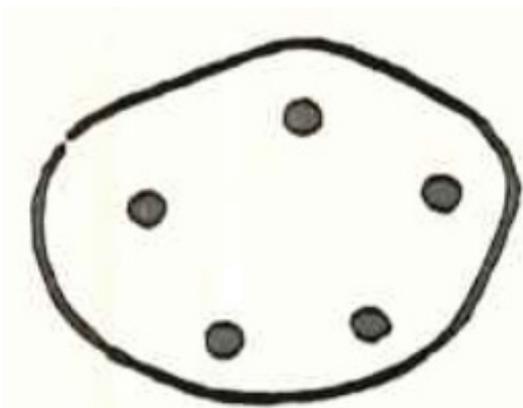
Assessment is in the hands of professionals and Athena knowing that there is not need for control of each stage, she controlled just the effects. The keywords of Athena Culture Handy saw in competence and skills. Because of that the most difficult tasks will go for a mean with experience and who has proven to be efficient.

While in Zeus Culture the most important rule of the system is to know Zeus, Apollo Culture regards at the employees' qualifications and Athena Culture rewards competences and skills. Taking into consideration the characteristic brought above, Athena Culture is favorable for effective international, interdisciplinary and

intercultural cooperation where the flexibility and expertise is highly desired and respected.

d) The fourth type of organizational culture described by Handy is **Dionysus Culture (the Existential Culture, Culture of Freedom)** because Dionysus represents existential philosophy among the gods. This is a very rare type of culture and it can be met in cultural organizations, corporations of doctors, lawyers or in university (in relation to academic dimension - “academic freedom”). Exists a boss, but mostly just formally, without having really any effect on the activities of the others work (academic). Handy its structure presented graphically as follows (**Figure 42**).

Figure 42. The Dionysus Culture (the Existential Culture)



Source: Handy, 1995: 25

Within this culture external effects are controlled and the key words is - freedom. According to Handy in previously described cultures people work for survival of the organization, while here (in Dionysus culture), the organization exists to help to individual achieve his/her purpose. Moreover, professional usually have a job security, allocated territory or sphere of influence and guaranty of independence. The work is assessed, for example through the outcomes of the work team, the popularity, the opinions of viewers, and attendance at concerts, etc. The Irish scholar presented these characteristics in 1978 and 1995 in the observations made in the USA context. The academic freedom nowadays is more discussed.

Knowledge about existence of different kinds of organizational cultures (among many other kinds of classifications) helps managers and consultants to be aware of the different cultures and their potential strengths and weaknesses within the organization. It can help also university leaders and administrators to plan and implement their strategies as well as collaborate recognized culture of their institution partner institution. It is needed to be aware that organization culture will be impacted strongly by national culture, as they are always going together and their evolution in creation of campus culture depends strongly on the personalities of the leaders (Wisniewska, 2014a; 2014b; 2014c).

It is worthy to mention that, the trainers who were developing intercultural training courses for managers of international companies, since long time were introducing knowledge about different types of organizational culture in the program of such course.

The university leaders, academic staff, students, and researchers should be aware about these dimensions, before they take their period of study in foreign institution, or before meetings with overseas stakeholders. It helps to decrease possible cultural shock and to avoid unnecessary misunderstandings. Intercultural climate of a campus well prepared, with clear mission, vision, strategy and adequate communication about them can assist with efficacy to the intercultural preparation of the campus population (Wisniewska, 2011).

7.3.3. Confucian values and Aristotle's reason in Education

In order to understand, explain and analyze culture of Korean campus, additional characteristic of national and organization cultures - their Confucian values - have to be taken into consideration. Even if Hofstede's dimensions of national culture (2001; 2010) give some point of reference to be able understand differences between cultures, and the Scholar added the dimension long-term orientation after research done in Asian countries, the significance of Confucian values in Korean Academia³³ needs additional

³³ Many aspects of Korean higher education are rooted in the country's history. The strongest and oldest foreign influence can be noticed in Confucian philosophy. Confucianism was transmitted to Korea by means of the Chinese character (Min, 1997) in the Three Kingdoms period (57 BC-AD 668). [Three Kingdoms, the Unified Silla Kingdom and the Koryo Dynasty espoused Confucianism as the principle of governmental and educational systems in order to establish the sovereign's power and to keep their political and economic privileges (Kim, 1145 quoted in Lee, 2001). In the Choson period (1392-1910)

attention (Hofstede, 1988; Park, 1996; Lee, 1998; Lee, 2001; Lee, 2000; Kim, 2005; Baker, 2008).

Taking into consideration the two principal thoughts about education, in **East civilization** shaped by **Confucius** and in the **West civilization** shaped by **Aristotle**, has been noticed that, both of them emphasized “*ethical education for building individual civilization, social harmony, and the ideal state*” (Lee, 2001). However, some significant differences have been observed which can explain this and not other way of education and society development: “*while Confucius emphasizes his ethical and political principals without supporting the metaphysical and epistemological theories,*” Aristotle “*justify his ethical and political thought*” (Lee, 2001: 3). While Confucius generally stress self-cultivation through learning, ritual and moral harmony, Aristotle “*primary emphasizes self-actualization through habit and reason*” (Lee, 2001: 3). According to Ozmon and Craver, generally, Western thought stress logic and materialism, whereas Easter thought emphasis intuition rather than sense, the inner rather than the outer word, and mysticism rather than scientific discoveries (1990: 81).

In his philosophical-cultural analysis Lee (2001) observed that, while Aristotle claims that education should be principally concerned with social and vocational skills for happiness, Confucius perceived that education should be related to attitudinal development for moral harmony. While Aristotle view education as a tool to improve human beings’ present state, Confucius view education as a mean to achieve perfection for self-actualization and harmonies in society (Lee, 2001: 16). Confucianism has an aspect of knowledge and learning on the one side, and on the other side, an aspect of “*morality and ethics combined with the primacy of blood*” (Min, 1997).

The social Confucian values maintain in the Korean society impact each aspect of life: (1) encouragement of learning, (2) emphasis on self-cultivation and social morality, (3) class notions and male authority, (4) stress and family regulations and blood ties (5) reverence for rulers, and (6) emphasis on political rules and rituals.

Confucianism was accepted as a source of basic principals for national policy, ethics and education.] Meanwhile also Buddhism was introduced from China about 372 integrating in some way with regional Shamanism. In 1443, King Sejong the Great created the Korean alphabet (Hangul) and later on the Western missionaries introduced the concept of Western higher learning into the Korean language finishing the focus on the Chinese classics (Koo & Suh, 1984). During the period of Japanese colonial rule (1910-1945) and the USA military government in Korea (1945-1948), the Korean higher education system was influenced by foreign structure, curriculum and administration (Lee, 2006). However, the Korean Confucianism is still strongly present in organization of higher education.

In relation to organizational culture – Confucian organization represents the hierarchical and reciprocal relationship among people. According to “*Analects*” of Confucius, human relationship should be regulated by the Five Code of Ethics (O-Rjun) based on basic relationship: the subject to the ruler, the son to the father, the wife to the husband, the young to the old and between friends (Lee, 2001).

Confucian leadership is based on two main themes: personal order and sociopolitical order. In Korea, the educational administrators prefer hierarchically authoritative leadership to reciprocally humanitarian leadership and performing autocratic manager to moral manager. Hierarchically closed system in organizations maintains highly administrative structure and demands a rigid communication style. Moreover, Confucian ethical values bring male dominant culture under which women are discriminated, academic collectivism exclude other persons who studied in heterogeneous schools. The academic collectivism is related to the solidarity among alumni, what make stronger academic ostracism and matter of age is fully taken into consideration (Lee, 2001).

7.4. Internationalization of University

7.4.1. Institutional approaches toward internationalization

In this subchapter the theoretical framework on organizational culture of a university understood as its planned factors - internationalization strategy - used for data gathering and analysis will be brought.

There is not one way or a right way to internationalize institutions of higher education (Knight, 2008a, 2008b, 2011). The diversity offered by universities, university colleges and other educational institutions reflect their different historical, national and institutional context as well as their mission, visions, values, priorities and rationales.

In the debate on: *What must internationalization do?* International Scholars and academic associations agreed that, international education must encompass the curriculum, international exchanges of scholars and students, comparative programs with the community, training and a wide array of administrative services, as well as a ‘distinct commitment’, attitudes, global awareness, orientations, as well as dimension

which transcends the entire institution and shapes its ethos (Harari, 1986; de Wit, 2002; Brandenburg et al., 2011a, 2011b; Knight, 2004, 2007, 2007, 2010, 2015; Wisniewska, 2011).

In order to see how the idea of internationalization of an educational institution starts, following Canadian Scholar Jane Knight³⁴ (2010) some of the approaches that university take to internationalization will be presented:

- ✓ **Activity approach:** internationalization is understood in terms of activities such as study abroad, academic programs, curriculum, international students, development projects, institutional networks and branch campuses.
- ✓ **Outcomes approach:** internationalization is seen and presented in the form of desired outcomes such as **intercultural competent students** (Deardorff, 2004, 2006), campus population, increased international agreements, partners, collaboration in international projects.
- ✓ **Rationales approach:** internationalization is related with the primary motivations or rationales driving it. It could be income generation, academic standards, cultural diversity or student and staff development.
- ✓ **Process approach:** internationalization is considered as a process, where internationalization is involved into primary functions of an institution, this means in teaching and learning, research and service to the society.
- ✓ **Ethos approach:** internationalization is seen as a promotion of intercultural dimension on the campus based on *home activities*.
- ✓ **Abroad / cross border approach:** internationalization is described as the cross-border delivery of education to other countries or different delivery models (face to face, e-learning, distance education) and administrative agreements (twinning, branch campus, etc.).

In the last decade, in the European context one of the most often observable approaches seems to be “*activity approach*”. Same approach has been observed in the most active Asian campuses. However, in many educational institutions mix approaches will be found.

³⁴ Jane Knight – Alma Mater University of this Scholar are: BA University of Western Ontario (Canada). M.Ed. University of British Columbia (Canada), PhD Michigan State University (USA); large experience in IHE&R field. Jane Knight is perceived as one of the most influential scholars in the field of IHE&R.

This study will be principally focused on campus-based internationalization (*internationalization at home*).

7.4.2. Institutional level strategies for an internationalized university campus

This section will be focused on some institutional level strategies whose main goal is to internationalized campus. Critical areas of decision-making, organizational functioning as well as activities which provide opportunities to **develop intercultural competences** among university population will be presented.

7.4.2.1. Factors of internationalization

For the purpose of this study the mix of Keller's (1983), Davies's (1995) and Knight's (2010) theories on internationalization has been used. Keller identified two sets of active factors in the development of internationalization strategy: **external factors and internal factors**. Among the internal factors which determinate internationalization strategy were mentioned: university mission, tradition and self image, assessment of strengths and weaknesses in programs, staff, finances and structure of organizational leadership. On the other hand, among external factors that influence development of international strategy were pointed out: external perception of image and identity of the institution, evaluation of strength and weaknesses of the institution in the context of international marketplace and assessment of competitive situations (**Figure 43**).

Short characteristic of the mentioned factors of internationalization will be presented as they were taken into consideration during this study:

a) University mission – according to Davies all universities should have a mission (mission statement, presidential reports, policy papers, prospectuses). It should contain planning processes and agendas, resources allocation criteria; it should indicate to external constituencies a basic and stable set of beliefs and values (Davies, 1995).

Figure 43. Elements considered in the development of international strategy in university



Sources: Adapted from Keller (1983); Wisniewska 2011

The mission of a university in the era of internationalization of higher education and research should respond for the principal question:

- Why does it expose to internationalism?
- What is the scope of internationalism? Does it cover all range of university activities?
- Are there particular geographical points for a universities, maybe its specialization is specific region for example the Near East, Latin America, African countries, etc.
- Which aim is more desirable: to gain specialization in culture, language, history, policy and economy perspectives?
- Which level of interest relay has university in internationalization? The internationalization is seen as an essential or marginal matter?
- Is mission explicit in terms of student outcomes, capabilities? It could be taken in to consideration such elements as: experimental learning (Bologna's focus on learning by doing) in other cultures, language competences, the ability to operate effectively in other cultural settings, international environments, as well as independence of thought and action (dependency of these element on national culture and organizational culture will be taken into consideration in this study).

Following Keller's (1983) **strengths and weaknesses** related with internationalization strategy of a university are focused around **programs, personnel and finances**. In fact, many practices using this kind of analysis have been developed by universities; not particularly with purpose of internationalization, but the SWOT³⁵ analysis take part of general institution management.

b) Programs - the critical issues which should be here considered are:

“ Is internationalism all pervasive in the curriculum, or at least as pervasive as it needs to be to fulfill the mission of the university and the need of an international students?”

Literature review showed that discussion about internationalization of curriculum or recruitment of the international students which was present 30 years ago is still actual, for example (Keller, 1983; Knight, 2010; de Wit, 2011a; 2011b; 2015a):

- ✓ Issue of the language in the program (Does the language training take part of the program? Is the language the program is taught, relevant to the students? Is linking to other studies? Is overseas practice an integral part of the program?)
- ✓ *Are program tutors able to manage the diversity of the students participated in the program adequately?*
- ✓ Full time study abroad may encompass study period and work/internship period. The integration of both provides challenges for planning, supervision, complementarity and relevance for the stay and assessment (joint program with student transfer, joint basis curriculum, common assessment, credit recognition).
- ✓ Large part-time student body with international exposure may have different problems; as an example could be mentioned lack of time to include the language courses.

c) Personnel – considered:

Effective delivery of international dimensions in programs depends on academic and administrative staff members, their knowledge, skills and attitudes (Keller, 1983) and other later defined as dimensions of intercultural competences (Deardorff, 2004;

³⁵ SWOT is an analysis of the Strengths, Weaknesses, Opportunities, Threats of an institution (or program) created by Albert S. Humphrey in the 1960's. SWOT is largely use in management organization and its use in the field of internationalization of university has been also observed.

followed later on in the literature by Lyons, 2001; Gopal, 2011; Kim, 2016). These campus stakeholders require continuing training and professional preparation; among the actions which encourage and develop internationalization opened attitudes have been mentioned: language training, regular sabbaticals, faculty exchange programs treated structured issues, country briefings, international seminars and training in intercultural competences (Keller, 1983).

Internationalization of the programs includes some tasks like:

- International marketing for students and project grants.
- Managements of international programs, student services, housing and social facilities.
- Designed of international and multicultural programs, distance learning and development of materials.
- Different cultural settings, teaching and assessment in different languages (Keller, 1983).

d) Financial management - it takes important part of the internationalization strategy in university. In many cases, the incomes come with overseas fees, students related grants (Erasmus, Tempus), Project grants (COMETT, ESPRIT) Research projects (7 FRAMEWORK PROGRAM), Technology transfer, Franchise courses to other country, national government resources and regional resources.

The internationalization process is perceived as a big challenge for university financial management. A university needs to be wary of sustaining commitment to projects which are already run, even the continuing income is questionable.

7.4.2.2. Organization efforts towards internationalization of university

The internationalization of the university can take place through normal organizational units or special organs created for this purpose. Following **Davies** (1995), the following elements of international strategy have been observed:

- **Departments and faculties.** They are mostly focused on teaching and research. The research has always been international in nature. For researchers, it was always very

important to be members of international networks, because this allowed them to maintain their place at the frontiers of knowledge and above geographical borders. Personal contacts, reports, exchange of publications and conferences were and still are the medium to take part of scientific international forums. Research was always more internationally oriented than teaching and administration.

- **Delivery of industrial research and technology transfer** (it is split between departments and specially set-up organization such as spin innovation centers and university consortium).
- **Research contract offices** (international projects offices). They play significant role in technical and financial development as well as in contacts with overseas partner and net working in multicultural and interdisciplinary projects, carry out units which contract researchers to handle tasks in national and international context.
- **International offices** and its role in generation of contacts and intelligence in terms of foreign students and different contracts for Research and Development.
- In case a university cannot provide education at place (because, for example, of large number of participants and elevate costs), this gives rise to international partnership based on **franchise arrangements** overseas with local institutions and joint degree. The relevance of quality of education has been highlighted here.
- **Externally Perceived Image and Identity** is reflected in mission of an educational institution. Full collaboration of all members in the implementation of the mission is required. Development of the credibility of the institution is linked with delivery of that mission. The reputation of an institution develops over time by administrative and academic collaboration.
- **Trends and opportunities** in a market place. These elements of the strategy are based on regional and international context. Good recognition of the opportunities at international level permits development of international dimension of the campus.
- **Assessment of competitive situation** - University can play different role in internationalization taking into account the way of its collaboration, they could be perceived as: leaders, challengers, followers, nichers (they take some market segment and provide their specialist and monopoly service).

The elements of the organization culture, which are related with national culture and should always be taken into consideration during internationalization process, are (considering its weaknesses and strengths):

- ✓ Mission and tradition;
- ✓ Successes and failures and its reasons;
- ✓ Knowledge of market segment, including power structure;
- ✓ Experience and expertise in particular segment market;
- ✓ Style of negotiation of each institution, influencing, doing business;
- ✓ Committed resources to segment;
- ✓ Financial buoyancy, policy and costing;
- ✓ Characteristics and quality services offered;
- ✓ Big names;
- ✓ Ability and flexibility in order to work in consortia.

7.4.3. Strategies for internationalization of university

It could be noticed over the history that internationalization of higher education and internationalization of research always were present in the life of a university. In some countries this present was remarked more, in other less, and in some disciplines more than in others (Sanz & Bergan, 2006). The internationalization efforts were performed mostly by a department or on an individual level of researchers/academics and still these practices are present in Asia, Europe and in other continents. 25 years ago same classification of approaches to internationalization in university was proposed and it took into consideration how much an institution was involved in the internationalization efforts. Afterward, most recent division of internationalization strategies will be presented.

7.4.3.1. Keller's factors of internationalization³⁶

It is convenient for this study to follow Keller's (1983) key factors of internationalization in university focused on critical areas of decision making and

³⁶ George Keller's *Academic Strategy* published in 1983 is perceived by large group of academic leaders and administrators (noted in American context) as one of the most useful handbooks on University management.

organizational functioning, the factors which can facilitate or either retard the development (Davies, 1995, 1992; Klasek et al., 1992; Zha, 2003; Fralinger et al., 2007; Wisniewska, 2011).

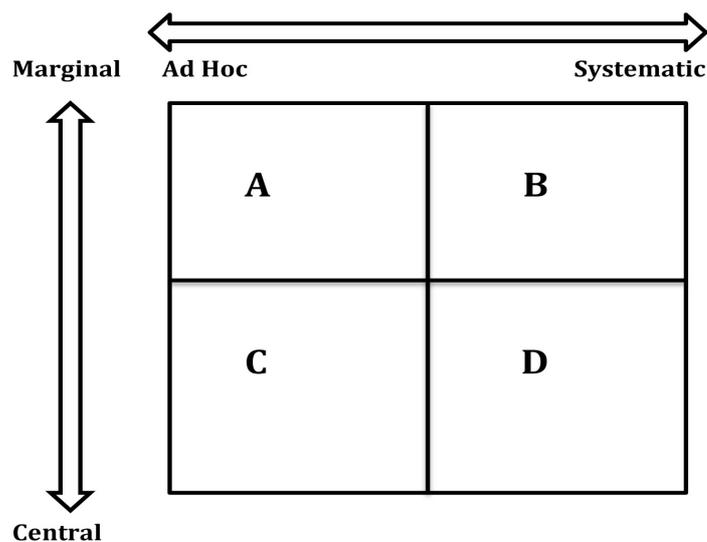
Two sets of factors are identified in the development of international strategy:

1. In some university **internationalization has marginal character**, and usually, these institutions decide to focus on regionalization;

2. In other universities **internationalization is highly relevant** to their work and is present in every aspect of institutional life.

In order to explain different approaches to internationalization, which have their source in wish to fulfill political and social needs of their contexts, the following model will be presented: **university approach to the internationalization (Figure 44)**.

Figure 44. Institutionalization of Approaches to Internationalization in Universities



Sources: Adapted from Keller (1983) In Klasek et al. (1992)

❖ **Quadrant A: Presents Ad Hoc-Marginal approach:**

The internationalization is one of the elements of the campus, but not really important. The university having following this kind of strategy has a small number of foreign students and small amount of consultancy or continuing education. Existence of culture with developed research links is very limited, motivation of individuals and

actions for changing forward and financing are sporadic. The lack of information about opportunities, trends and competitions is very characteristic for this strategy; little assessment of opportunity takes place.

❖ **Quadrant B: Systematic-Marginal approach:**

If the university follows this approach, the amount of international business is limited, however, more systematic and organized than in the first case. Areas with international character are well identified and correspond to well identified internal strengths of an institution related with market opportunities. The university uses its strengths and works hard to become an expert in the field. Furthermore, market segmentation could be observed. Costs and incomes are realistic and accurate. Even if the number of institutional agreements is small they are well worked. Other relevant point of this strategy is a constant support to the internationalization in different dimensions of an institution. However, staff training is limited.

❖ **Quadrant C: Ad Hoc-Central approach:**

University choosing this strategy makes its international dimension visible among different segments and clients group. However, sometimes the marketing is not focused enough on the international dimension. The curriculum is lightly internationalized by providing different elements of international programs, however, it is still sporadic. Tendency for a lot of international agreements but not always operational can be observed. Considerable international efforts can be noticed, but support services are often not assured.

❖ **Quadrant D: Central-Systematic approach:**

In this strategy approach a lot of international work in all dimensions and categories can be observed. The mission of internationalization of the university is clear for all population of the campus; moreover, the strategy is supported by special policies and actions. The information about the strategy is extensive and regularly updated. The university has many working agreements through programs. The internationalization of a policy, curriculum and trainings are constant. Exists an

ownership of the internationalization idea and financial assessment is very systematic. (Davies, 1995; Klasek et al., 1992; Wisniewska, 2011).

7.4.3.2. Knight division of institutional internationalization strategies

Knight (2006; 2010) talked about **main division of institution strategies**. She mentioned two big groups: *academic strategies* and *organizational strategies*. They are run on institutional level.

According to Knight, **the academic strategies** are composed of *academic programs* and *research scholarly collaboration*. While, the first one focus on students exchanges programs, cross-cultural training, foreign language study, academic staff mobility, internationalized curriculum, visiting international lectures, international students, the second one involves all activities linked with research and collaboration in internationalization at home strategy. *External relations, domestic, cross-border and extracurricular activities* take part of *academic program's strategy*.

Among *organizational strategies* Knight pointed out **governance, operations and Services and Human resources** strategies.

As **governance strategies** have been mentioned:

- *“Expressed commitment by senior leaders*
- *Active involvement of faculty and staff*
- *Articulated rationale and goals for internationalization*
- *Recognition of international dimension in institutional mission statements, planning and policy documents”* (Knight, 2006, quoted by Raabe, 2010).

Among **operations strategies** should be seen:

- *Appropriate organization structure*
- *Systems (formal and informal) for communication, liaison and coordination*
- *Balance between centralized and decentralized promotion and management of internationalization*
- *Adequate financial support.*

Following Knight **strategy at services** level of an educational institution are related to:

- *Support for institution wide services units, for example registry, students housing, fund-raising, information technology*
- *Involvement of academies supports units, (understood as a teaching and learning, faculty staff training and library support)*
- *Students support services provided to outgoing and incoming students, (such as counseling, visa advice, training in intercultural competences, etc.).*

Human resources strategy in internationalization of university is based on:

- *Recruitment and selection procedures of the staff with international experience*
- *Promotion of policy to reinforce faculty and staff, whose contribute to internationalization*
- *Professional development activities for staff*
- *Support for international assignments and sabbaticals (Knight, 2006; Wisniewska, 2011).*

The educational institutions with focus on *internationalization at home* are trying to develop and promote many of the mentioned strategies. It could be observed that universities chose freely elements of different strategies, those which are matching more their needs and context. According to the literature on the subject as well as observation the Australian, Canadian, Nordic and United States universities opted more for campus-based internationalization. However, it does not mean that cross border strategies are neglected. On the contrary, they are developed to support intercultural environment and global experience on the campus.

Tendencies in internationalization of higher education and research in Europe according to de Wit (2002) were focused mostly on: academic program mobility, technical assistance, research collaboration and extracurricular activities.

In Asia, internationalization of higher education is focused mostly on the vision to educate global leaders and to develop English language competency among professionals.

American Scholar Maurice Harari already in 1989 noticed that, “*having many international students on a campus does not make that institution international*” (Harari, 1989; quoted in Klasek, 1992). These argumentations continue in time and in different cultural contexts (Kim, 2005; 2010; Deardorff, 2013; Dohan Ehrenfest et al., 2014f, 2014g, 2017; Wisniewska, 2011; Wisniewska et al., 2014a, 2014b, 2014c).

Because of that, some European universities became to be more aware that they need some additional actions in order to bring internationalization opportunity on the home campus (Wisniewska, 2011). From that need emerges “*campus based internationalization*”, “*internationalization at home*”.

7.4.3.3. Internationalization at home and models of international university

Internationalization of university as an educational institution is a very complex and comprehensive process. In the first decade of the XXI century, the division into “*internationalization at home*” called also “*campus based internationalization* and *cross - border education*”, emerged.

This Thesis is based on the framework of campus-based internationalization. This dimension of internationalization efforts is always closely tied up with cross-borders activities. It appeared in the beginning of the XXI century and it was related mostly to the teaching/learning process and curriculum (Nilsson, 2003). Its objectives are to introduce intercultural and international dimension in teaching, research, learning, extracurricular activities and in relationship with local culture. The integration of foreign scholars, students into campus life is also seen as an element of internationalization at home (Wisniewska, 2011).

Taking in to account this research approach to process of internationalization and intercultural competences development, the framework for *internationalization at home* proposed by Knight (2008, 2010) has been chosen (**Table 3**).

Table 3. Knight’s framework for “internationalization at home”

Internationalization “at home”- campus – based	
Curriculum and programs	Teaching/learning process
<ul style="list-style-type: none"> • New programs with international themes • Introduce international, cultural, global or comparative dimension into existing courses • Foreign language study • Area or regional studies • Joint or double degree 	<ul style="list-style-type: none"> • Involvement of international students, returned study abroad students and cultural diversity of classroom in teaching/learning process • Virtual students mobility for joint courses and research project • Use of international scholars and teachers and local international/intercultural experts • Integration of international, intercultural cases studies, role plays, reference materials

Internationalization at home campus based	
<p>Research and scholarly activity</p> <ul style="list-style-type: none"> • Area and theme center • Joint research project • International conference and seminars • Published article and papers • International Research agreement • Research exchange programs • International research partners in academic and other sectors • Integration of visiting researchers and scholars into academic activities on campus 	<p>Liaison with local cultural/ethnic groups</p> <ul style="list-style-type: none"> • Involvement of students in local cultural and ethnic organizations through internships, placements and applied research • Involvement of representatives from local cultural and ethnic groups in teaching/learning activities, research initiatives and extra-curricular events and projects <p>Extra -curricular events</p> <ul style="list-style-type: none"> • Student club and associations • International and intercultural campus events • Liaison with community based cultural and ethnic groups • Peer support groups and programs

Sources: Knight (2008) quoted in Raabe (2010: 14)

As the theoretical frameworks, models and approaches presented above showed there are many different ways of internationalization of university. Knight highlighted that there is not one model for an international university, nor should there be (Knight, 2015).

Currently Scholars are mentioning free models of international university (Knight, 2015):

- 1) The first generation of internationalized universities are the universities with a diversity of partnerships, international students and academic as well as administrative staff, many international and intercultural collaborative activities at home and abroad;
- 2) The second degeneration is also called the satellite model – it refers to universities with satellites offices around the world (for example: branch campuses, research centers, contact offices);
- 3) The third and most recent generation of international universities are internationally cofounded universities. These are educational institutions cofounded and co-developed by two or more partner institutions from different countries.

In next point some definitions of intercultural competences taking into consideration the national context of their authors will be presented. However, firstly the concept of culture and its levels of uniqueness in mental programming (uniqueness of person), as well as cultures visible and invisible elements will be presented. Furthermore, the theory of development of intercultural competences proposed by Deardorff (2004, 2006, 2013) as well as its possible way of development will be brought.

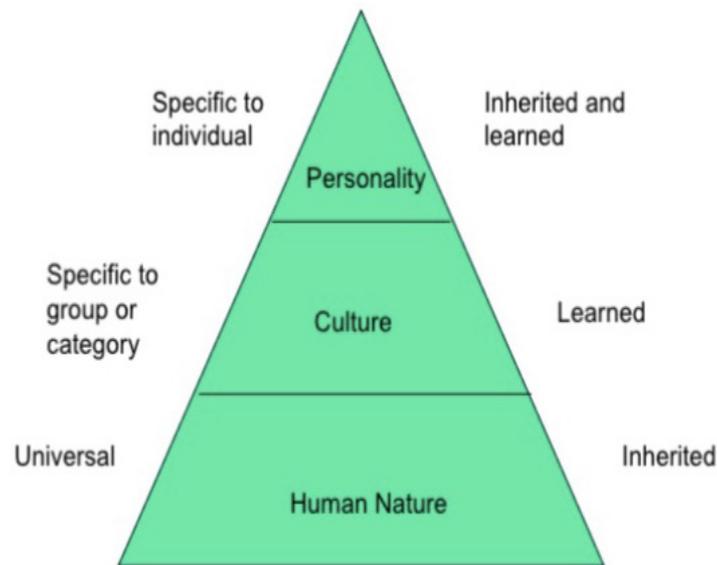
7.5. Development of intercultural competence (ICC)

7.5.1. Understand Culture - and its visible and invisible

According to Hofstede, culture consists of the unwritten rules of the social game. *“It is the collective programming of the mind that distinguishes the member of one group or category of people from others”* (Hofstede et al., 2010: 6). Following this definition it logical that culture is learned and not innate. It drives from one’s social

environment rather than from one's genes.³⁷ Because of that culture should be distinguished from human nature and form the individual's personality (**Figure 45**).

Figure 45. Three Levels of Uniqueness in Mental Programming



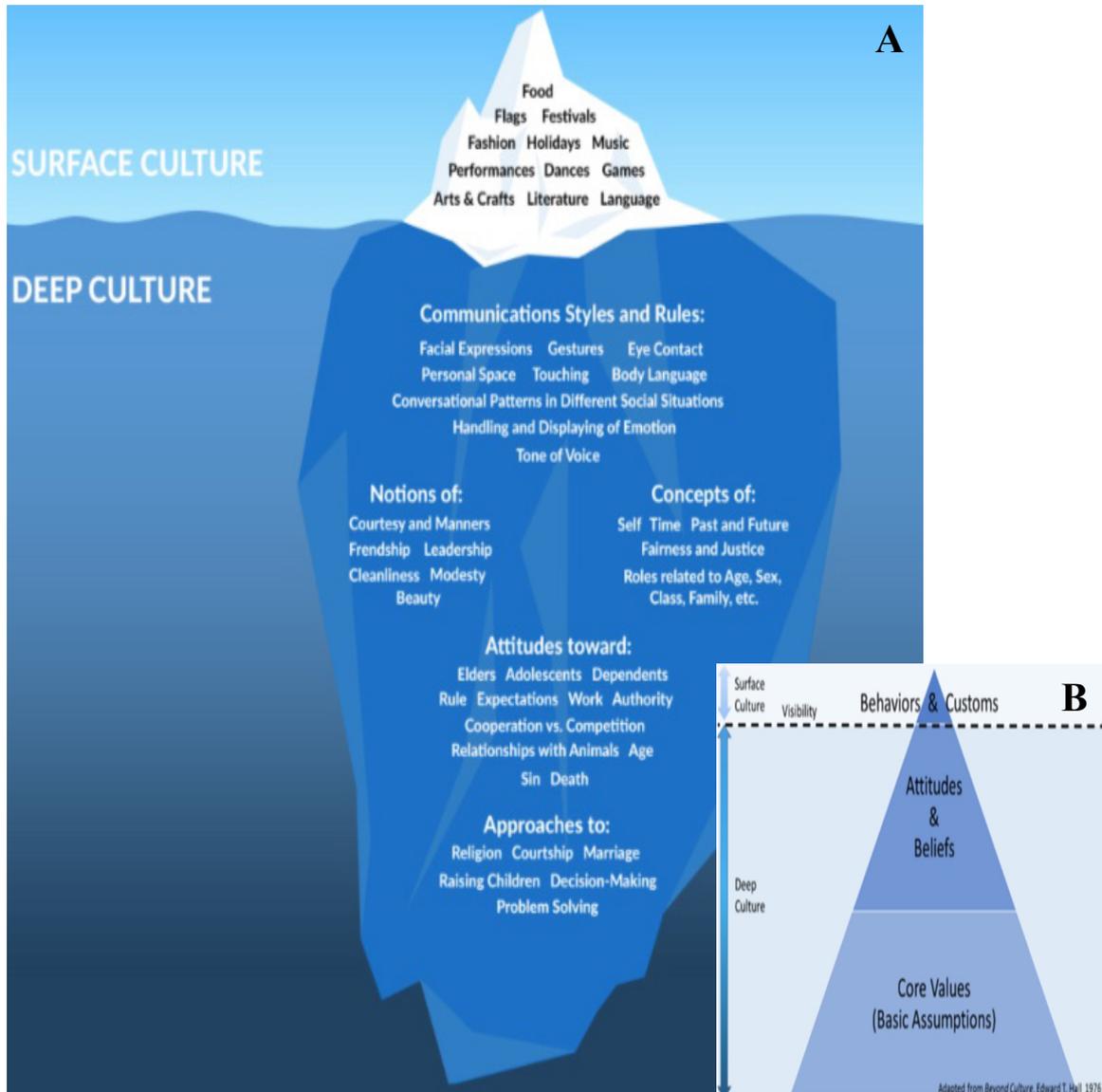
Source: Hofstede, 2010: 6

The meter of borders between the nature and culture, and between culture and personality is a topic of discussion among social scientist (Hofstede et al., 2010).

Human nature it is what all human beings have in common such as the human ability to feel fear, anger, love, sadness, joy, the need of integration with others, the faculty to observe the environment and to take about it with others. However, according to Hofstede “*what once does with these feelings, how one expresses fear, joy, observations*” etc. is modified by culture (2010: 7). Following the description of the **Figure 45**, it can be said that the personality of an individual is the unique personal set of mental programs which did not need to be shared with any other person.

³⁷ Following the argumentation of Hofstede its definition of culture as a collective programming of the mind similarities to concept of habitus proposed by the French sociologist Pierre Bourdieu (1930-2002) can be noticed: “*Certain conditions of existence produce a habitus, a system of permanent and transferable dispositions. A habitus function as the basis for practices and images ... which can be collectively orchestrated without an actual conductor*” (Bourdieu, 1980, p.88-89; cited in Hofstede et al., 2010).

Figure 46. Hall's Iceberg model of culture



Sources: Adapted from Hall, 1976

It is based on the traits that are partially inherited and partially learned. Learn here it means modified by culture and unique personal experience. Presentation of culture, of its visible and invisible elements, was proposed by Hall (1967) as the Iceberg concept of culture (**Figure 46**).

According to Hall, language, behaviors, costumes are visible parts of the culture, but behind of it there are many invisible elements of the culture developed during years

through historical and social processes. Invisible elements of culture - called deep culture - composed attitudes, beliefs and core values.

7.5.2. What is intercultural competence? - Asian, European, USA perspective

Why do we need the intercultural competences? We need them because the cultures differ. And why the cultures differ? According to Lusting and Koester (2012: 33), cultures differ because of six factors enriched within the members of every culture: history, ecology, technology, biology, institutional networks and interpersonal communication patterns. As the cooperation between cultures and civilizations is larger and quicker than ever before, the need of intercultural competences increased.

The literature review (Spitzberg, 2009; Bennett, 2001, 2004, 2013; Deardorff, 2006, 2009, 2013; Paige & Goode, 2009; Sinicrope, Norris & Watanabe, 2007; The Higher Education Academy, 2014; OECD, 2016) showed a complexity of concepts related to intercultural competences. Different terminology of this concept is in use. Some of them are: *intercultural competences* (in plural), *intercultural competence* (in singular), *multicultural competences*, *global competence*, *cross-cultural competences*, *cross-cultural awareness*, *transcultural communication*, *global competitive intelligence*, *cross-cultural adaptation*, *international competence*, *international communication*, *intercultural interaction*, *intercultural sensitivity*, *intercultural cooperation*, *cultural sensitivity*, *cultural competence*, *communicative competence*, *ethnorelativity*, *biculturalism*, *multiculturalism*, *plurilingualism*, *effective inter-group communication* (Fantini, 2006; quoted in Sinicrope et al., 2007).

For the needs of this research, it will be used the name suggested by Deardorff (2004, 2006) and the Higher Education Academy (2014) - *intercultural competences*.

There are many definitions of intercultural competences. The description of this concept depends on the region of the world, **the needs they were created for**, the field their author were looking for and the contexts (organizational, social) (Moosmuller & Schonhuth, 2010).

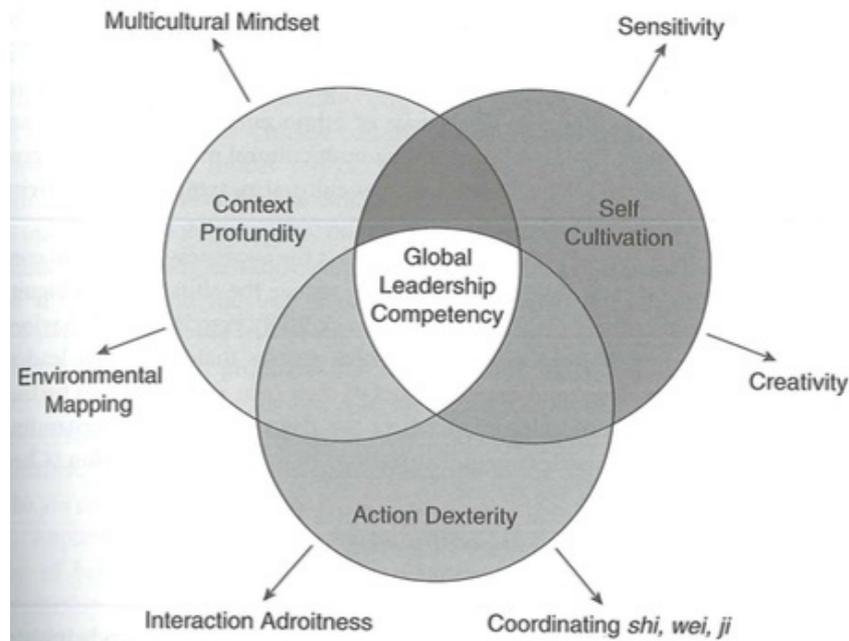
To give an example some of the definitions of intercultural competences from the Asian, European and American Scholars will be brought below.

According to the Indian perspective, Manian and Naidu (2010) wrote that, “*Competence is the **ability** or capacity to **quickly adapt** (but not convert), which in this case lead to appropriate social behavior.*” As it can be appreciated, according to Manian the valor of this competence is lying in a quick adaptation to the context, but not conversion, not being changed in order to adapt to environment. Moreover, quick adaptation is possible and will depend on flexibility in communication, learning styles and so on. The term of conversion, what is perceived as something different than ICC, is close to transformation, and those need time and other psychological mechanisms.

The Chinese conceptualization of intercultural competence looks for relationship between leadership competence and its application to intercultural context (Chen & An, 2009), as very often intercultural competence in Asian environment is called global competence or competence for global leaders. Because of the way the Chinese perceive competence and the way the Chinese communicate are sharply different from Westerners (Chen & Chen, 2002; S. Liu & Chen, 2000; S. Liu, Chen & Liu, 2006; quoted in Chen & An, 2009). Guo-Ming Chen and Ran An model is composed of three dimensions including culture profundity, self-cultivation and action dexterity, with each dimension containing each element separately (**Figure 47**). Self-cultivation is understood as a process of transforming and moving the leader from the lower to the higher level of the development ladder of competence. It is perceived as a process of unceasingly edifying, liberating and purifying personal attributes of the self. Passing to other elements the context profundity is understood as the broadening and expansion of the leader's perspectives by eliminating biases or stereotypes toward people from other cultures (Chen & An, 2009; in Deardorff, 2009: 200-201). The third element of the ICC is the extension dexterity is the leader's ability to appropriately and effectively initiate, maintain and determine verbal and nonverbal interaction.³⁸

³⁸ For view more explanation about elements of intercultural competences embedded in Chinese philosophy see Chen & An, 2009 in Deardorff, 2009: 197-208.

Figure 47. Chinese Model of Intercultural Leadership Competence



Source: Chen & An, 2009 in Deardorff, 2009: 201

Taking into account German conceptualization of intercultural competences it could be seen that, it refers to both “*authority, responsibility*” and “*capability, ability and skills*”. The terms intercultural action competence and intercultural communication competence are used synonymously for the term intercultural competences. Many scholars equate intercultural competences with key qualification; Dieter Mertes (1974) among them such key qualifications has seen: **social competence** (*cooperation skills, communication skills, empathy, conflict resolution skills*), **method competence** (*analytical skills, willingness to learn creativity, rhetorical skills*), **self competence** (*productivity, motivation, capability, flexibility, independence, reliability, adaptability, stress resistance*) and **action competence** seen as an *ability to act in an adequate manner to the situation while being able to realize own interests* (Moosmuller & Schonhuth, 2009). As it could be observed, this definition introduced division of intercultural competences into four dimensions: social competence, method competence, self competence and action competence which are understood as an ability to act.

British Scholar Mike Byram incorporates five components defining intercultural competences: “**attitudes** (*curiosity and openness to suspend disbelief about others cultures and belief about once own*); **knowledge** of social groups and their products and practices in one’s own and in one’s interlocutor country, and of the general processes of societal and individual interaction; **skills** of discovery and interaction (*ability to acquire a new knowledge, attitudes and skills under the constraints of real-time communication and interaction*); **critical cultural awareness/political education** (*ability to evaluate critically and on the basis of explicit criteria perspectives, practices and products in one’s own and other culture and countries*)” (Byram, 1998; 1997; 2001). According to Byram’s definition, within ICC four elements could be recognized: attitudes, knowledge, skills and critical cultural awareness. As can be noticed these elements are very similar with the dimensions of the ICC proposed by Deardorff (2004).

According to Bunk (1994: 8), intercultural competence is a series of “*knowledge, skills and attitudes that may arise automatically and flexibly*” and they develop due to interpersonal relationship, lifelong learning, participation and interest in others. Flexibility and autonomy seems to be a key attitude in achievement of the planned goals.

Taking into consideration Spanish Scholars, it can be noticed that Aguado (2003) sees ICC as a combination of specific capacities such as positive attitude toward diversity, communicative competence, capacity to manage conflicts in intercultural situations and cultural self-awareness (*consciencia sobre la propia cultura y como esta influye en la vision et la interpretación de la realidad*) as well as how our own culture influence the interpretation of the reality.

Vailá (2003: 105) defined *competencia comunicativa intercultural*, as an ability to negotiate cultural meanings and to have efficient communication, which he based on the Chen and Starosta (1996) model that combined cognitive, affective and behavioral competence.

To continue with Spanish cultural context, Otrí (2004) sees ICC as a large competence, which is related with ability of adequate action and flexibility of the person at the moment of meeting of the people from other culture. He distinguished within ICC general competences (*saber, saber hacer and saber ser*) and communicative competencies.

According to Eixman, Gonzáles, Llorente & Núñez (2004: 145), ICC is formed by three basic components:

1) the declarative component related to cognition: knowledge about other cultures, other costumes, other lifestyles... so with knowledge (*saber*);

2) the procedural component related to methodology: doing and participating in social movements and in social institutions, cultural pro-integration;

3) the affective-attitudinal component related to values, feelings and attitudes. It is about accepting, valuing, respecting and living with other cultures; knowing how to be and be between others and with others.

In the French context, intercultural competence can be understood as the ability of the speaker to grasp, understand, explain and positively exploit intercultural data in a given situation. Abdallah-Preteille (1996: 32) argued that this does not imply a simple knowledge of the facts of civilization, but a mastery of the communication situation in its entirety, in its complexity and in its multiple dimensions (linguistic, sociological, ... and cultural).³⁹ According to French Scholar intercultural competence goes beyond cultural competence because between a knowledge of cultural differences (ethnographic dimension) and an understanding of cultural variation (anthropological dimension), there is not only a simple difference in wording, but an analysis in terms of structures and states to that of change and complex situation, unpredictable and random situations, given the increasing cultural heterogeneity within what are traditionally called cultures (Abdallah-Preteille, 1996: 32).

Parisian Scholars, Camilleri and Vinsonneau (1996: 36) conclude that "*now, it is the contact of cultures that becomes an object of science as such, reflection polarizing on the phenomena that result from it in relation to the relation.*"⁴⁰ This contact is identifiable in the verbal and non-verbal language interactions, the analysis of which is based on the implicit and explicit knowledge of the target culture and the pragmatic and effective use of the cultural components in context of daily communication (cited in Zhang, 2012: 72).

³⁹ <*mais une maîtrise de la situation de communication dans sa globalité, dans sa complexité et dans ses multiples dimensions (linguistique, sociologique, psychologique... et culturelle*> Abdallah-Preteille, 1996: 32.

⁴⁰ Translation from French into English done by the author of the Thesis.

Finish Scholar Skutnabb-Kangas (2000) emphasizes the importance of developing intercultural skills that enable individuals to make the most of their linguistic and cultural exchanges, while respecting the specificity of each language and culture (Glaser, Guilherme, Garcia and Mughan, 2007: 31). Intercultural competence should therefore enable the speaker-listener to acquire a more complex capacity for perception and anticipation. This ability allows it to react positively in the most complex and diverse communication situations.

Danish scholar Karen Risager (Aktor & Risager, 2001) emphasized that intercultural competence is not just question of knowledge, but also of attitudes and cultural behavior.

Intercultural competence among Italian Scholars, in similar way as it was among Spanish Scholars, erased from the concept of communicative competence brought in American context by Hymes. (1984 [1971]). Coppola (2009) includes in communicative competence cultural competence in which brought into question the cultural scene, the socio-cultural norms and values of the participants; she mentioned the cultural competence that is developed through a comparison between different cultures and the intercultural competence, which arises from the encounter between cultures.

According to American Professor Fantini (2005), cross-cultural communicative competence is that complex of skills necessary to act in an effective and appropriate interaction with others who are linguistically and culturally different. He states that the intercultural contact between two language speakers provides an excellent opportunity to promote the development of ICC (Soto Molina & Garcia Burgos, 2015).

Among many Italian Scholar could be noticed recall to Deardorff definition of intercultural competence (2004, 2009).

Similar situation was observed in the case of South Korean Scholars while talking about global competence (intercultural competence) attitudes, knowledge and comprehension, and skills were mentioned as dimensions which composed this complex competence (Murtiningsih, 2016) and definition of Deardorff (2004) was commonly used.

To the needs of this work the definition of intercultural competence (ICC) proposed by Deardorff (2004) will be followed:

Intercultural competence is “the ability to communicate effectively and appropriately in intercultural situations based on one’s intercultural knowledge, attitudes, skills and reflection abilities.”

As it was noticed the definition of intercultural competences proposed by Deardorff (2004) includes some key elements mentioned in previously presented definitions. Four dimensions of ICC, which develop in constant learning process - intercultural knowledge, skills and attitudes pass into reflection abilities in order to effectively communicate in an intercultural environment.

In conclusion could be said that, ICC is complex communication competence (verbal and nonverbal) with important dimensions of attitude, knowledge, skills and reflection, which need time and adequate (intercultural) environment to be developed. The best way of self-evaluation of ICC development is the efficiency (keeping respect for oneself and others) of intercultural contacts.

The next subchapter will shortly present the model of development of ICC proposed by Deardorff and used in this study as framework of this key concept. Furthermore, possible ways of development of ICC through intercultural contacts, interactions and through participation in international, intercultural cooperation will be described. The possible ways and results of cooperation in intercultural teams will be visualized.

7.5.3. How are intercultural competences developed?

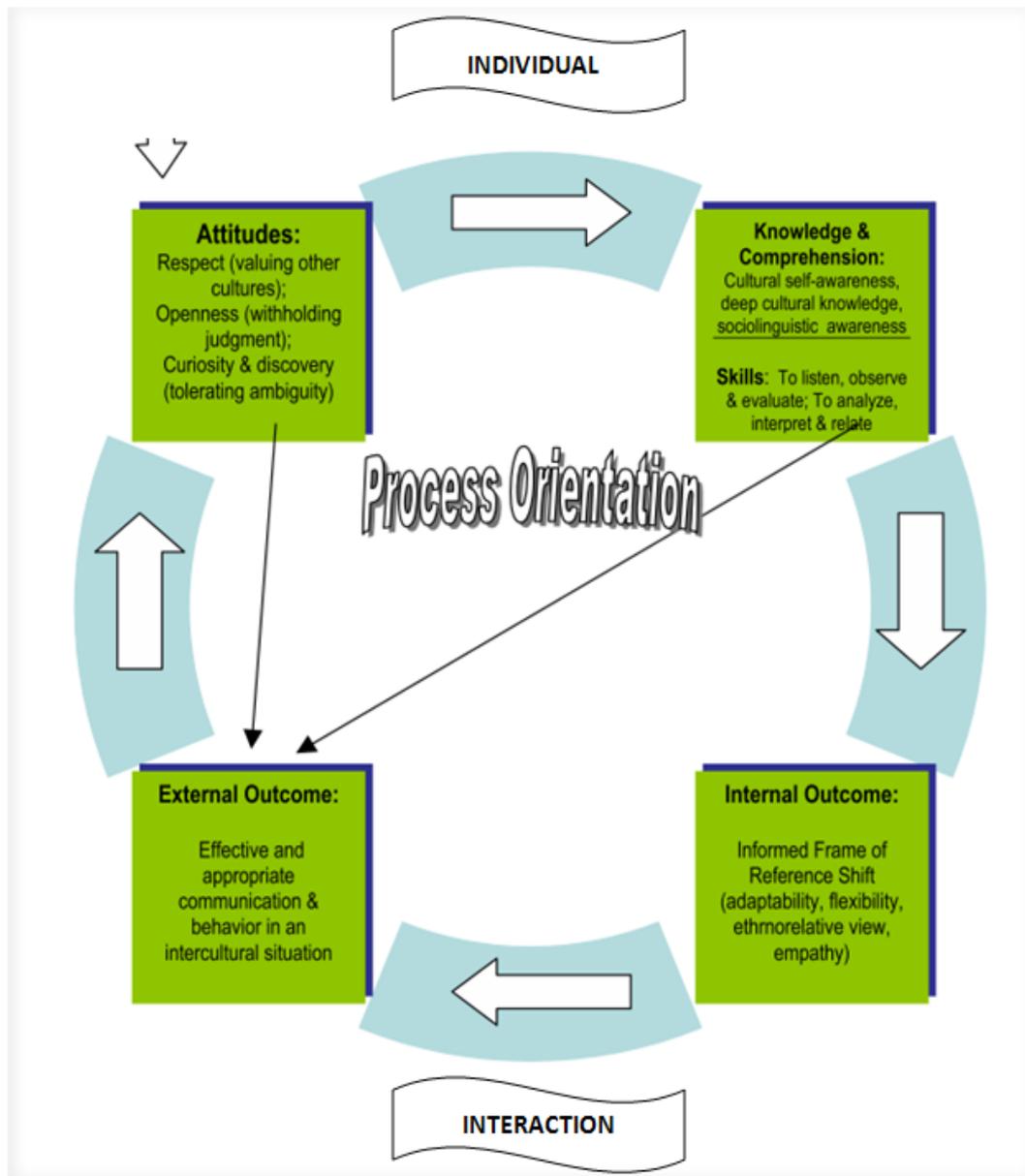
Intercultural competence is a long process of complex learning and experiences. It is not an outcome of a one subject, one module, one training or singular visit of a foreign country. Language skills and knowledge of a particular culture are not enough to be interculturally competent person. However, practice of all these elements together in challenging intercultural environment help to master this complex competence.

7.5.3.1. Deardorff’s model of Intercultural Competence

The literature review about the development of ICC proposed many models devoted to process development of this competence (Byram, 2010; Bennett, 1986; 1993; 2008; Chen & An, 2009; Deardorff, 2004; 2009; 2013). Taking into consideration

the physical limits of this work just one model will be presented below, the one that has been chosen as a theoretical background of this research matching the objectives of our study. It is a model proposed by Deardorff (2004, 2009) in which she identified four dimensions in process acquisition of ICC (**Figure 48**).

Figure 48. Process Model of Intercultural Competences



Source: Deardorff, 2006

According to her, the ICC develop in constant process on individual and interaction levels. They begin with attitudes on individual level and move to interaction level.

On the personal level, ICC develop **(1) attitudes**, which principally are respects, openness and curiosity towards other cultures, as well as **(2) intercultural knowledge and comprehension**, and **skills** – understood as cultural self-awareness, deep cultural knowledge, sociolinguistic skills and ability of analysis and observation.

On the interaction level, ICC develop **(3) the ability to reflect on intercultural issues** called also internal outcomes that helps in adaptability, flexibility and cultural empathy, while **(4) ability to interact constructively** - called also external outcomes or intercultural competence - is seen as an adequate behavior and communication in intercultural situation.

It is assumed that the four dimensions interact between each other. The most important element in this model is dimension of attitudes toward cultural diversity. Curiosity and wish to know more about other culture permit to gather and retain information, knowledge and skills that can be build on bases of the previously gained. Having certain knowledge and interacting adequately constant reflection process about possible cultural differences can be awaken and in moment the level of development of ICC will help to pass to further constructive level. The highest dimension participants of the process reach and the most times this situation repeat, the most ICC will be developed.

7.5.3.2. Mechanic of development of intercultural competences (ICC) in intercultural environment

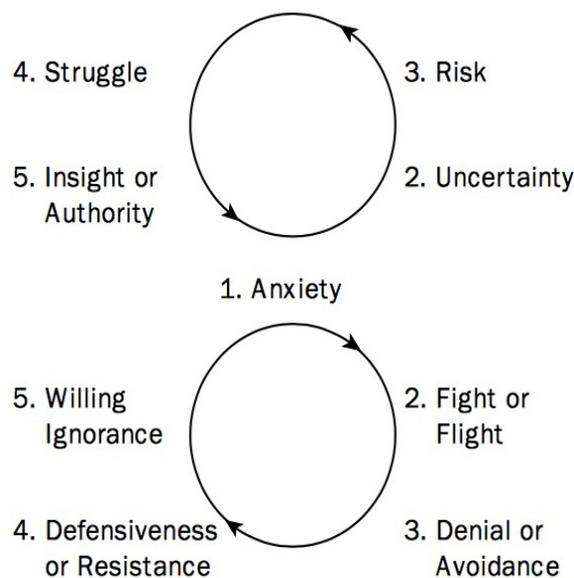
Different steps of ICC learning which can occur (stop or move forward) in international or culturally diverse environment or group were analyzed by Heimer and Vince (1998), Vince and Martin (1993), Gach (2007) and Wisniewska (2011)(**Figures 49 and 50**).

As can be appreciated on the **Figure 49**, development of the ICC is principally based on feelings. The strategic moment in this process is the beginning related with anxiety, *“where the anxiety can either be held and worked through, towards some form*

of insight, or it can be ignored and avoided, creating a “willing ignorance” (Vince & Martin, 1993).

The top cycle is the one that promotes learning and the uncertainty build by anxiety could be kept long enough for risk to be taken. In this environment (on personal or group level) feelings of risk and struggles often lead to new knowledge. However, in the bottom cycle, the one that discourages learning, as feelings of uncertainty cannot be kept and anxiety promotes the denial or evidence of emotions which are too difficult to overcome. Individual or team being in the moment of anxiety can move in either direction, towards positive outcomes rich in learning or away from it. It depends often on the level of ICC that person in that critical moment has. Strategic moments they are always created from emotional response to experience.

Figure 49. Anxiety as strategic moment



Source: Vince & Martin, 1993

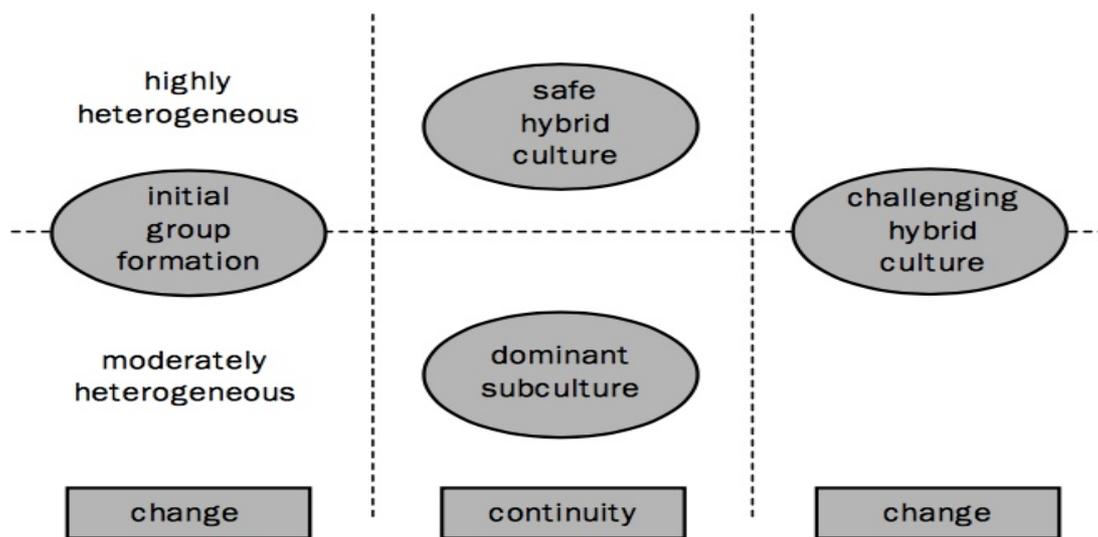
In order to visualize how the ICC is developed in the group level and how the level of its development impact outcomes of the learning or work, the **Figure 50** was brought.

Not all intercultural/international collaborations bring development of ICC on higher level. At the initial stage of the collaboration, international or culturally diverse teams seem to move in one of two directions: “toward safe hybrid culture” (where the

team denies or stops seeing cultural differences as important) or “dominant culture” (the one who constantly sets up the agenda and the frame within which problems are defined and solved) (Heimer & Vince, 1998).

In order to create learning and change, the team needs to adopt a challenging hybrid culture, “*where the cultural differences within the team are themselves seen as the material which inspires learning and change*” (Heimer & Vince, 1998). To be able to understand emerged feelings on the individual level and within the group development constant reflection on him/her self, as well as on the process group is needed. ICC are developed along the process of collaboration. The process awareness emerges over time.

Figure 50. International Team Culture



Source: Heimer & Vince, 1998: 85

Reviewing these complex processes which have place during international and intercultural collaboration, a question comes up: to what extend intercultural competences can be integrated into curricula as they are currently structured? It is obvious that this competence cannot be offered by one discipline. Only when learners have been offered diverse opportunities of learning such as culture theory, suitable intercultural interaction through in diverse culturally environment, abroad experience, opportunity of open dialog the ICC will have opportunity to build up. According to Deardorff ICC required integrated education (Bertelsmann, 2006).

The interesting point worthy to be highlighted is a language. Both models (Deardorff's model and Hall's model) agreed that the language issue is not the most important one in the process of intercultural competence development. Deardorff's components of ICC mention language as "sociolinguistic competence," far away from the most important in the efficient communication in intercultural environment.

The complexity of culture and model of ICC development reinforces the belief that development of culturally aware professionals is not something what can be done at a single class. Taking into consideration this observation it is a very strong argument for development of intercultural environment on the home campus which permits to train that competence in many dimensions and settings (formal, not formal, curricular, extracurricular, conscious and less conscious). Some holistic models of development of ICC on a university campus were proposed, for instance by Herrera (2008-2011), and Wisniewska (2011).

Next point will bring possible ways of assessment of ICC. It is another complex issue related with this competence. Who and how should assess intercultural competences?

7.5.4. How to assess intercultural competences?

The intercultural competences as any other students learning outcomes need to be assessed. Interculturally/globally competent students and professionals are frequently listed outcomes in postsecondary education⁴¹ (case of the American campuses, Asian, European campuses etc.). The ICC are also mentioned as possible outcome of internationalization of the campus assessment (Deardorff, 2004, 2006, 2009). However, how they can be assessed?

According to the opinions of experts in ICC (on the USA campuses) gathered by Deardorff (2004), there are various ways of assessment of ICC at person's level. Among them can be mentioned: case studies, interviews, mix of qualitative and quantitative measures, qualitative measures, analysis of narrative diaries, self-report instruments; observation by others/host culture, developing specific indicators for each component/dimension of ICC and evidence of each indicator, judgment by self and

⁴¹ OECD in its brochures informed that ICC will be measured also in Program for International Students Assessment (PISA) exam in 2018.

others, as well as triangulation (use of multiple data collection efforts as collaborative evidence for the validity of qualitative research findings) (Deardorff, 2004; 2009).

Thinking about assessment of ICC some issues should be taken into consideration. Following Deardorff's and Fantini's (Deardorff, 2009) study it is necessary to have clear definition of ICC before the evaluation is started, as well as clear alienation of evaluation process with overall mission of the course, organization or program. It is recommended to remember about that:

- ✓ assessment of ICC is more than observations;
- ✓ during the process should be considered the cultural and social implications as well as who is evaluating, what for, to what benefits, the time frame involved and the level of collaboration.

The experts agreed that **is important to measure the degree of ICC** (as it is also see as a one of the indicators to assess internationalization efforts of the campus), however, it is important that **during the process the impact of situational, social, historical contexts is taken into consideration.**

Following the literature about the subject, it can be seen that a lot of definitions of ICC depending on the field the evaluators (administrators, educators and assessors) come from. There is a need to be aware of those definitions instead of recreating some concepts without of any grounding from the intercultural field (what also has been observed, Deardorff, 2006). Next important point is that the definition needs to be reviewed and updated. Afterwards, contextualization should give a ground for development of indicators used in process assessment.

During the last years many different ways of evaluation of ICC were proposed and used (For more information see Griffith et al., 2016).

In this Doctoral Research, multiple techniques of evaluation of ICC were used: case study with mix of qualitative and quantitative measures (questionnaire with 4 Liker scale), where questionnaires were organized as a self-report instrument, as well as data and methodology triangulation. The methodology is described in details in the following chapters.

8. Methodology

This study examined the relationship and impact of national culture on the development of intercultural competence among campus population (students, academic staff) in the era of internationalization of higher education and research in Asian (South Korea) and European (France, Spain, Italy) context. Comparative perspective of internationalization processes in Asian and European campuses will attempt to be presented. The primary audience for taking into consideration the results of this study is higher education managers, administrators, leaders and academic staff who are involved in development and implementation of internationalization strategies on the campus. The subjects of this study were campus (general and specialized) population: national and international students, administrative and academic staff related with implementation of internationalization and campuses in itself.

This multiple ethnographic case study (Chonnam National University, Universidad de Granada, University of Paris-Sorbonne, University of Frederico II de Naples) involved a multiple method. Descriptive, retroductive research as well as process approach was exploratory in nature. The research methods used were a case study, participative observation, professional diary, field notes, informal interviews/chain conversations, review of the literature, journals and institutional policies and institutional online's sources, photos and questionnaire. These methods of data generating are described in further details in this chapter, taking into consideration background information on the method, moreover details on the sample, instrumentation, data collection and analysis.

"A researcher does not have to adhere blindly to one of the polarized paradigms that have received the names of **qualitative and quantitative**, but can freely choose the mix of attributes of both paradigms to better meet the demands of the research problem"⁴² (Cook & Reichard, 1986; Díaz, 2004).

⁴² "Un investigador no tiene por que adherirse ciegamente a uno de los paradigmas polarizados que han recibido las denominaciones de cualitativo y cuantitativo, sino que puede elegir libremente esa mezcla de atributos de ambos paradigmas para atender mejor las exigencias del problema de investigación con que se enfrenta". Own Translation from: Cook & Reichard, 1986, quoted in Dias 2004.

8.1. Strategy of the research

In order to meet our research objectives the multiple **ethnographic study cases** strategy was used with **inductive and retroductive strategies'** character. Moreover, process and competences development approach to internationalization has been chosen as an approach of this study. Triangulation of source of data, triangulation of methodology (qualitative and quantitative) and environmental triangulation was used.

8.1.1. Multiple Case Study (qualitative & quantitative methodology)

The case study has been using in the research at least since year 1930 and it was chosen to be the most appropriate form of research for this Thesis (Clark, 2004; Tellis, 1997). This strategy is used in many settings, political and sociological research, public administration research and organizational management studies (Yin, 1989). It is an appropriate method for when "why" or "how" questions are asked. Yin (2003: 13) explains that: "A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." By using this approach, replication of the study is possible in different contexts. This Thesis was done in Korea, Spain, France (general and specialized campus) and Italy (specialized campus).⁴³

Case study research is a comprehensive approach to data collection and analysis. It is a part of a larger phenomenon, where linkages are made between specific research questions to the larger policy issues. According to Marshall and Rossman (1989), it enables a comparison across nationals and institutions evoking and assessing the relative importance of each factor (Wisniewska, 2011).

This multiple case study combines quantitative and qualitative research (**Figure 51**). Qualitative research is a way of examining a subject freely in flexible way in order to gain a deep insight into the problem (Creswell et al., 2007).

Following Flick et al. (2008: 22-24), the characteristics of our qualitative research allowed:

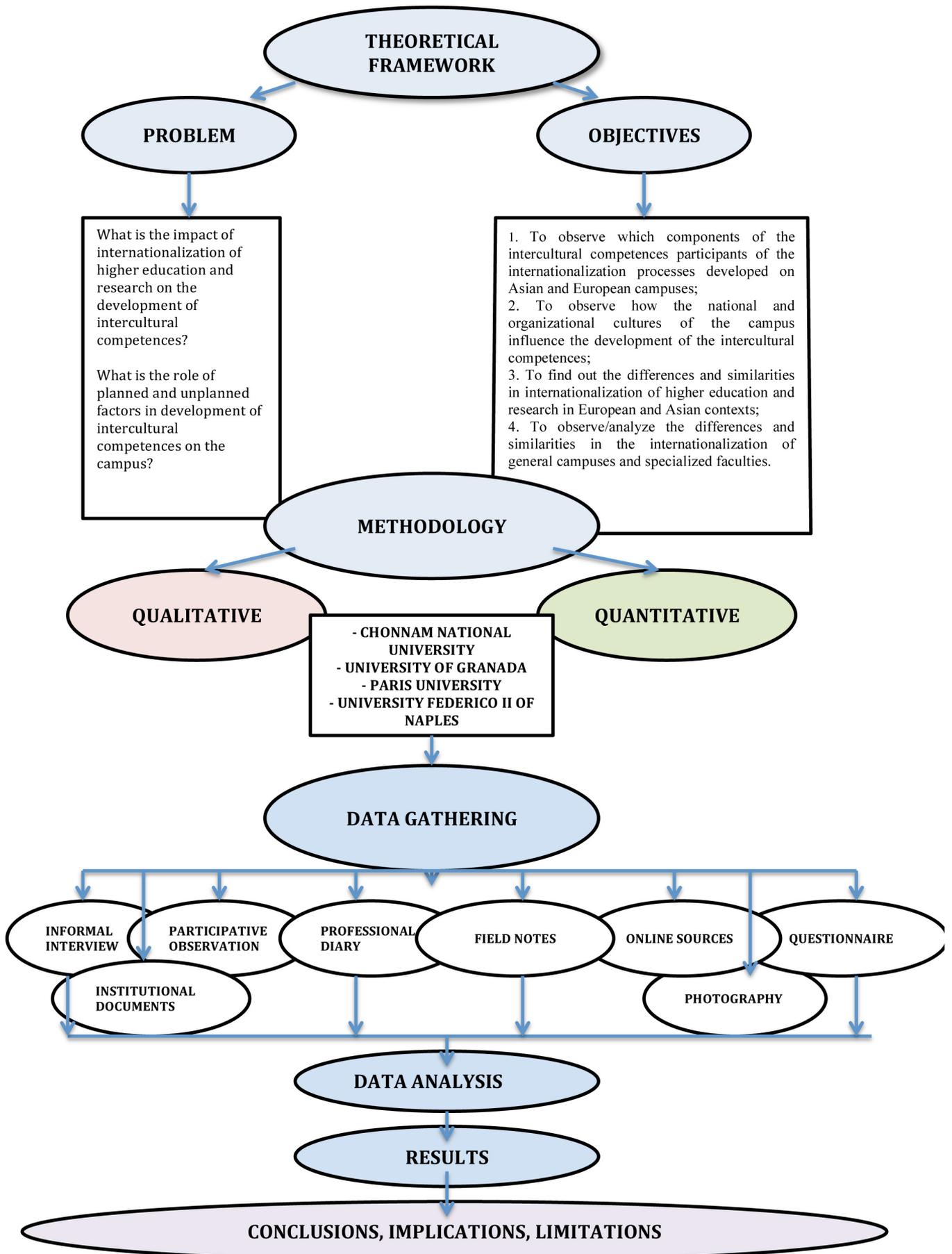
- To use of a range of methods.
- To develop a different method for each research objective.

⁴³ Same methodology has been previously developed and applied (by the author of this Thesis) at the campuses in Norway and Spain. (Wisniewska, 2011).

- Collection of the data in the real context what build the basis for the analysis.
- Appreciate and incorporate diverse perspective.
- Constant reflection of the researcher on her/his actions and perception to be as objective as possible, what form part of the cognition process as well.
- Cognition principle help to understand complex connections instead of the explanation of a single relation.
- Follow role of the openness during data collection, what give an opportunity to utilize open questions and afterward do freely analysis instead of following strictly existing patterns.
- Construction of the reality.
- Detection of new findings and theory building.

Having these characteristics in mind, the phenomenon of 1) impact of national culture and organization culture on the internationalization process and though it on the development of the intercultural competence, as well as, 2) observation of possible similarities and differences in internationalization oh higher education and research between Asian and European contexts, are best investigated qualitatively, because they need to be explore freely within different cultural and organization contexts.

Figure 51. Research design



8.1.2. Retroductive strategy

The **retroductive strategy** is a logic associated with the philosophical approach of scientific realism, or transcendental **Realism** of Bhaskar and constructivist realism of Harre. Social reality is viewed as social arrangements that are the product of material and not observable structure of social rations (Bhaskar 1979, cited in Blaikie, 2010; Mayer & Lunnay, 2013). The aim of Realist science is to explain observable phenomena with references to underling structures and mechanisms.

“The Retroductive research strategy starts with observed regularity and seeks different type of explanation. In this strategy explanation is achieved by locating the real underling structure or mechanism (s) that is/are responsible for producing the observed regularity, and identifying the context in which this happens. As structured and mechanisms may not be directly observable, it may be necessary to search for evidence of the consequences of their existence; should they exists, certain events can be expected to occur. Retroduction uses creative imagination and analogy to work back form data to an explanation.” (Blaikie, 2010: 19)

According to Pawson and Tilly, *“all social regularities are embedded in a wider range of social process, within different layers of social reality”* (quoted in Blaikie, 2000).

Because of all argumentation mention above, in order to understand relationship between national and organizational culture and implementation of the internationalization strategy on the campus and its impact on the development of intercultural competences, a lot of sectors of reality must be taken in to account, between them should be mentioned: location of the campus, geographical location (city, region, country, continent), historical context, social context (national culture, organizational culture of the university, organizational culture of offices responsible for development of this strategy), as well as social and cultural background of the students population, teachers and administrative staff.

8.1.3. The inductive strategy

The inductive strategy is one of the views of how scientists go about their work. Followed carefully this strategy objectives, observation and measure as well as careful data analysis are required. Bacon saw science as based on presuppose observation, where causes are to be discovered by unprejudiced observation (Blaikie, 2010). This strategy has been described as one, which consists of three principles: accumulation, induction and instance information.

In the light of the criticism of this way of research (Popper, 1959; Hempel 1966; quoted in Blaikie, 2010) as pure data collection is impossible, in order this strategy to be useful, the theoretical background and concepts were used, before any observations or measurements were made.

8.2. Research methods: Instrumentation and procedure

Research methods were selected based on the focus of this study. This Thesis examined the nature of relation between national culture, organizational culture and internationalization of higher education as well as the formative impact of the mentioned elements on the development of intercultural competence among participants of the campus. The subjects of this study were higher education administrators, teachers, campus staff and student population (national and international) as well as professionals and researchers involved in international research projects.

The **research is using mix methodology** (qualitative and quantitative method). **Descriptive** and **ethnographic** research approach was primarily exploratory in nature. The research methods used: **analysis of documentation, field's notes, professional diary, professional reports** (prepared by the author of this Thesis as well as by external agencies) **informal interviews, participative observation, on-line sources of the universities (Facebook, Twitter, Wikipedia, You-Tube, forums, ect.), university journals, photography and questionnaire.**

The research methods are described further in this chapter, including background information on the method, detail on the sample, instrumentation, data collection and analysis (**Table 4**).

Table 4a. Instruments for data collection

OBJECTIVES	METHODS	INSTRUMENTS	ANALYSIS	PARTICIPANTS	CONTEXT
<p>Explorations, description** and explanation internationalization efforts undertaken at the 4 universities (What do we internationalize? How do we internationalize?)</p> <ul style="list-style-type: none"> - University of Granada (UGR) general campus*** - UGR Faculty of Odontology - Chonnam National University (CNU) general campus - CNU School of Dentistry - Paris-Sorbonne University (PIV) Sorbonne campus and other campuses of Paris IV - Paris University Faculty of Odontology - University of Naples Federico II School of Dentistry (UNINA) 	<p>Qualitative</p>	<ul style="list-style-type: none"> - Institutional documents (policy, rapports, students' guides, university's journals), - Institutional websites (Facebook, Tweeter, Wikipedia, You-tube) - On-line forums - University rankings - Informal interviews/"chains of conversations" - Direct observation, participative observation/ no controlled observation - Field notes - Professional diary - Photography (not written sources) 	<p>Descriptive analysis</p> <p>Content analysis</p>	<p>CNU (2011-2013)</p> <ul style="list-style-type: none"> - Local Teachers (15) - Foreign teachers (2 university teacher, 5 language center teachers) - International office employees (5) - Campus Bank (3) - Campus services in Student's Union (3) - Student Parliament (2) - Students organizations (2) - Bishop of local church (3) - Domestic students (40) - International students (25) - Course Korean language & culture (6 months) - School of Dentistry of CNU, Hospital - Conferences on the CNU campus and other Korean universities - Cultural excursions with the CNU stakeholders - Photography campus' places <p>UGR (2014)</p> <ul style="list-style-type: none"> - Local Teachers (20) - Foreign teachers (5 university, 4 language teachers) - International office employees (3) - Escuela Internacional de Posgrado - Campus Bank (2) - Campus services - Student Parliament (2) - Students organizations (2) - Domestic students (50) - International students (30) - Photography campus' places <p>PIV (III-X 2014)</p> <ul style="list-style-type: none"> - Teachers locals (15) - Foreign teachers (1 university) - Service de Relations Internationales (100%) - Vice-President of Relations Internationales of PIV (Professeure déléguée de Relations Internationales and - <i>Charge de contrats de recherche</i>, (2) - <i>Cotutelle Internationale de thèses</i> (3) - Ecole Doctorale - Campus services: Service culturel - Student Parliament (2) - Students organizations: Parismus, Adeas, Students' Union (15) - Domestic students (40) - International students (15) - Photography campus' places <p>PVI (III-X 2014)</p> <ul style="list-style-type: none"> - Direction des Relations Internationales (50%) - Bureau Europe (80%); - Sorbonne Universités - Management of the COMUE, - Université de Technology Compiègne 	<p>CNU, Gwangju South Korea</p> <p>UGR, Granada, Spain</p> <p>PIV, Université Paris-Sorbonne, Paris</p> <p>Sorbonne University, Paris France</p> <p>Direction des Relations Internationales of PVI – collaborator of Paris IV</p>

Table 4b. Instruments for data collection

OBJECTIVES	METHODS	INSTRUMENTS	ANALYSIS	PARTICIPANTS	CONTEXT
<p>Introductory context to the study: Explanation* of IHE at global, European and Asian level</p> <p>Explanation of Asian-European Cooperation, Korean European cooperation in IHE & Research.</p>	Qualitative	Conferences' documentation, declarations, statistics, Website resources	Content analysis (descriptive character)		Global Asian European

OBJECTIVES	METHODS	INSTRUMENTS	ANALYSIS	PARTICIPANTS	CONTEXT
<p>To observe which components (dimensions) of the intercultural competences participants of the internationalization processes developed on Asian and European campuses;</p>	Quantitative	Questionnaire	Analysis of questionnaire SPSS; descriptive	<p>Students of general campus undergrad + postgrad - 100 Professors of general campus – 20</p> <p>Students of School of Dentistry undergrad – 60 Students of School of Dentistry postgrad - 20 Professors of School of Dentistry -20</p> <p>Students of general campus undergrad +postgrad -100 Professors of general campus – 20</p> <p>Students of School of Dentistry undergrad – 60 Students of School of Dentistry postgrad - 20 Professors of School of Dentistry - 20</p> <p>Students of general campus undergrad +postgrad - 100 Professors of general campus – 20</p> <p>Students of School of Dentistry undergrad– 60 Students of School of Dentistry postgrad - 20 Professors of School of Dentistry - 20</p> <p>Students of School of Dentistry undergrad – 60 Students of School of Dentistry postgrad - 20 Professors of School of Dentistry - 20</p>	<p>ASIA: CNU</p> <p>EUROPE: UGR</p> <p>PIV</p> <p>PARIS UNIVERSITY</p> <p>UNINA</p>

Table 4c. Instruments for data collection

OBJECTIVES	ANALYSIS	INSTRUMENTS	ANALYSIS	PARTICIPANTS	CONTEXT
To observe how the national and organizational cultures of the campus influence the development of the intercultural competences;	Quantitative and qualitative	Questionnaire & all the qualitative instruments mentioned above	- Analysis of questionnaire with Contextual and Institutional analysis	- All the participants of the study mentioned already in this table & others participants (campus stakeholders) of the all analyzed campuses. - Learning environment of the campuses.	Asia: CNU Europe: UGR PIV PV UNINA
To find out the differences and similarities in internationalization of higher education and research in the Asian and European contexts;	Qualitative		Comparative analysis (with SWOT analysis)	- All the participants of the study mentioned already in this table & others participants (campus stakeholders) of the all analyzed campuses. - Learning environment of the campuses.	CNU UGR PIV (+PVI) Paris University Federico II
To observe the differences and similarities in the internationalization of general campuses and specialized faculties.	Qualitative and quantitative		Comparative analysis	- All the participants of the study mentioned already in this table & others participants (campus stakeholders) of the all analyzed campuses. - Learning environment of the campuses.	CNU (general campus & School of Dentistry) UGR (general campus & Faculty of Odontology) Paris University (PIV, 6 campuses & PV) UNINA (Faculty of Medicine).

* Explanation – retroductive research strategy. ** Exploration and description – inductive research strategy.

*** General campus = central campus.

8.2.1. Informal Interview

In order to understand fully an impact of **national and organizational culture** on the **process of internationalization of the campus** and their impact on the development of intercultural competences, and afterwards faire comparative analysis of these situations in Asian and European context one of the very useful ways of data gathering was **informal interview/chain of conversations**. It was very useful way especially in Korea and France where the language of interaction was often English⁴⁴, sometimes Spanish, French and one in Polish (on French campus).

Those methods of data gathered go hand in hand with participative observation and photography taking. The informal interview (conversation) was usually done as a part of the observation process focus on social setting of interests in order to understand

⁴⁴ English language is still a challenge to be used for professional or more explicit interaction on the campus.

more reality. It consisted on informal talks with different stakeholders about research's wildly understood life on the campus.

Sometimes notes during conversations were taken, however, most of the information from the conversations was written after meetings. The brief notes from experiences in the field and some pictures in order to visualize organizational culture which shaped learning environment of the campuses, were taken.

For the purpose of this study, this approach and methodology were very useful as there is not any literature describing the organizational culture, national culture and internationalization efforts of the universities, which were taking part of this study, as well as no documents on their impact on the students or academic staff populations. (Public, general information about some projects internationalization campuses, visible on institutions' website existed.) For some of the interviews some preparation was needed (Wood Johnson, 2011).

8.2.2. Participative observation and notes from the field

The methodological debate on the role of observation as a method of investigation has taken place during history. Increasingly visual data become more important in qualitative research (Flick, 2004; 2008). There are various reasons for using it instead of verbal data or in union with those. Firstly there is a **big wish of researcher to overcome speaking words** and reports about actions in favor of **analysis** of those in their **natural going**. Secondly, there is a possibility to get knowledge through observation and intervening in field in question, and observed consequences of this participation.

In Goffman's (1961)⁴⁵ and Flick's (2004: 149) study observer becomes part of the observed field. However, affordable stories and interviews make data practices rather than the practices themselves. It is often said that, the **observation allows** to a researcher to find out **how actually something happens**. The interviews comprise a mixture of what something looks like and as it should be.

In this research **direct participative** (from inside), no **controlled observation** was performed (Marradi et al., 2007).

⁴⁵ Goffman, E. (1961). *Asylums. Essays on the Social situation of Mental Patient and Other Inmates*. Nueva York: Anchor Doubleday. Cited by Flick (2004). *Introducción a la investigación cualitativa*. MORATA. Madrid.

Participant observation is defined as a field strategy that simultaneously combines the analyzes of documents, to interview respondents and informants, direct participation and observation, and introspection (Denzin, 1989: 157-158).

"Participant observation "combines participation in the lives of the people (in the case of this study - institutions) being studied with maintenance of a professional distance that allows adequate observation and recording of data" (Fetterman, 1998: 34-35).

Principals' features of the method are that the researcher immerses himself in the field, viewed from the perspective of a member but also influences what is observed due to his/her participation (Cardoso de Oliveira, 2004: 55-68).

The participative observation in this research took place in three steps (according to Spradley: 1980):

1. **Descriptive observation** - at the beginning it served to have general view about field of study, it helped to understand complexity of situation on the campus and developed views for our most specific questions. (At the CNU it was natural process of familiarization with a new campus during months; at the Paris University it was shorter period of time (about 8 months), at the UGR the author already had experienced this campus as a research place during master program.
2. **Localized observation** - during this step the research perspective become more and more limited to the processes and problematic research question.
3. **Selective observation** - last step of observation was focused on additional information, which permitted to develop ideas created in the second step and respond to the eventual doubts which appeared during whole process.

Observation of field setting in our case involved:

- **Systematic observation of real situations** - long engagement in the life of institutions (CNU - 2,5 years; UGR - 2 years; Paris University - 8 months; Federico II - 12 days); Expressed notes on how the observation has been done (professional diaries form the stays on different campus and for different tasks);
- Mix: cover and uncover observation (Friedrichs, 1973).

- Methodological and tactical improvisation in order to develop full understanding of setting of interest.
- Some of the observations were recorded, others were noted.

8.2.3. Pictures as instruments of data gathering

Recent years pictures, videos become a source data in qualitative study, especially with ethnographic and anthropology studies (Flick, 2004).

In our study the visual material is used for additional documentation and visualization of the culture and practices which have been analyzed and contrasted with the presentations and textual interpretations in order to extend the integrated perspectives on the subject. It has been taken into consideration that the visual material is achieved in theoretical framework of this research and is perceived and interpreted from a specific perspective – perspective of internationalization of higher education and research.

8.2.4. Professional diary

Professional diaries become interesting tool research during last years. According to Pring (1999) the relevance of notes in the diary work is an issue, but on the other side, through diary case studies are unique in context and sharing experiences can still relate to others in similar situations. Objectivity in self-reflection is still debatable and requires further investigation. However, professional diary helps to keep focus, patience, planning and personal growth (Harvard Business Review, 2011). Author of the thesis before this research was performed had had a 3 years experience in using own professional diary for investigation purpose. Any bias which could be introduced by this tool was verified by the other qualitative tools as well as the time during which the study took place.

8.2.5. Institutional documentation

Institutional documentation of the universities were reviewed though the perspective looking for the internationalization of higher education and research actions as well as eventual trainings for intercultural competence. Statutes of the universities, their missions, visions, strategies of development were taken into consideration.

Documents describing obligations of the employs (international offices), journal of the campus, invitations to cultural invents, campus information, institutional emailing, were taken into consideration.

8.2.6. Online sources

Online sources of the institutions were analyzed in perspective of internationalization of higher education and research. It was taken in to consideration (if existed): Websites of the universities, Facebook pages, Twitter, You-Tube videos of the universities, students' guides.

8.3. Validity & reliability of the Observation (observation security)

In order to show a process of knowledge construction about internationalization efforts and its interaction with national culture and organizational culture as well as its result on the campus population the **Table 5** was prepared. According to Becker and Geer (1960), attitudes deduced from group activities and daily life conversations give closer vision of reality. Declarations, conversation within groups is more probable that are shared and usually take place, instead of declarations face to face with researcher. **Spontaneous declaration, attitudes and conversation seems to be more reliable than those which respond for researcher intervention (Flick, 2004: 161).** For this reasons the **Table 5** showed places and activities, where the data collection took place.

It should be noticed that data were recollected from informal interview (informal conversations), where some of them had spontaneous character and other were arranged by the researcher, very often with the help of the local supervisors.

Some of the data were deduced from daily life conversations and interactions with other participants of the campus (like international and national students, administrative and academic staff, etc.) and some from direct contact with researchers.

Table 5. Information used for our analysis overlap. Observation security

Ways of observation and information gathering		Spontaneous Interaction	Meeting arranged previously by researcher
Declarations, Informal interview/"chain discussions" following the role of the "snowball", conversations	Information/interaction only with researcher	<p>CNU (2011-2013) Office of International Affaires (administrative staff and professor) - Academic staff of the - Foreign academic staff - Language Centre teachers (foreign and local teachers) - Campus Bank - Students' restaurants on the campus and out side of the campus, around university - Campus services in Student's Union building - Student Parliament - Students organizations - Bishop of local church - Domestic students (different carriers) - International students - Course Korean language & culture - Photography campus' places - Participation in Cultural event on the campus of the CNU, out of the CNU together with the CNU community; visits of the neighbour campus University (Chosun University); - Participation in conferences (CNU, SEOUL); visits of the hospital - Interactions with administration of responsible for international research - e-mail interactions with administration of the CNU - Interaction with local people, visitors of the CNU, users of the CNU library - Dormitory living - use of Library</p> <p>UGR Study as a Socrates student (2004/2005); Studying as a Free mover student (2005/2006); Participant of the Erasmus Mundus Master (2008-2011); Professional Internship at the OFPI de la UGR (2010); PhD student (2012-2017) - Personal and online interactions with academic staff and administrative staff - Teachers: locals & foreigners - International office staff - Escuela International de</p>	<p>CNU (2011-2013) Office of International Affaires (administrative staff and professor) - Foreign academic staff, Language Center teachers: foreign and local - Student Parliament - Students organizations - Domestic students - International students - Course Korean language & culture. -Interaction with administration of responsible for international research.</p> <p>UGR Office of International Affaires (administrative staff) - Foreign academic staff, - Language Centre teachers and staff - Student Parliament - Students organizations - Domestic students - International students - Interaction with administration of different establishments of the UGR</p>

	<p>Posgrado de la UGR - staff</p> <ul style="list-style-type: none"> - Campus Bank - Campus services - Student Parliament, - Students organizations - Domestic students - International students - Photography campus' places - Libraries <p>PIV (March to October 2014)</p> <ul style="list-style-type: none"> - International office staff - Teachers: locals & foreign - Ecole Doctorale - <i>Charge de contrats de recherche,</i> - <i>Cotutelle Internationale de thèses,</i> - Campus services, cultural services - Student Parliament - Students organizations: Parismus, Adeas, Students' Union - Students (domestic & national) - Library - 6 campuses of the Paris 4 - Sorbonne Universites: Beuro Europe (80%); - International Office of the Université de Technology Compiègne (on-line contact) 	<p>PARIS-SORBONNE (PIV) (2014/2015)</p> <ul style="list-style-type: none"> - International office staff (PIV) - Academic staff (local and foreign) - Members of the COMUE - Members of the International Office of the Paris VI - Members of the Bureau Europe (Paris VI) - <i>Charge de contrats de recherche,</i> - <i>Cotutelle Internationale de thèses,</i> - Ecole Doctorale - Campus services: cultural - Student Parliament - Students organizations: Parismus, Adeas, Students' Union - Domestic students - Foreign students - Library
Other stakeholders of the campus in daily life conversations	<p>CNU - national students international students; national administrative and academic staff; technical staff at the CNU</p> <p>UGR - national students international students; national administrative and academic staff; technical staff</p> <p>Paris University - national students international students; national administrative and academic staff; technical staff</p>	
In group	<p>CNU - national students and international students; national administrative staff and academic staff; technical staff at the CNU</p> <p>UGR - national students and international students; national administrative staff and academic staff; technical staff</p> <p>Paris University - national students and international students; national administrative and academic staff; technical staff</p>	<p>Meeting arranged by the Office of the International Affairs (example, Christmas meetings)</p> <p>Doctoral School of Paris IV Direction des Relations - Internationales (PVI)</p>

<p>Activities</p>	<p>Individual</p>	<p>Taking pictures on CNU, UGR, PARIS University campuses; Observation of the campus, classes, conferences and other cultural and scientific events (national and international) at CNU, UGR, Paris University; Observation of the Research centers and libraries (CNU, UGR, Paris University; gathering of the questionnaires (CNU, UGR, PIV, PV) Preparing: - Field notes and professional observations in the perspective of internationalization, at the CNU - Field notes and professional observations in the perspective of the internationalization - at the UGR - Report for the Presidency of the Sorbonne (fields notes and professional observations in the perspective of the internationalization)</p>	
	<p>In group</p>	<p>CNU: - Participation in the Course of the Korean language and culture; - International food festival - Development of research projects and research collaboration in the framework of POSEIDO - Cultural excursions in group in Korea (with students) - Scientific conferences and cultural events (with academic staff and researchers) - Events of the Industry-University collaboration in Soul - Gathering of the questionnaire on the campus - Informal interviews on the campus (help with translations Korean-English) UGR: organization of the conference in the framework of the Researcher's Associations at the UGR, participation in classes and conferences Paris University: preparation of the statistical part of the Report. Conversation on the culture of the office, university and COMUE.</p>	

Sources: Own elaboration, followed Becker and Geer (1960) indications⁴⁶

⁴⁶ Becker and Geer (1960) cited by Flick (2004: 161).

In relation to the participative observation, following the division proposed by Gold (1958) the researcher in this study played a role of:

1. **Active member in all analyzed campuses** (for example: as a student of the Course of Korean Language and Culture (CNU), as a professional of international project development within POSEIDO (CNU); student of French course and PhD researcher in preparation of the Paris IV report, etc. Researcher assumes a more central place in the setting that involves a functional role in addition to an observational role. This facilitates trust and acceptance of the researcher, but increases the identification of the researcher with members of the setting. According to Adler (1987), self-reflexivity, awareness and periodic withdrawal from the setting are needed to maintaining the research role.
2. **Complete member** (as an international student, scholar, researcher who takes part of professional actions in internationalization of campus) - fully immersed in the research setting. One may study a setting in which he or she is already active member or "become the phenomenon" of interest (Adler, 1987).
3. **Peripheral member** (because the author was not national, and she was temporary in the place) - involves daily or near-daily contact, interactions with members varies from acquaintanceship to close friendship with key informants. This is the most marginal role and least committed to the context (Adler, 1987; Wisniewska 2011).

8.4. Reliability and validity of the study

Reliability and validity are important concepts and **practices for case study research**. According to Yin (1989: 40-41), reliability and three forms of validity for this Thesis (qualitative methodology) were followed:

- **Reliability**: which demonstrated that the methodology of a study - such as data collection - can be repeated with the same results.

- **Construct validity**: established correct operational measures for the concepts being studied.

- **Internal validity**: establishing a casual relationship whereby certain conditions are showed to lead to other conditions.

- **External validity:** established the domain to which study's findings could be generalized.

Reliability of this case study was enhanced by previously tested protocol in the comparative case study conducted by the author of this Thesis in three separate universities (2 Norwegian campuses and 1 Spanish)⁴⁷, and in 6 campuses (Korea, Spain, France) to determinate the impact of national culture and organizational culture on the policies, strategies and stakeholders of these institutions. Following Yin (1989; 2003), the goal here was to minimize the possible biases of the study. Documentation of procedures and the development of a case study database, strengthen reliability.

The Construct validity was ensured by collecting data in the most accurate and appropriate form: open interviews/"chain conversations" with key stakeholders (academic and administrative staff, national and international students, services on the campuses) within each university and office. Document analysis was employed to analyze government and university documentations (Yin, 1989).

The Internal validity was established by triangulation of evidence, variety of data and variety of sources of data along the process of data collection progressed (Janesick, 1994). Triangulation provided some means for clarifying meanings and identifying different ways the phenomena was seen (Flick, 2004). Yin (1989) stated that any findings are likely to be much more convincing and accurate if it is based on several sources of information.

The External validity was strengthened by the fact that the same methods of data collection were used in studying 8 separate institutions (6 for this Doctoral Thesis and 3 for previous International Master).⁴⁸ Moreover, to the author of the Thesis during process of data collection and results processing, accompany many external observers, who were the academic staff of these institutions and other group who were international academic/administrative collaborators of these institutions. Finally, the results obtained through the qualitative methodology and analyses were confronted with the results obtained through the quantitative methodology (questionnaire).

⁴⁷ Study presented as a master thesis of Erasmus Mundus Mundusfor in front of the international committee in Portugal (Wisniewska, L. M., 2011).

⁴⁸ Wisniewska (2011).

8.5. Ethical considerations

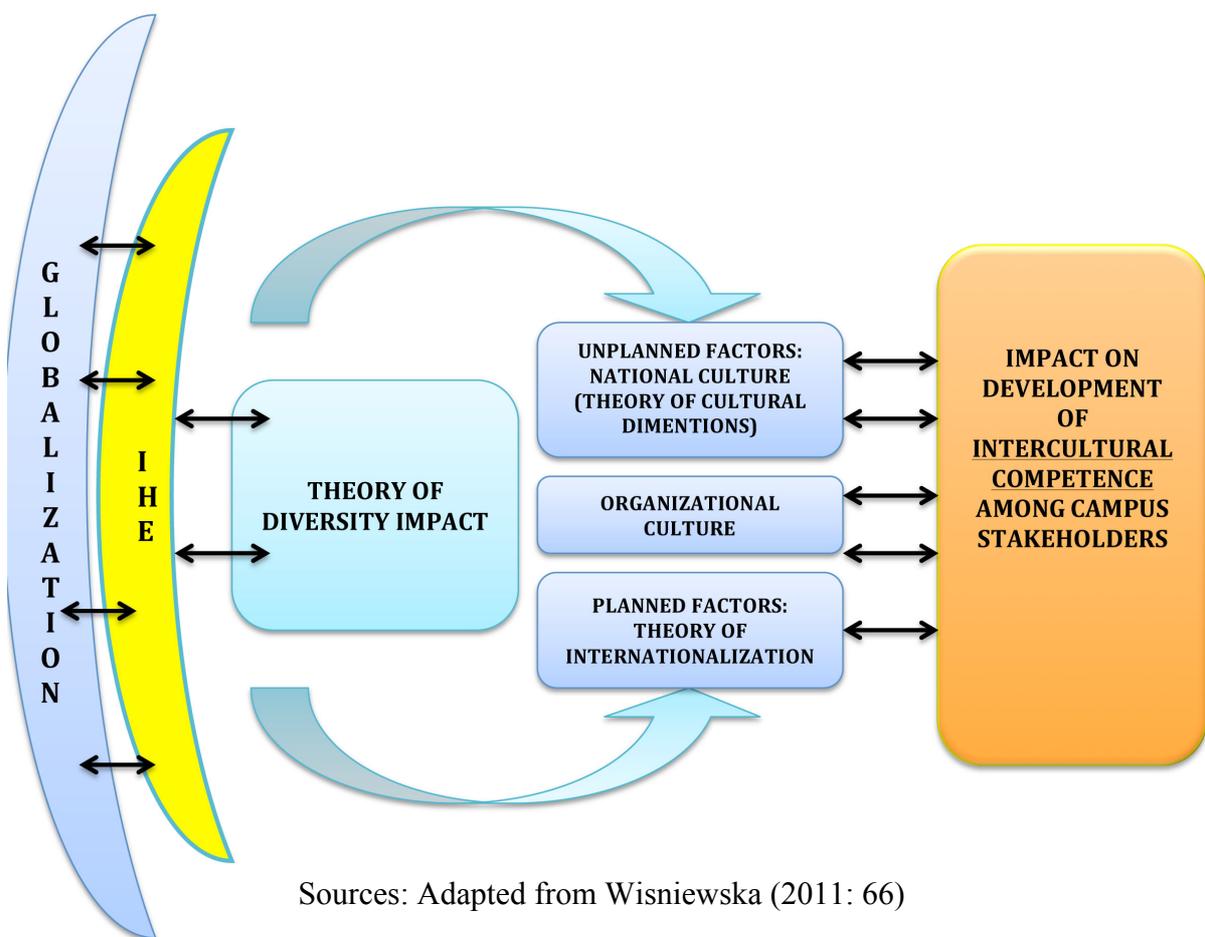
1. The collaboration was voluntary and selfless. The study was conducted with the approval of all research participants. All data from all respondents and the whole process was anonymous. If some name appeared it happened with agreement of the interviewed.
2. The purpose of the informal interviews was explained. The responsibility of the researcher for welfare of the participants was taking into account.
3. Leaders of international offices embraced this opportunity (as they were informed about conversations about internationalization issues with foreign and national students) and recognized the value of such research and the feedback from students.
4. These leaders hope that the research on internationalization of their campuses may provide them with organized information on this complex process. Administrators of the international offices requested feedback upon completion of the thesis to contribute the discussion on internationalization in their respective universities.

8.6. Analysis of the qualitative data

Analysis of the qualitative data gathered on the campuses during professional stay, has been performed in the framework of the mix of theories: pedagogical, organizational and cultural. The model of creation of campus culture - in which national culture takes active, but silent role - for development of interculturally competent professionals (**Figure 52**) has been taken into consideration. According to Wisniewska (2011), the culture of the campus, which is created by relationships between policy (international, national, regional, institutional), national and organizational culture of an institution, academic international programs, internationalization of curriculum, extracurricular activities on the campus, formation program for administrative staff as well as collaboration in research projects in international consortia (academic and administrative staff) impacts development of intercultural competences among stakeholders of the campus (see Theoretical framework).

For deeper analysis of relationships, interactions, dependencies and impacts among elements which create campus environment/culture, and this one is constantly changing the impact on the development of certain attitude toward intercultural competence, theoretical framework of this Thesis is build on: theory of process development of intercultural competence (Deardorff, 2004), theory of diversity impact of Gurin (1999; 2002), who followed Piaget’s theory of developmental growth (Piaget, 1971), internationalization of higher education and research theory proposed by de Wit (2002; 2009; 2010; 2015) and Knight (1997; 2004; 2008a; 2010; 2011; 2015), Hofstede’s (2001; 2010) theory of cultural dimensions and Handy’s (1995) types of organizational culture (Wisniewska, 2011)(Figure 52).

Figure 52. Theoretical framework of the case study



Sources: Adapted from Wisniewska (2011: 66)

8.7. Quantitative methodology: the questionnaire

In order to match the first objective of our study:

“To observe which components of the intercultural competences participants of the internationalization processes developed on Asian and European campus,” a **questionnaire** as an instrument of data collection has been used. Observation (participative, direct), informal interviews and professional diary, field notes were carried on in order to cover quantitative methods limitations.

8.7.1. Questionnaire as a data gathering tool

Quantitative methodology (questionnaire) is frequently used in education. Following Hernandez et al. can be said that a questionnaire is a set of questions regarding one or more variables to be measured (Hernandez et al., 1991). Elliot (1991: 79) emphasized that this quantitative tool serves to verify the responses of many people for the same question. Moreover, a questionnaire serves to prepare statistics and furthermore analyze the data. The collection of information is easily structured and systematic what allows quantifying the reality and identifying potential causal relationships that occur and the intensity with which they occur (Arnal, et al., 1992).

According to Hohmann (2006), in the last years, educational research emphasized quantitative methods. Taking into consideration the strengths of the questionnaire as a tool for the data gathering as well as its match with the study objectives, it was used in this project (and in the framework of ISAIAS project, Wisniewska, 2014b).

Among **the strengths of the questionnaire**, which convinced the author to use it for this research project were:

- Previous experience with the use of the questionnaire for similar comparative case study (Wisniewska, 2011), argued potential of the questionnaire proposed in that study, as well as the literature on evaluation of the internationalization of higher education and research (Deardorff, 2004; Wisniewska, 2011).
- In the **suggestions for further study given by Deardorff** (2004), it has been mentioned the mixed methodology (quantitative and qualitative) as one of the possible methods of assessment of intercultural competences.

- It could be given face-to-face or sent online. It was found the first option much more efficient and giving an opportunity of further discussion with the responders.
- Questionnaire as a possible assessment tool of intercultural competences was mentioned in other studies.
- Quickly gathering information from many people.
- The questions are guided according to the objectives of the research.
- The theoretical framework of the questionnaire matches directly to the research questions.
- Quite economic and can be applied to huge number of participants.
- It embraces a wide range of key stones in the same study.
- Its anonymous character encourages to feel freer in expressing opinions and to increase the degree of truthfulness of the answers.
- It is perceived by scholars as a one of the most suitable methods for collecting opinions and beliefs, what was the objective of this study; it facilitates generalization of results (Hohmann, 2006).

Some disadvantages of the questionnaire should be mentioned:

- usually the information is restricted to that provided by the subject; however, in the case of this study, often the answers (after filling them) were discussed with the responders (all campuses);
- the process of writing questions (translation, contextualization, pilotage) and their interpretation take time, and
- the information given that day is influenced by the mood of the responders

8.7.2. Theoretical construct of the questionnaire (dimensions)

It should be mentioned that the strict phases for the preparation of the questionnaire (Wisniewska, 2011; 2014b) were followed (Aguirre, 1995):

- a) Determination of the purpose of the study and its dimensions,
- b) Specify the type of questions and answers,
- c) Redaction of questionnaire questions,
- d) Validation of the content,

e) Distribution and collection.

8.7.2.1. Determination of the study purpose and dimensions

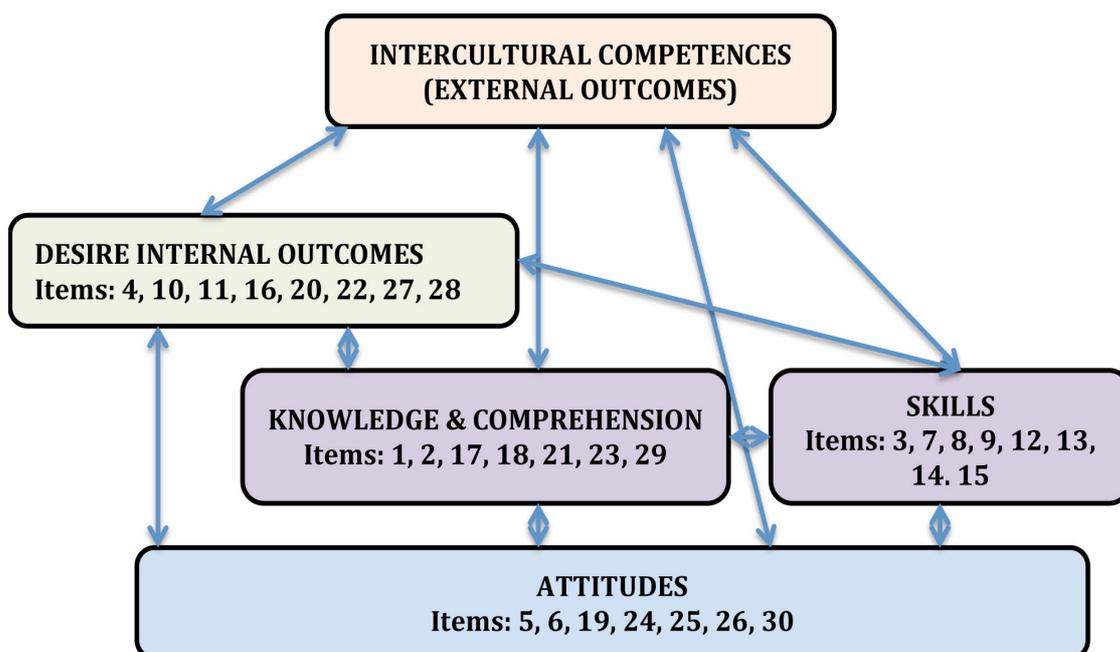
According to Del Rincon (1995: 208), it “*is convenient to delimit and to write the basic purpose of the questionnaire,*” what in case of this study means:

- Observe which components of the intercultural competences participants of the internationalization process develop on Asian and European campuses.

The theoretical dimensions of our questionnaire have been brought by the results of Deardorff ‘s study (2004). The dimensions proposed by the model of development of the intercultural competences (**Figure 53**) become the dimensions of the questionnaire prepared during Wisniewska’s study (2011), and this one has been taken as a validated tool (theoretically and empirically) and used (after slight contextualization) to this research. The questionnaire was slightly contextualized to each campus (linguistic contextualization (See Annex – questionnaires in French, English, Korean and Spanish).

The dimensions of the questionnaire are: attitudes, knowledge and comprehension, skills and internal outcomes.

Figure 53. Dimensions of the questionnaire



Source: Own elaboration

The **Figure 53** represents four dimensions of the questionnaire construct used in this research, where:

- The first dimension (perceived by Deardorff as the most important one) called “Attitudes” is composed of the Items: 5, 6, 19, 24, 25, 26 and 30.

- The second dimension of this instrument is called “Knowledge and Comprehension” is composed of the Items: 1, 2, 17, 18, 21, 23 and 29.

- The Skills dimension is composed of the Items: 3, 7, 8, 9, 12, 13, 14 and 15.

- And the dimension of “Desire Internal Outcomes” is composed of the Items: 4, 10, 11, 16, 20, 22, 27 and 28.

The dimensions and items proposed by this questionnaire correspond to the model of the development of intercultural competences proposed in the Deardorff’s study (2004).

8.7.2.2. Conceptual validation of the questionnaire

The conceptual validation of the questionnaire was done by following steps:

1. Bibliographic revision,
2. Selection of a questionnaire from the previous study,
3. Adaptation of the questionnaire for the new study,
4. Pilot study of the questionnaire and new modifications (linguistic adjustments),
5. Translations (for each campus), interpretation and pilots study which brought some small linguistic adjustments,
6. Implementation of the questionnaire.

After revision of the bibliography dedicated to the intercultural competences (Bennett, 2001; Deardorff, 2004, 2006, 2009, 2013; Bennett & Bennett, 2004; Bennett & Simone, 2013; UNESCO, 2013; The higher Education Academy, 2014; Actor et al., 2001; Byram, 1989; 1997a; 1997b; Byram et al., 2001; 1998; Bolten, 2012; Griffith, 2016; Berrardo et al., 2012; Griffith et al., 2016: 3-5), and their way of assessment (Deardorff, 2009; Fantini et al., 2006; Griffith, 2016: 8-10), some questionnaires of intercultural competences assessment were found (Fantini, 2006; Wisniewska, 2011; source of different tools gathered in Griffith et al.).

For the purpose of this research it was opted for the questionnaire proposed by

Wisniewska (2011) who based it on the theory of process development of the intercultural competences and their components developed by Deardorff (2004; 2006). This questionnaire has been validated and used in the international study (for international Erasmus Mundus master thesis) on Spanish campus (Wisniewska, 2011: 57-60). For the purpose of this Doctoral research the questionnaire was newly adapted, translated (from Spanish/English version) and contextualized (when needed) into Korean, French, English and Spanish language (See Annex 1 - questionnaires). The first part of the questionnaire (demographic and context data) has evolved comparing with its first Spanish version (Wisniewska, 2011: 139-140), however, the second part of the questionnaire (components of the ICC) remained almost the same - faithful to the original list of the components of the ICC proposed by Deardorff (2004) and to the first Spanish version of the questionnaire.

In the first questionnaire prepared in 2011 (Wisniewska), the part related to the components of the ICC had 23 items. In the questionnaire adapted to this doctoral study the number of items augmented till 30 (Wisniewska, 2014a; 2014b; 2014c). It has happened because after experts' discussions it has been decided that some of the items should be divided since they are asking about different abilities. In this way:

- ✓ Item 5 (from 2011): *It increased my interests in the **people from other cultures** and in the **intercultural learning**.*

Become:

- Item 5 (2014): *It increased my interests in the **people from other culture**.*
- Item 6 (2014): *It increased my interests in **the intercultural learning**.*

- ✓ Item 6 (from 2011): *It has improved my capacity of **listening and observation** of people from other cultures.*

Become:

- Item 7 (2014): *It has improved my capacity to **listen** people from other cultures.*
- Item 8 (2014): *It has improved my capacity to **observe** people from other cultures.*
- Item 9 (2014): *It has improved my capacity to **collect** information (to listen and to observe) in an intercultural environment.*

- ✓ Item 9 (from 2011): *It helps me to improve my abilities to **analyze, interpret and relate** information related with different cultures.*

It has been divided into 3 items (Wisniewska, 2014), and became:

- Item 13 (2014): *It helps me to improve my abilities **to analyze** information related with different cultures.*

- Item 14 (2014): *It helps me to improve my abilities **to interpret** information related with different cultures.*

- Item 15 (2014): *It helps me to improve my abilities **to relate** information related with different cultures.*

- ✓ One additional question related with motivation was added in the new tool (2014):

Item 30: *I think intercultural competences are needed in my work.*

After the questionnaire was slightly modified and translated from English into Korean. Translation process was done in close collaboration between author of the Thesis and a Korean friend Yeowon (Master in English Education by the CNU). Both were not native English speakers; however, the translation had a place in the beginning of 2013 when the author of the Thesis has been living in South Korea already over 2 years, the friendship and communication between both of them was smooth; moreover, Yeowon was deeply introduced in the thematic of the study as she was helping also in the translations during data gathering on the campus of the CNU and in the review of Korean literature. Following Boone (1985), after preparation of the 2 versions of the questionnaire (for academic staff and students), 7 pilot studies have been done (on general campus and in Dentistry School). Both versions needed minimal linguistic adjustments (in 2 items). Afterwards 2 questionnaires (Korean versions for students and academic staff) were review by the experts (in methodology) and after acceptance once again they passed some pilot study. The version of the questionnaire was correct.

8.7.2.3. Implementation of the questionnaire

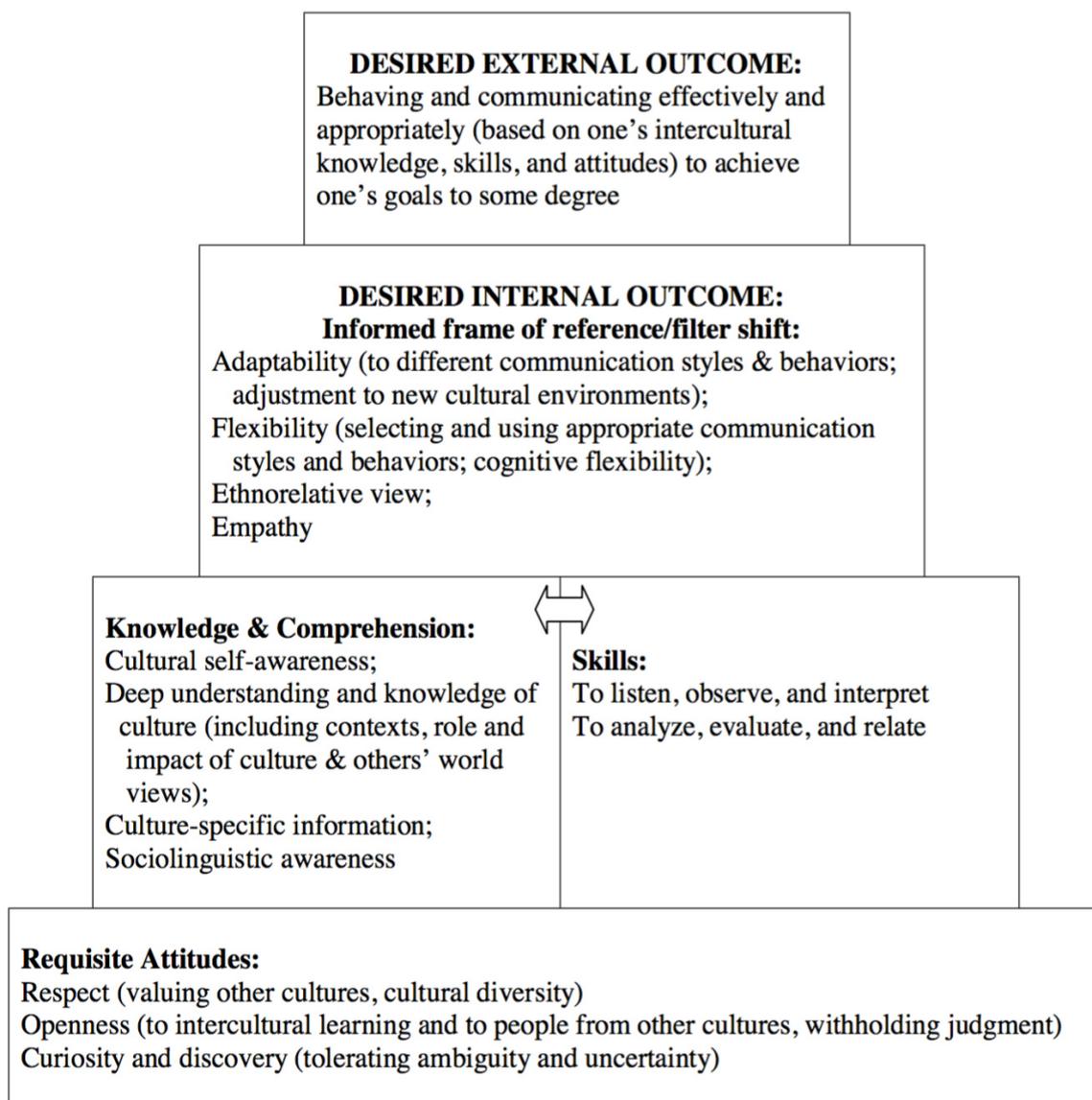
- ✓ Distribution in South Korea: The questionnaire was distributed (2013) in the paper version on general campus (among students, professors, and researchers) of the CNU, and in Dentistry School of the CNU (students, professors, researchers). The questionnaire was filled during meetings (arranged or casual) what allowed have deeper conversation about the subject.
- ✓ Distribution in France: The questionnaire was distributed (2014) in paper version on the different campuses (among students, professors, and researchers) of the Université Paris-Sorbonne (P4), and in the Dentistry School of the Paris Université (students, professors, and researchers).
- ✓ Distribution in Spain: The questionnaire was distributed (2014) in paper version on general campus (among students, professors, and researchers) of the UGR, and in the Faculty of Odontology of the UGR (students, professors, researchers).
- ✓ Distribution in Italy: Additionally, the questionnaire was distributed (2014) in paper version at the Dentistry School of the University of Federico II (students, professors, researchers).

8.7.3. Analysis of the quantitative data

Analysis of the quantitative data has been performed using the statistical program Statistical Package for the Social Sciences (SPSS version 16.0). Missing values in response to the questionnaire were filled with fashion item.

For the interpretation of the data, Deardorff's model of development of ICC, which gave the conceptual framework and dimension to this questionnaire, was used (**Figure 54**). Furthermore, to follow deeper analysis of relationships between development of ICC and national and organizational culture as well as culture of a university campus, the theoretical framework of this research was applied (see more in the chapter on theoretical Framework).

Figure 54. Model of development of intercultural competence proposed by Deardorff (2004, 2009)



- *Move from personal level (attitude) to interpersonal/interactive level (outcomes)*
- *Degree of intercultural competence depends on acquired degree of underlying elements*

Sources: Deardorff, 2004

8.7.4. Ethical considerations

The collaboration with all participants was voluntary and anonymous. The study was conducted with the approval of all research participants, since the action to complete the questionnaire and return, it is considered implied consent to the acceptance for inclusion in the study. The purposed of that questionnaire was widely explained and

additional information on the study was given in case of demand. The responsibility of the researcher for welfare of the participants was taken into consideration. “*Consistent diligence, collaborative association, and meticulous thoughtful communication (...)*” during intensive research periods as well as during whole stay on the different campuses had place in order to perform professional research and avoid any bias (Panter et al., 2011: 34).

9. Methodology and Results: a study in 3 levels

To answer to the research questions of this Thesis, data were collected through the POSEIDO ISAIAS project, as described previously, and results were published in biomedical journals. For this reason, the titles, introductory statements and conclusions of the articles may appear sometimes different from the core research questions of the Thesis, because these articles were designed for publication in biomedical journals. However, the data, results, discussions and perspectives of the 3 main articles are answering directly to the research questions and are included directly into this Thesis thereafter.

These 3 articles present comparative, transversal case studies of the Chonnam National University (CNU, South Korea), the University of Granada (UGR, Spain), the University of Paris (Paris 4 and 5, France) and the University Federico 2 of Naples (UNINA, Italy) on general campuses and in dental schools. The combination of the data and results from all these campuses leads to the answer for our research questions.

As previously explained, a questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences had been developed, based on the concepts and key elements pointed out by Deardorff (2004; 2006; 2009). It was statistically tested and validated between the University of Granada and the Oslo and Akershus University College (Wisniewska, 2011). This questionnaire was selected as a first instrument for the ISAIAS project for the screening assessment/evaluation of the internationalization process of a University through the development of intercultural competences (ICC) among the Academic stakeholders, and it was used to calculate a score integrating various aspects of development: the Fast Assessment Screening Test (FAST) Score.

In this series of articles, the ISAIAS FAST scores were calculated in 4 different Academic environments (France, Italy, Spain, South Korea) involved in implant dentistry and biomaterial education and research within the member Academic entities of the POSEIDO network, in order to estimate and understand the internationalization patterns of these universities, dental schools and implant and biomaterial research and

education significant groups. These scores were then integrated with the numerous other data collected during these field studies.

This study has been organized to compare an Asian model (the very specific Korean model in this case) with 3 different versions of the European environment, as the Asian - European interface could be a significant source of intercultural misunderstandings and anxiety in collaborations. It seemed therefore a very good example to analyze how the internationalization of higher education and research is impacted by the national culture and organizational culture of a university, how these cultures have an impact on the development of the ICC of the campus population, and to answer to the complex research questions of this Thesis.

However, the selected models also offer interesting perspectives, due to their multiple transversal approach, which increases the validation of the results. This transversal analysis is not only trans-disciplinary, but is also going through different levels of organization of the campus, from the general to some particular examples: from the general campus to the specialized faculties, and to the most specialized research and education groups within these specialized faculties.

Each level of this analysis, from the general to the particular, brings considerable data to the discussion on the research questions. They had to be investigated simultaneously in parallel, but results are presented separately level by level, and are completing and refining the answer to the research question. The general discussion section of the Thesis will make the synthesis of all these results, as data are spread between the 3 levels of analysis: general campus, specialized Faculties, and specialized research and education groups.

9.1. Field study in general campuses in Asian and European contexts

9.1.1. Introduction

The following article focused on the main research questions of this Thesis and gathered the data of these field studies about internationalization of higher education and research and the development on ICC in the **general campuses** of 3 different Universities, in European and Asian contexts:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014;2(3):179-94.

In this first part of the study, the ISAIAS FAST method was put to the test at the scale of a whole campus, to evaluate its practical relevance. The questionnaire has been used for the general assessment of 3 different campus (1 Korean and 2 Europeans) with 3 very different cultural and well-identified backgrounds, history and strategy. This model allowed to investigate if the ISAIAS FAST score corresponds to the typical profile, easily observable and well documented of these 3 universities, and it provided data and perspectives on these 3 general campuses and national cultures.

9.1.2. Materials and Methods

9.1.2.1. General methodology

The ISAIAS FAST questionnaire was proposed to 100 undergraduate and master students and 20 professors or researchers from various disciplines on the general campus of each participant university. The test sample is significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2011 and 2014 on the campus of the University of Granada (Granada, Spain), the Paris Sorbonne (Paris 4) University (Paris, France) and the

Chonnam National University (Gwangju, South Korea). In this case study, it was decided to analyze two different old European universities (Granada and Paris), to be able to analyze and compare their different approaches to internationalization of higher education and research in the European context with a traditional Asian campus (Chonnam).

The process of data gathering followed the same procedure in Asian and European campuses (ethnographical case study). Mixed methodology was used, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. A mixed methods research design implied collecting, analyzing and mixing both quantitative and qualitative data obtained through different sources and different methodologies. The combination of quantitative and qualitative approaches provided a better understanding of research problems, assured the validity of research and captures different dimensions of the same phenomena. This holistic methodology was mandatory in order to understand the impact of national and organizational culture on internationalization processes and its impact on development of ICC.

The qualitative methodology was based on field research: non controlled observation and direct, participative observation (participation in campus life, participation in cultural events, conferences), informal interview with academic staff (national and foreign), administrative staff (national and foreign), national students, international students and representative of students union, photographs, diary of the stay, universities websites and on-line forums about study in these universities. Review of the policy, research articles and reports on internationalization of higher education in these universities were also taken into account.

The quantitative methodology used the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the development of ICC. This questionnaire was previously developed, statistically tested and validated between the University of Granada and the Oslo and Akershus University College (Wisniewska, 2011), based on the theory of development of ICC, the concepts and the key parameters proposed by Deardorff. The previously validated questionnaire was slightly adapted to this specific study, and spelled in 2 slightly different forms adapted to students or to Academic professionals (researchers, teachers, professors), but both versions are strictly parallel and comparable. The analysis of the questionnaires

allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people. Moreover, many of the responders of the questionnaires had an informal interview with the researcher, what permitted to validate the answers given in the questionnaire.

9.1.2.2. Description of the questionnaires

The questionnaires (opinion tool) were built in 2 slightly different forms. One was formulated for teachers and researchers to determine in which measure the participation in international research/educational projects has impacted the development of their ICC. The second one was adapted for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or informal or personal meetings with foreign colleagues, etc.) - has impacted the development of their ICC.

Each questionnaire was composed of 2 separated parts. The first part was gathering the main data of identification of the person filling this anonymous questionnaire, where the respondent was asked about information such as: sex, age, professional situation (undergraduate student, postgraduate student, technician/administrative staff, Professor/senior lecturer/researcher, other) and a series of general information related to his/her activity.

For teachers and researchers, the extended questions can be summarize as followed:

- How long have you been working with international research/education projects, and what kind of projects,
- Do you participate in international events related to international projects (workshops, conferences), how many and what kind,
- Have international research/education projects required long stay abroad, how long and where; had you been abroad through university exchanges before starting international projects, how long and where; and would you like to go abroad for academic work, why and where,

- How often do you meet with your foreign partners concerning international research or education projects (presence meeting, online meeting, emails), and from which country are your main partners,
- From where were the foreigners you met on the campus and did the presence of foreign colleagues in the class/laboratory influence the value of the education,
- How do you feel with foreign partners, what is your biggest difficulty in the relationship with foreign partners, and how do you define intercultural competence.

For students, the extended questions can be summarize as:

- How long have you been studying at the University,
- Have you participated in any international events on the campus, and the kind of events (curricular or extracurricular),
- Have you ever been abroad through university exchange, where and how,
- Would you like to go abroad for study or work, why and where,
- From where were the foreigners you met on the campus and did the presence of foreign colleagues in the class influence the value of the education,
- Have the curricular and extracurricular activities offered on the campus given you the ability/skills to do your profession in culturally diverse environment,
- How do you feel with foreign colleagues, and what is your biggest difficulty in the relationship with foreign colleagues.

The questionnaire finally offered some free space to add reflections and comments of the person, in order to complete the experience.

The second part was the statistical part of the questionnaire with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a

classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under evaluation. The items based on the development theory of Deardorff and proposed for the ISAIAS FAST score were:

1. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has given me the opportunity to understand better other's (foreigners) world views.
2. It has helped me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).
3. It has improved my capacity for cultural self-assessment.
4. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has improved my capacity for adaptation to culturally different and new environments.
5. It has increased my interest in people from other cultures.
6. It has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).
7. It has improved my capacity to listen people from other cultures.
8. It has improved my capacity to observe people from other cultures.
9. It has improved my capacity to collect information (to listen and to observe) in an intercultural environment.
10. It has improved my ability to adapt to different forms of intercultural communication and different learning styles.
11. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to become more flexible with people from other culture.
12. It has helped me to improve my abilities to analyze, interpret and relate information brought in different cultural contexts (process information).

13. It has helped me to improve my abilities to analyze information related to different cultures.
14. It has helped me to improve my abilities to interpret information related to different cultures.
15. It has helped me to improve my abilities to relate information related to different cultures.
16. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to take part of an intercultural group where I had opportunity to respect ways of expressions of each member, becoming more tolerant.
17. It has helped me to understand better my own culture.
18. It has improved my understanding of culture of others'
19. It has increased my respect for other cultures.
20. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has increased my cultural empathy - The capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.
21. It has helped me to understand the impact of culture on the social and historical contexts.
22. It has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic- from others cultural perspectives).
23. It has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).
24. It has helped me to understand better the value of cultural diversity (mindfulness toward cultural diversity).
25. It has influenced prejudices and stereotypes.
26. It allowed discovery and increased my curiosity toward cultural diversity.
27. It has changed my point of view about the cultural community where I belong.
28. It has helped me to learn through interaction with foreigners.

29. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to know more and understand more culture and traditions of foreign colleagues.
30. Intercultural competences are needed in my work.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Sorbonne campus and Spanish for the Granada campus), but a few questionnaires were also used in English when students or teachers/researchers were foreigners not perfectly comfortable with the local language.

9.1.2.3. Treatment of data and calculation of the ISAIAS FAST score

The theoretical framework for the analysis of the data collected on the campus was built taking into consideration the Hofstede's theory of intercultural dimensions (Hofstede et al., 2010; 2001), the Handy's theory of organizational culture (Handy, 1995), the Confucius's philosophy concepts (considering Asian campus particularly) (Lee, 2001; Kim, 2005), the theory of the development of intercultural competences (Deardorff, 2009; 2006), and the theories of internationalization of Knight and de Wit (Deardorff et al., 2012; Knight, 2004; 2010; 2011a). This theoretical background was needed, in order to synthesize for each campus a general situation of the internationalization efforts and of the impact of national and organizational culture, evaluated through the development of ICC. Afterwards, the SWOT analysis was prepared in order to synthesize the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts on each campus. The results obtained from the questionnaire and the associated analyses finally served as a base of comparison between the different universities and their respective methods of implementation of the paradigm of internationalization of higher education and research.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They

were regrouped in 4 groups, termed the 4 dimensions of the questionnaire (following and adapting the general components of ICC proposed by Deardorff (2004; 2006):

1/ The first dimension was termed “Attitudes” and was composed of 7 items: 5, 6, 19, 24, 25, 26 and 30.

2/ The second dimension was termed “Knowledge and Comprehension” and was composed of 7 items: 1, 2, 17, 18, 21, 23 and 29.

3/ The third dimension was termed “Skills” and was composed of 8 items: 3, 7, 8, 9, 12, 13, 14 and 15.

4/ The fourth dimension was termed “Desire internal outcomes” and was composed of 8 items: 4, 10, 11, 16, 20, 22, 27, and 28.

The score of each dimension gave an important information on the development of each specific component of intercultural competences, and therefore in combination with first part of the questionnaire allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all answers composing a dimension were added, and the total was then divided by the number of items of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of people evaluated on each campus.

9.1.3. Results

Following the previously described mixed methodology, data have been collected on the campuses. The answers for the questionnaires have been integrated in order to calculate for each participant university, the mean value of the global ISAIAS FAST score and of the scores of each dimension of ICC. Results of the Professors and

Researchers are presented in the **Table 6**, and results of the Students are presented in the **Table 7**.

The scores observed in the 3 universities presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical for Universities with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the organizational culture of the institution.

The scores observed in the University of Granada are the highest for students among the 3 universities, and the second highest for the Professors, highlighting the very strong policy and openness for internationalization of this University.

The scores observed in the Paris-Sorbonne University are the lowest in both groups between these 3 universities, highlighting the very traditional approach to globalization challenges of higher education and research.

The scores observed in the Chonnam National University are the highest among the Professors in these 3 universities, highlighting the general policy of the University and the frequent need for the Professors to get some diploma or research leave abroad during their career (mostly in the US). However, the score of the students on the general campus are much lower, illustrating the difficulties to internationalize this campus, particularly because of the cultural and language barrier.

The scores appeared coherent with the field observations in all aspects. Scores and field studies have been integrated in details in the discussion section.

Scores of Professors/Researchers on the general campus					
University Campus	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.55	2.75	2.74	2.68	2.682
Paris-Sorbonne University (France)	2.50	2.48	2.50	2.53	2.503
Chonnam National University (South Korea)	2.75	2.6	2.7	2.7	2.688

Table 6. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 3 different general campus.

Scores of Students on the general campus					
University Campus	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.7	2.55	2.58	2.6	2.606
Paris-Sorbonne University (France)	2.28	2.30	2.35	2.25	2.295
Chonnam National University (South Korea)	2.42	2.32	2.45	2.21	2.348

Table 7. Intercultural dimensions and total ISAIAS FAST scores of a group of Students from 3 different general campus.

9.1.4. Discussion

9.1.4.1. General Hypotheses and objectives of the ISAIAS project

The basic hypotheses of the ISAIAS project are that the national and organizational cultures have an impact on the development of intercultural competences (ICC), that the internationalization of education and research implies the development of intercultural competences, and that we can point out differences in internationalization of higher education and research in the various universities (particularly in European and Asian context in this case study). From these hypotheses, it is expected to develop instruments to evaluate the level of internationalization through the development of intercultural competences and define new standards for a smooth and efficient international collaboration, particularly within a specialized consortium such as POSEIDO.

The general objectives of the ISAIAS project are multiple, and the fast screening assessment proposed by the FAST score is only a preliminary approach of evaluation. The FAST score allows first to observe which components of intercultural competences (based on the Deardorff's theory) participants of the internationalization of education and research processes are developing in the various universities. In combination with qualitative evaluation in the mixed methodology, the second objective of this work is to observe how the national and organizational cultures of the campus (including the teaching-learning methodology) and indirectly the profile of each individual influence the development of intercultural competences. The impact of recent research on internationalization of higher education on the current strategies of development of intercultural competences in the various tested universities shall also be evaluated and integrated in the global analysis. Finally, the SWOT analysis is required to find out the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts, and the differences and similarities in internationalization of higher education and research, in the various universities. The answers to all these questions can be synthesized through the general analysis of the collected data during the screening assessment of the campus following our methodology.

As a first result of this case study in European and Asian contexts, the FAST score of each entity was corresponding quite well with the qualitative evaluation of each

campus, and therefore the instrument appeared suitable for a screening assessment of various academic environments through the POSEIDO network. All these aspects were discussed in details in the following chapters.

9.1.4.2. About the University of Granada: score and observations

The University of Granada (Universidad de Granada, UGR) was founded in 1531 by Charles I, King of Spain. It is one of the biggest (third position considering number of students) national autonomous Spanish universities (80,000 students). As the only university of the city, the UGR brings huge trans-disciplinarity organized in Faculties and Schools. According to the last Shanghai Ranking, the UGR is in the range between 300 and 400, and its position among Spanish Universities is the 7th. The UGR is the most popular European destination of Erasmus students (the UGR was awarded Erasmus Gold Star in 2007 for his long time active involvement in this program), Maghreb and South American citizens.

The strategy of internationalization is one of the most important objectives of the UGR and it has been strongly developing since many years. Mission and vision of the university as well as many of the policy papers of the different entities promote international dimension at each level of the institution. Social media (Facebook, Twitter, etc.) are strongly used in international marketing. The internationalization efforts are managed by the Vice-Rector's Office for International Relations and Development Co-operation at all levels of the campus through annual strategic plans, which try to support economically all kinds of initiatives of internationalization which had not been covered by European and national funding. These efforts put the UGR in the Europe's top-ranking international universities. Every year, the UGR has in mobility over 4000 students, what makes it the first destination of Erasmus in Europe. Other programs are also very active (LLP/Erasmus, UGR Exchange Program and Erasmus Mundus, Tempus, Alfa, PCI, PEACE, etc) among students, academic and administrative staff. Most of the subjects at the UGR are taught in Spanish, and the UGR is logically very active in priority in Spanish speaking countries.

To improve its prestige and international visibility, the UGR is very present and active in numerous international networks and associations. In 2010, the UGR took over

the presidency of two important networks: the European Coimbra Group of Universities and the South-American Association for Postgraduate Studies (AUIP), which is a UNESCO-recognized non-governmental international organization, whose aim is to promote postgraduate and doctoral studies in Latin-America. In fact, the UGR is one of the European institutions that receive the most external financing for the mobility and exchange of students, teaching staff and administration and services staff with non-European countries.

All these characteristics have been observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. Students at UGR have developed the most positive attitudes to internationalization and the highest scores in all dimensions of intercultural competences among the 3 participant universities, as a logical result of the general positive ambiance to internationalization promoted by the policy of the University and the large number of international students on the campus and mobilities. The scores of the Professors were a little bit higher, despite the frequent difficulties to interact in English, as they have been encouraged to the participation in international research projects. Moreover, research and educational collaborations have been very active with South-American countries, which often share the same language. Despite these positive results, the scores also revealed that the process remained still moderate, as the scores were far under the threshold of 3. This marked also the practical limits in the internationalization of the campus, related to the organizational culture of the university and national dimensions, despite the real and perceptible enthusiasm (Altbach et al., 2007; Wisniewska, 2014a, 2014b, 2014c, 2017a).

9.1.4.3. About the University Paris Sorbonne: score and observations

The University of Paris (historically known as Sorbonne) has a very long history starting in the 12th century, and is now organized in 13 public universities with a specific number (between I to XIII) and name. Each university is characterized by a specific range of schools and specialties. There is often a thematic line in each university. For example, Paris 4 (Paris-Sorbonne) is specialized in Human Sciences, Literature, Language and Arts. Paris 5 (Descartes) is more scientific and medical, including particularly a School of Medicine, a School of Dentistry and a School of

Pharmaceutical Sciences. In order to be more competitive in the current education and research globalized world, these universities have been regrouping in the last years. The process was triggered to optimize management and the use of resources, to improve trans-disciplinarity and to increase world visibility. Each new grouping of universities is supposed to form a kind of multidisciplinary collegiate university.

The strategy of internationalization is different between the various Paris universities, and is still under permanent evolution at this time. However, it remains in general quite traditional. Traditionally, education in the French university is only done in French and is therefore attracting in priority students from the French speaking countries. Even with this practical limitation of language, Paris Sorbonne University is very attractive for foreigners, due to its historical reputation of excellence in many fields and the attraction of Paris as a major western city. A large part of the internationalization efforts is placed in program of exchanges such as Erasmus, and almost all professors and teachers are French nationals, the national regulations of concours and recruitment of the faculty members being still very restricted. It is also considered that all foreign students have to adapt to the local mentality and patterns, and many aspects of the Anglo-Saxon approach of internationalization of higher education and research are not perceived positively or even conceptualized. International collaboration in the research dimension takes place mostly on the basis of personal relations between academics or at the level of faculty, and its level of institutionalization is different in each Parisian University. The multi-disciplinarity is strongly encouraged and the internationalization is expected to play a stimulating effect in this process. At this moment of the development of its international policy, the reciprocity has been chosen as a main approach to internationalization of higher education and research (See Wisniewska, 2014/2015, Report in Annex 3).

All these characteristics were very clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score (Wisniewska, 2014a). Both Professors and Students groups showed the lowest scores among the 3 universities, reflecting a lower enthusiasm for the internationalization process (Wisniewska, 2014a). This illustrated some traditional approach towards internationalization and the very French-centered aspects of the Paris-Sorbonne University described previously. The French strongly traditional organizational culture

of this university was perceived as its heritage and strengths (Wisniewska, 2014a; See Wisniewska, 2014/2015, Report in Annex 3).

9.1.4.4. About the Chonnam National University: score and observations

The Chonnam National University (CNU) was founded in 1952 in Honam region in Gwangju city (South Korea). The university emerged from the ashes of the Korean War, regrouping a few preexisting colleges, with the support of local citizens who wished to develop competent, qualified people. Gwangju (means “province of light”) has been always a very agricultural and cultural place. In the social perception, the CNU reminds as a place where democratic movements in 1980 started, as one of the best and the oldest university in the province, and as the 5th in the national ranking. It is also a quite large multidisciplinary university with more than 35,000 students enrolled each year.

Theoretically, the policy of the CNU is following the national educational policy framework where decentralization, innovation and internationalization of education and research have a very important role. The CNU’s mission is officially to promote a community producing creative knowledge and leading future generations, and to become a first-class university with global competence. Its vision and mission clearly refer to a regional as well as international dimension (“CNU to Asia, CNU to the World”). However, it is important to highlight, that these elements of western paradigm of education related with globalization, are submerged in a strong, traditional environment of Korean Academia.

The policy of internationalization of higher education and research in CNU had been following all steps encountered in general in the Korean Academia. It started in the 1950th -1960th with the government initiatives of sending the Koreans to take advanced education in developed countries (many of the CNU’s professors did their PhD in the US). This idea of studying abroad remains strong in Korea, but in the last years the Korean government promoted the western concepts of internationalization in order to make the Korean Universities attractive for foreign students. The process of Internationalization of CNU is therefore first of all a political answer for the Korean Ministry requirements (Byun et al., 2011) and to support the economical needs of the

university (need to increase the incomes). Following Korean very hierarchic organizational culture, internationalization at CNU takes mostly the form of a global program strategy. The CNU's Office of International Affairs is responsible for the management of most of the actions related to the internationalization efforts. Majority of them are focused on mobility of students and researchers and maintenance of international partnership with sister universities and partners.

The internationalization of curricula is very limited. Almost of the classes are done in Korean language (even in English Education). However, the university urges faculty members to have their classes in English. Each department has to meet their English class quota. The large majority of foreign students is of Asian origin, and just a very few of them are African (with Korean government scholarships) and Europeans on short period exchanges. The number of foreign professors is about 57, but almost all of them are with Korean origin. Therefore there is a strong wish to follow modern Anglo-Saxon patterns of internationalization, but this strategy remains still on the conceptual level and quite far from the daily cultural reality.

All these characteristics were very clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score. The scores observed in the CNU were the highest among the Professors in these 3 universities, highlighting the general policy of the University (the wish to produce "global leaders", as it was repeated frequently) and the frequent need for the Professors to get some diploma or research leave abroad during their career (mostly in the US). However, the field study also revealed that the relative enthusiasm for internationalization appeared more as a consequence of the policy and expectations of the University and Ministry (which are expected to be obeyed in this very collectivist and hierarchic Confucian Society) (Byun, 2011; Knight, et al., 1997; Lee, 2004) than a real practical endeavor (Kim, 2005, 2010; Kim, 2016; Wisniewska, 2014a; Wisniewska, 2014, 2014c). The score of the students on the general campus were much lower, illustrating the difficulties to internationalize this campus, even if the enthusiasm was perceptible and the University was doing efforts to promote internationalization at home by inviting foreign students and scholars (Jon, 2013). The number of foreign students remained limited (mostly from Asian neighbor countries) and cultural and language barriers remained very strong.

9.1.5. Conclusion of the first part

In this first part, the results of the ISAIAS FAST scores were calculated in the general campus of 3 universities (University of Granada, Paris-Sorbonne University and Chonnam National University) and corresponded to the qualitative data gathered on the campuses, and to the general profiles of internationalization of these institutions. The next step consist on the evaluation of the FAST scores of more specialized faculties, in order to refine - through a transversal approach - our investigation about internationalization of higher education and research, national and organizational cultures and the development of intercultural competences in these Asian and European contexts (Wisniewska, 2014a).

9.2. Field study in specialized faculties (dental schools) in Asian and European contexts

The following article focused on another aspect of the main research questions and gathered the data about internationalization process and development of intercultural skills, collected during investigation in **specialized faculties** (dental schools) in 4 different Universities, in European and Asian contexts.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014;2(3):195-207.

The content of this article serves as the second part of the “Methodology and Results” section of this Thesis, and provides data and perspectives on **4 Schools of Dentistry** (respectively in Spain, Italy, France and South Korea) in correlation with their respective campuses and national cultures.

9.2.1. Introduction

In the field of dental education and research, the internationalization process has followed a very specific path related to the nature of the dental profession itself. Dental schools are indeed mostly designed to produce future dental clinicians, and this profession is traditionally quite protected in most countries. Like most medical specialties, the recognition of diploma is often limited between countries, and there is a strong limitation for clinical exercise for clinicians moving between countries. This frequent situation limited in many countries and during many years the development of international education in this specialized field, and the schools of dentistry were often outside of this general movement of internationalization of campuses. This situation evolved only recently and very slowly with the development of diploma recognition in European countries and through specific international agreements (for example France

and Quebec). In fact, in most cases, the major part of the internationalization of the dental schools can be found in the post-graduate programs and in the research activities. Therefore the dental schools are interesting indirect markers of the internationalization of a University and of the general mentalities, as they may reflect the general evolution of a campus and of researchers, more than the evolution of the Graduate School itself.

In this second part of the study, the ISAIAS FAST method was used for the first time in a limited specialized environment, at the scale of the dental schools participating to this study. This approach allowed investigating the level of development of the intercultural competences of the dental students during their dental studies, and how the local strategies of internationalization of higher education and research may have influenced this result. The questionnaire was used for the assessment of 4 different dental schools (1 Korean, 3 Europeans) with 4 different cultural and well-identified backgrounds, history and strategy. This allowed also checking if in this specialized dental environment, the ISAIAS FAST score corresponds to the typical profile, easily observable and well documented of these 4 universities.

9.2.2. Materials and Methods

9.2.2.1. General methodology

The ISAIAS FAST questionnaire was proposed to 60 undergraduate and master students in the dental school of each university. The test sample is significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2012 and 2014 at the School of Dentistry, University of Granada (UGR, Granada, Spain), the Faculty of Odontology, University Paris 5 Descartes (P5, Paris, France), the School of Dentistry, Chonnam National University (CNU, Gwangju, South Korea) and the Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples (Unina, Naples, Italy). Dental students were always in the last years of their studies, and were therefore almost dental professionals already. In this case study, it was decided to analyze three very different European universities (Granada, Naples and Paris), to be able to compare 3 different approaches of the European implementation of internationalization of higher education and research with a very typical Asian campus (Chonnam).

It is important to point out that “undergraduate” has always to be understood (in this study) as dental students under formation to become a general dentist. In Korea, the new dental students have already finished their bachelor degree prior to apply and to enter in a dental school, and are therefore considered as postgraduate students following the local terminology. In France, Italy and Spain, dental students without their dentist diploma are considered as undergraduate students, and postgraduate students are only those working for a specialization diploma. This specificity of terminology has however almost no practical impact.

The methodology used in this study was the same as the one described in the first article of this series (see article 1 for details), using a mixed methodology, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. The quantitative methodology was using the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences. The analysis of the questionnaires allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people.

9.2.2.2. Description of the questionnaires

The exact description of the questionnaires can be found in the first part of this series of 3 articles, as they were exactly the same (see part 9.1. for details). The key points were recalled below.

The questionnaire was formulated for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or informal or personal meetings with foreign colleagues, etc.) - had impacted the development of their intercultural competences.

The first part of each questionnaire was gathering the main data of identification of the person filling this anonymous questionnaire, to place the answers in an adequate perspective. The second part was the statistical part with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile

of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under observation.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Paris campus and Spanish for the Granada campus), except in Italy where the students were able to answer the questionnaires directly in English. In Korea, Spain and France, a few questionnaires were also used in English when students were foreigners not perfectly comfortable with the local language.

9.2.2.3. Treatment of data and calculation of the ISAIAS FAST score

The treatment of data used in this study was the same as the one described in the first part of this series of 3 articles (see part 9.1. for details). The key points were recalled below.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They were regrouped in 4 groups, termed the 4 dimensions (D) of the questionnaire (following and adapting the general components of intercultural competences proposed by Deardorff): “Attitudes” (D1), “Knowledge and Comprehension” (D2), “Skills” (D3) and “Desire internal outcomes” (D4).

The score of each dimension gave important information on the development of each specific component of intercultural competences, and therefore allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all questions composing a dimension were added and

the total was then divided by the number of questions of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of students evaluated in each dental school.

Finally, these statistical results were completed, analyzed and compared using the qualitative data gathered during the investigation. It was voluntarily avoided to draw a direct statistical comparison between the tested groups, as it would be meaningless. The scores have to be compared while taking especially into consideration the national and organizational culture and other qualitative data that influence the understanding and interpretation of each score.

9.2.3. Results

Following the previously described mixed methodology, data have been collected in the dental schools. The answers to the questionnaires were integrated in order to calculate for each participant school, the mean value of the global ISAIAS FAST score and of the scores of each dimension of intercultural competences. Results obtained in the groups of the undergraduate students are presented in the **Table 8**.

The scores observed in the 3 universities presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical from dental schools with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the local organizational culture.

The scores observed for the students in the School of Dentistry at the University of Granada were a little bit higher than on the general campus, and among the 2 highest scores (with CNU) in the 4 participant dental schools. It appeared as a marker of the particularly strong policy and enthusiasm for internationalization of this university.

The scores observed for the students in the Faculty of Odontology at the University of Paris were significantly lower than on the general campus of Paris-

Sorbonne, and also the lowest among the participating dental schools, highlighting a significant isolation of this group of future dental professionals from the internationalization efforts, particularly in comparison with students from the general campus.

The scores observed for the students in the Department of Oral Surgery at University Federico II of Naples were a little bit lower than in the UGR and CNU, but still in the same range, and reflected this intermediate situation of relative enthusiasm for internationalization within the limitations of the local organizational culture. The score of the general campus could not be evaluated extensively in this work.

The scores observed for the students in the School of Dentistry at Chonnam National University were much higher than on the general campus and were among the 2 highest scores (with UGR) in the 4 participant dental schools. This result was often associated with the social status of the future dental professionals in Korea, which were often a bit older and more interested in international experiences than the other categories of students.

The scores appeared coherent with the field observations in all aspects. Scores and field studies were integrated in details in the discussion section.

Scores of Undergraduate Dental Students in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.76	2.48	2.65	2.56	2.612
Paris University (France)	2.27	2.088	2.187	2.03	2.141
University Federico 2 of Naples (Italy)	2.6	2.4	2.4	2.5	2.473
Chonnam National University (South Korea)	2.8	2.6	2.75	2.35	2.62

Table 8. Intercultural dimensions and total ISAIAS FAST scores of a group of dental students from 4 different Dental Schools.

9.2.4. Discussion

9.2.4.1. General specificities of the dental community

In this study, all dental students from the 4 participant universities shared a very strong common point: all of them were studying dentistry. The methods of teaching, the practical perceptions and the clinical sensibility (in terms of esthetic and functional considerations for example) may be different between countries, but all dentists have a lot in common: most techniques and materials, daily life problems of a practice, relationships with pain and patient complaints for example. There is a joke about dentists that we found in most countries: it is better to not have several dentists in a family, because when they meet, they cannot stop themselves to speak only about teeth. This is a population which appears, at first look, easier to internationalize, as the professional similarities are very strong worldwide, even if the social environment of the profession is not the same everywhere. Finally, dentists are in general a highly educated population, as there is often many selective examinations to enter in the dental schools, leading to a quite high socio-economic population able (and wishing) to travel more and therefore to meet other cultures.

Therefore, even if dental schools may not appear very internationalized, due to the limited recognition of the clinical diplomas between countries, the population of dental students is in general more curious, opened and connected to the international community than other categories of students on the campus. This could be observed in 2 universities that were analyzed in the first part of this series of 3 articles (Granada and Chonnam), where the scores of dentists were higher than the scores of the other general students on the campus. However, surprisingly, the contrary situation was observed in Paris University. As a quite homogeneous profession and profile, whatever the nationality, we could expect that all dental students taken into consideration in this study could have the same kind of high scores. However, we observed very different patterns depending on the school, and it can be interpreted as the impact of the national and organizational culture of each country and university on the dental students (Wisniewska, 2014a, 2014b, 2014c; Knight, 2004; Hofstede et al., 2010; Handy, 1995; 1986). The exact profile of the groups of students of each school must be investigated and understood in the context of their respective university and country.

9.2.4.2. About the School of Dentistry at the University of Granada

The history and policies of the University of Granada general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

Dentistry is a relative new independent discipline in Spain. The oldest dental schools in Spain were founded recently, in 1986, as a consequence of the integration of Spain in the European Community. Previously, dental curriculum was supported in Schools of Stomatology, where MD degree was demanded to apply in. University of Granada implemented Dentistry curriculum as the first School of Dentistry in Spain, simultaneously to University Complutense in Madrid and University of Barcelona. The number of students selected per year is inferior to 80. The selection of students is very restricted, and limited through “*numerus clausus*” procedure, selecting traditionally one of the best groups of students, because it is quite demanded by them. Research activity is intense in this Dental School, occupying the first position in the National ranking in the last 5 years. The dental studies in Spain are a minimum of 5 years. In Spanish public Universities, the fees are not expensive (some minor administrative fees) and based on a strong entrance concourse selection only. The first two years are dedicated mainly to Basic Sciences related to Medicine and Health. The 3rd, 4th and 5th years are specific dedicated to Dentistry, mostly dedicated to clinical work.

School of Dentistry at the University of Granada, offers a limited number of positions to foreign pre-graduate students, approximately 5 % of the total applications. These positions are restricted and only can be applied for international students. These students traditionally proceed from North Africa or South America. The dental curriculum is offered exclusively in Spanish, although professors can choose to develop it in English. However in the most advances years, mainly 3rd, 4th and 5th, an intense program of exchange is offered to the students. Considering undergraduate students, besides to the Erasmus program (with prestigious European Universities), special programs are running with some countries from East Europe, Balkan countries, Mexico, South America, and others are under development with North American Universities. Regarding postgraduate students, the School has established strong relationships with

foreign Universities, mainly with Spanish speaking countries, to receive students from these countries, to develop research collaboration and to exchange postgraduate students for clinical or PhD programs.

In spite of the language limitation, professors are quite demanded to establish new collaborations with foreign Universities, and some of these professors begin to develop sabbatical years in foreign contexts, something new in the strategic demanded policies of the University of Granada. In addition, the number of Granadian students leaving Spain to develop international postgraduate studies, are increasing spectacularly in the last years, mainly to North American Universities. The School of Dentistry is therefore trying to follow the strong internationalization policy of the UGR in all aspects, and this appears to promote the development of a new generation of leaders of internationalization.

All these characteristics were observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. The scores observed for the dental students were among the highest scores observed in the participant dental schools, and the field observation confirmed the significant enthusiasm for international relations developed in the UGR through the many programs of exchanges. Besides this very positive attitude and policy, the national and organizational culture may explained why the scores remained far below 3 (Altbach et al., 2007; Handy, 1995; Wisniewska, 2011, 2014a, 2014b, 2014c; Grupo de Trabajo de Internationalizacion de Universidades, 2014) and that student exchange (limited in dentistry) appeared to not be enough to promote a deeper intensive development of intercultural competences.

9.2.4.3. About the Faculty of Odontology at the University of Paris

The history and policies of the University of Paris general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

The 2 Paris Dental schools were historically the 2 largest dental schools in France, recruiting a total of more than 200 students per undergraduate year. The dental studies in France are a minimum of 6 years. They are free (except some minor

administrative fees) and based on a strong entrance concourse selection only. The first year is a national very selective medical concourse with a strict “numerus clausus”. The second and third years are specific to dentistry, but without clinical activity. The 4th and 5th years are mostly dedicated to clinical work. The 6th year is dedicated to clinical work, clinical experience outside of the school and preparation of the thesis for the Doctorate in Dental Surgery (DDS). The 2 Paris dental schools are affiliated to 2 different universities: the Faculty of Odontology of Paris 5 René Descartes University, and the Faculty of Odontology of Paris 7 Denis Diderot University. The 2 universities have very similar curriculum and management, and many efforts have been done in the last years to merge them; following the movement of groupings in Paris Universities, the final merging of the 2 schools within one major Paris Dental School is now just a question of time.

The French national diploma of Doctor in Dental Surgery is very selective and restricted (national concourse with a numerus clausus). Moreover, as the education in the French university is almost only done in French, it is therefore attracting in priority students from the French speaking countries. Therefore, the recruitment of foreign students - including Europeans - that may be interested to join these dental schools is very limited (mostly those living in France since a significant time), even if the University and city themselves are very attractive. Non-European foreign students who want to work in the European Union in general try to get a European diploma through schools in countries with more open regulations. Moreover, the national regulations of concourses and recruitment of the faculty members being still very restricted, almost all professors and teachers are French nationals, and a majority followed all their curriculum in the school where they are teaching now.

Most of the internationalization efforts are placed in program of exchanges such as Erasmus. French students are going in priority in other North countries (North America or Nordic countries), and foreigners coming are mostly Europeans. The number of exchanges remains however very limited in comparison to the wide number of nationalities that can be found in a US campus for example. It is also considered that all foreign students have to adapt to the local mentality and patterns, and many aspects of the Anglo-Saxon approach of internationalization of higher education and research are not even considered.

All these characteristics were clearly observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. The scores in the Paris dental school were clearly the lowest among the 4 participant dental schools. The scores were also clearly lower than in the general campus of Paris-Sorbonne University. It appeared as an anomaly, as dental students finishing their studies in France are supposed to be future professionals with a relatively high socio-economic level, as it was observed in the dental schools in other countries. This result could be explained by the characteristics of the Sorbonne general campus, oriented to Humanities (particularly the teaching of languages), presenting a more important population of international students, and therefore showing higher scores of intercultural development. The collection of the questionnaires in the School of Dentistry at Paris University was clearly the most difficult from all the groups. The concept of intercultural competences was sometimes not understood. This result mostly highlighted the significant isolation of this group of future dental professionals from the international communities. This homogeneous score confirmed the field observations (Wisniewska, 2014b).

9.2.4.4. About the Department of Oral Surgery at University Federico II of Naples

The University of Naples “Federico II” was established in 1224 by Frederick II Hohenstaufen, King of Sicily and Holy Roman Emperor. It is the first publicly funded university in Europe. Nowadays the University offers courses and research in most academic disciplines and enrolls a considerable number of students (more than 96,000) per year. The University, formerly organized in Faculties, has revised its organizational structure in order to address the complexity of the interdisciplinary relationships of the academic disciplines. The *Ateneo* is currently composed of 4 huge Schools/Faculties, each of which operates as semi-independent body for the teaching and research management. The Department of Oral Surgery is therefore a Dental Section of the Faculty of Medicine. Internationalization is one of the important lines of development in the policy of the Federico II University, as this University wants to be recognized as a global institution. To improve its visibility, reputation and attractiveness for international students and other international and national stakeholders, the University is mostly developing international cooperation by promoting and supporting interactions with

other universities and research centres throughout the world (through partnerships and conventions). Moreover, the Bologna process supporting international mobilities has been fully implemented, and Unina is exchanging significant numbers of students each year (through Erasmus program as well as other academic exchange programs).

The dental studies in Italy are a minimum of 6 years. They are free and based on a strong entrance concourse selection only. The course consists of the preparation with basic knowledge in the disciplines of biology and general medicine as well as general education, in the first 2 years. The 3th and 4th years are specific to dentistry with some clinical activity; the 5th and the 6th years are dedicated to clinical work. At the end of the course students can subscribe to specialization schools such as Orthodontics or Oral Surgery, or Master and Postgraduate Courses to deepen the preparation in all areas of dentistry.

The Italian national diploma of Doctor in Dentistry is very selective and requires to pass the national concourse of the first dental year. Each year there are some reserved seats for non european students, in order to assure a limited number of foreigners students. Traditionally, Italian universities courses are Italian language based only and is therefore mainly attracting Italian speaking students. Moreover, the national regulations of concourses and recruitment of the faculty members being still very restricting, almost all professors and teachers are Italian-born citizens and the majority of them followed their curriculum in the school where they currently teach. Most of the internationalization efforts are placed in programs of exchanges such as Erasmus. The internationalization is essentially the result of the capacities/contacts of each individual and group, and is therefore very dependent on the presence of strong personalities serving as leaders of internationalization. Only few departments support actively this opportunity after postgraduate activity with the development of international meetings. In the Dental School of “Federico II”, the access to many international journals is provided, but it is important to notice that there is no global and massive strategy of internationalization as developed in Anglo-Saxon Universities.

All these characteristics were clearly observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. With an intermediate score, this group of students appeared quite motivated for internationalization, with an easy-going attitude and a wish to travel and exchange. But the group appeared also

understanding very well the limitation of their environment in this process of internationalization. This very homogeneous and mild score confirmed the field observations.

9.2.4.5. About the School of Dentistry at the Chonnam National University

The history and policies of the Chonnam National University general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

The CNU School of Dentistry is one of the 11 dental schools in Korea, recruiting 70 students every year. The school is perceived as the best in Honam area of Korea, and most of local general practitioners refer patients to the CNU dental hospital. As CNU dental school is a graduate school, students have various academic backgrounds and practical abilities before entering the school. Students are tested by a national exam for dental school admission. The dental studies in the CNU Dental School are paid and are a minimum of 4 years. Students study basic dental sciences during the first year. From the second year, students study clinical knowledge with clinical training. In the last year of study, students actively experience clinical practice in the CNU dental hospital. In the Korean environment, CNU School of Dentistry is well known and appreciated to offer students one of the best environments to experience clinical work including orthodontic and surgical cases before they graduate.

Foreign students are very rare in the dental school, as there is a national admission exam for dental school in Korean and all classes of these studies are done in Korean. However, the CNU dental school is trying to promote its internationalization through various centralized strategies, particularly at the post-graduate and research level. There are some basic research graduate students from abroad (mostly from the Asian area), who are not dental students. Some graduated foreign dentists come also to this school for clinical training. CNU Professors make efforts to have lectures and voluntary service in other countries (particularly in some Asian countries), in order to give a positive publicity to the CNU dental school. Also, an international symposium is periodically held in the school so that professors and students have interaction with

some renowned foreign Scholars. Moreover, there used to be a foreign professor (not ethnically Korean) in CNU dental school, what was never seen in any other Korean dental schools. Finally, each year, students are sent in foreign universities for field study, and in rare cases, PhD students are sent abroad to prepare a double degree. Therefore, from a Korean customs standpoint, CNU could be considered as an active dental school to promote internationalization, to fulfill the requirements of internationalization promoted by the Korean Ministry. However, the cultural and language barriers remain major obstacles for the development of more initiatives. Despite these efforts, CNU remains completely centered on a strict collectivist and hierarchic Confucian Korean organizational culture, what blocks the development of personal initiative of real autonomous leaders of internationalization.

All these characteristics have been clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score. This group of students showed the highest total score among the participant universities, as a natural consequence of the general hierarchic policy of CNU and the Korean Ministry towards internationalization, such as “Brain Korea 21” (Kim, 2005; Byun, 2011; Kim et al., 2008). This group also showed higher scores than other students on the general campus, what appeared as a marker of the socio-economic status of the future dental professionals. In Korean society, the possibility to travel abroad and to be connected to foreigners is perceived very positively in a social hierarchy, and therefore dental students have even more reasons and opportunities to develop their intercultural competences, even if the dental school itself does not offer so many opportunities. Even with this relatively positive result, the field observations confirmed the significant difficulties of communication of the students. The national and organizational culture of CNU (hierarchic Confucian culture, very marked in Korea) can explain why the scores remained far below 3, despite the positive attitude of the dental students (Kim, 2005; Jon, 2013; Kim, 2005; Kim, 2010; Wisniewska, 2014a, 2014b, 2014c). More efforts and new strategies will be needed to promote a deeper and more efficient development of intercultural competences.

9.2.5. Conclusion of the second part

In the second part of this study, the ISAIAS FAST mixed methodology has been applied to a very specialized academic environment, the dental schools. The FAST scores were calculated in groups of dental students of these 4 universities, correlated with field observations, and the results corresponded to the general profiles of internationalization of these institutions.

This second step of the study allowed highlighting the similarities and the major specificities of these specialized dental entities in the more general environment of the University. It provides transversal information to complete the answer to the research questions, and brings a relevant perspective to this investigation about internationalization of higher education and research, national and organizational cultures and the development of intercultural competences in these Asian and European contexts.

Following this transversal approach, the final step of this study is the evaluation of the FAST scores of more specialized groups of stakeholders in the dental implant and biomaterial research and education groups. This final level of investigation will also help to evaluate and understand how the local leaderships are impacting the level of internationalization of education and research in these specialized fields, and how to improve the interactions of these entities with international partners.

9.3. Field study in research and education groups within 4 specialized faculties (dental schools) in Asian and European contexts

The following article focused on another aspect of the main research questions and gathered the data about internationalization process and development of intercultural skills, collected during investigation in **4 major research and education groups within specialized faculties** (dental schools) in 4 different Universities, in European and Asian contexts.

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score*. POSEIDO, 2014; 2(3):209-23.

The content of this article provides data and perspectives on 4 major research and education groups within the 4 previously investigated Schools of Dentistry (respectively in Spain, Italy, France and South Korea) in correlation with their respective campuses and national cultures. The observation of these specialized groups provided important perspectives on the daily mechanisms of internationalization.

9.3.1. Introduction

As it was discussed in the previous parts of this work, in the field of dental education and research, the internationalization process has followed a very specific path related to the nature of the dental profession itself, which is very regulated in most countries. However, even if the undergraduate programs remain very national in many countries, the process of internationalization is impacting dental schools more and more, particularly through international postgraduate programs and through research collaborations (Koehn et al., 2011). Like in all other specialties, the process of globalized interactions is often complicated by the significant cultural differences of

perception and action and the different organizational cultures of each country and institution (Olson et al., 2001; Hofstede et al., 2010; Wisniewska, 2014a, 2014b, 2014c).

The next steps of the POSEIDO project are to develop deeper links between all partners of the consortium, particularly building commonly funded research and post-graduate education large projects at a world scale, particularly in the field of implant dentistry and biomaterial research (Koehn et al., 2011). This will necessarily require even more diplomacy and intercultural competences from all stakeholders (Deardorf et al., 2009; Knight, 2004), particularly at the level of the leaders of the research and education groups. Therefore the POSEIDO community and Foundation decided to support a global effort of evaluation and development of the intercultural skills of its actual and future members (Knight, 2001). The ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards) was designed as an evaluation, education and conflict prevention global initiative, to promote smoother and more efficient global cooperation, particularly in the field of implant dentistry and biomaterial research and education (Deardorff et al., 2012).

In this third part, the ISAIAS FAST method was used specifically on the groups of teachers, researchers and students that could be considered as a core of implant and biomaterial research and education in these 4 different dental schools (1 Korean, 3 Europeans), including some individuals with international reputation that could be considered as leaders of internationalization in their respective context. The objectives were to evaluate how local strategies of internationalization of higher education and research may have influenced the development of the intercultural competences of the postgraduate students and teachers/researchers of these specific research and education groups, and to highlight the impact of leaders of internationalization in the highly specialized academic fields of implant dentistry and biomaterial education and research. The final objective of this work was to integrate these data with the scores and observations of the general campus and dental schools, in order to refine the answers to the main research questions of this thesis.

9.3.2. Materials and Methods

9.3.2.1. General methodology

In the dental school of each participant university, the ISAIAS FAST questionnaire was proposed to 20 postgraduate students and 20 professors/teachers or researchers of these 4 different dental schools, including some individuals with international reputation that could be considered as leaders of internationalization in their respective environment. The test sample was significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2012 and 2014 at the School of Dentistry, University of Granada (UGR, Granada, Spain), the Faculty of Odontology, University Paris 5 & Paris 7 (Paris, France), the School of Dentistry, Chonnam National University (CNU, Gwangju, South Korea) and the Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples (Unina, Naples, Italy). In each School, there was at least a significant implant and biomaterials research and education group with some leaders involved in the international POSEIDO network. In this case study, it was decided to analyze three very different European universities (Granada, Naples and Paris), to be able to compare 3 different approaches of the European implementation of internationalization of higher education and research with a very typical Asian campus (Chonnam).

It is important to point out that “postgraduate” has always to be understood (in this study) as general dentists following a supplementary specialization diploma, what placed them in direct contact with active leaders in implant dentistry and biomaterial education and research. In Korea, the new dental students have already finished their bachelor degree prior to apply and to enter in a dental school, and are therefore considered as postgraduate students following the local terminology. In France, Italy and Spain, dental students without their dentist diploma are considered as undergraduate students, and postgraduate students are only those working for a specialization diploma. This specificity of terminology has however almost no practical impact.

The methodology used in this study was the same as the one described in the first article of this series (see part 9.1. for details), using a mixed methodology, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. The quantitative methodology was using the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the

development of intercultural competences. The analysis of the questionnaires allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people.

9.3.2.2. Description of the questionnaires

The exact description of the questionnaires can be found in the first part of this series of 3 articles, as they were exactly the same (see part 9.1. for details). The key points were recalled below.

The questionnaires were built in 2 slightly different forms. One was formulated for teachers and researchers to determine in which measure the participation in international research/educational projects has impacted the development of their intercultural competences. The second was formulated for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or informal or personal meetings with foreign colleagues, etc.) - has impacted the development of their intercultural competences.

The first part of each questionnaire was gathering the main data of identification of the person filling this anonymous questionnaire, to place the answers in an adequate perspective. The second part of the questionnaire was the statistical part with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under observation.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Sorbonne campus and Spanish for the Granada campus), except in Italy where the students were able to

answer the questionnaires directly in English. In Korea, Spain and France, a few questionnaires were also used in English when students or teachers/researchers were foreigners not perfectly comfortable with the local language.

9.3.2.3. Treatment of data and calculation of the ISAIAS FAST score

The treatment of data used in this study was the same as the one described in the first part of this series of 3 articles (see part 9.1. for details). The key points were recalled below.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They were regrouped in 4 groups, termed the 4 dimensions (D) of the questionnaire (following and adapting the general components of intercultural competences proposed by Deardorff): “Attitudes” (D1), “Knowledge and Comprehension” (D2), “Skills” (D3) and “Desire internal outcomes” (D4).

The score of each dimension gave important information on the development of each specific component of intercultural competences, and therefore allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score. Furthermore, many informal interviews with the responders have been done.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all questions composing a dimension were added, and the total was then divided by the number of questions of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of students and professors/researchers evaluated in each dental school.

Finally, these statistical results were completed, analyzed and compared using the qualitative data gathered during the investigation. It was voluntarily avoided to draw

a direct-statistical comparison between the tested groups, as it would be meaningless. The scores have to be compared while taking especially into consideration the national and organizational culture and other qualitative data that influence the understanding and interpretation of each score.

9.3.3. Results

Following the previously described mixed methodology, data have been collected in the dental schools. The answers to the questionnaires were integrated in order to calculate for each tested group, the mean value of the global ISAIAS FAST score and of the scores of each dimension of intercultural competences. Results of the Professors/teachers and researchers were presented in the **Table 9**, and results of the postgraduate students were presented in the **Table 10**.

In each group, some strong personalities serving as leaders of internationalization have been identified and selected to serve as reference points of the dental implant groups. All of them were confirmed with the highest FAST scores (above 3.8) and therefore could serve as leaders of the groups of postgraduate students and reference points for the index of teachers/researchers.

The scores observed in School of Dentistry at the University of Granada were very high for the group of teachers/researchers, the highest among all the groups tested in this 3-part study. On the contrary, the scores of the post-graduate students - even if still quite high - were the lowest observed in the University of Granada in this 3-part study, marking a form of frustration and many unfulfilled expectations.

The scores observed in the Faculty of Odontology at the University of Paris were globally quite low for the group of teachers/researchers (below 2). On the other hand, the scores of the post-graduate students were the highest found in all Paris groups tested in this 3-part study, highlighting clearly the impact of local leaders of internationalization.

The scores observed in the Department of Oral Surgery at University Federico II of Naples were globally almost the same between the group of teachers/researchers and the group of postgraduate students, and a bit higher than the scores observed with undergraduate students, showing the impact of local leaders of internationalization, within the limits of their context.

The scores observed in the School of Dentistry at Chonnam National University were globally quite high, higher than all other groups observed in CNU, reflecting the effects of local leaders of internationalization. Teachers/researchers of CNU had the second highest scores after those of UGR, and post-graduate students had the highest scores among all post-graduate groups observed in this study. The field study highlighted that this positive result did not follow the reality of the situation, and reflected more the wish and enthusiasm for internationalization than the real local activity.

Scores and field studies were integrated in details in the discussion section.

Scores of Professors/Researchers in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.97	3.07	3.25	3.02	3.086
Paris University (France)	2.08	1.84	1.99	1.85	1.938
University Federico 2 of Naples (Italy)	2.85	2.16	2.60	2.70	2.582
Chonnam National University (South Korea)	2.9	2.7	2.8	2.7	2.773

Table 9. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 4 different Dental Schools.

Scores of Postgraduate Students in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.464	2.16	2.45	2.53	2.406
Paris University (France)	2.77	2.25	2.81	2.53	2.595
University Federico 2 of Naples (Italy)	2.70	2.30	2.60	2.50	2.526
Chonnam National University (South Korea)	2.80	2.60	2.78	2.62	2.7

Table 10. Intercultural dimensions and total ISAIAS FAST scores of a group of Postgraduate Students connected to some implant and biomaterials leaders of internationalization in 4 different Dental Schools.

9.3.4. Discussion

9.3.4.1. General observations

The FAST scores and field observations in the 4 universities revealed very different situations and problematic. Even if the scores themselves appeared quite logical for the researchers, they shall not be considered without a deep observation and description of each national and academic environment. The FAST questionnaire was in many situations a support to evaluate deeper the reality of a situation that could only be understood by the campus field study. The combination of the scores of the questionnaires (quantitative analysis) and of the field study (qualitative analysis) has been sufficient to illustrate clearly the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts, and the differences and similarities in internationalization of higher education and research, in the tested dental implant/biomaterial groups from these 4 universities. The detailed analysis was done by school and described in its global perspective in the following chapters.

9.3.4.2. About the Implant/biomaterial Group at the University of Granada

Official programs in Implant Dentistry and Biomaterial at Spanish Universities are quite limited. Even if Implant Dentistry is the theme of the most important international meetings worldwide, it remains taught in Spanish Dental Schools in Surgery, Periodontics or Prosthodontics Programs, and not in specific programs based exclusively about implants. There is no official postgraduate program in Implant Dentistry, although there is a large proposal of unofficial programs offered by private entities, with a tremendous deregulation about teaching and research in Implantology and its associated techniques and procedures, as well as in biomaterial usage.

Traditionally, Dental schools have had a very limited activity in implant dentistry and biomaterials in the last 30 years, and it started to develop only in the last years. There are few active groups in Spain with some reputation in this field, normally associated to Periodontics or Oral Surgery Departments. They are focused mainly in clinical approaches and scarce clinical research, although there is currently a trend to basic research related to biomaterials and cell biology. The number of indexed international publications from Spanish authors has been also increasing in Implant

Dentistry, and the visibility of some Spanish researchers in the key international meetings on the topic is increasing slowly.

Spanish dental implant groups are not following a pre-established strategy of internationalization, as the major institutions in North Europe and USA do. Traditionally the potency of the Spanish language has been a hidden enemy for this internationalization. Few professors in the middle age are able to speak fluently English, due to the educational policies followed in the 70s and 80s, what became an important limitation. University Complutense of Madrid leads the international visibility of Spanish Periodontics and Implant Dentistry abroad Spain. Other young Academic groups (like at the University of Granada) are developing different strategies based on the formation of their new elements in prestigious Programs in American Universities, promoting legal agreements between programs and their leaders, and generating a fruitful didactic and research collaboration between Institutions. However, only a small number of foreign students come to Spain to receive specific formation in Implant Dentistry, and the international relationship used to happen by emigration of young and capable pearls. Mechanisms to promote the return of these young specialists have to be developed in order to reverse the trend of the internationalization in Spain, related to Implant Dentistry and Biomaterials.

The results observed in this study somehow highlighted the problematic of the situation in Granada. The group of teachers/researchers showed a very high FAST score and high values in all dimensions of intercultural competences (the highest among all groups from this 3-part study). This revealed the effect of the strong policies of the University of Granada to promote internationalization as a main vector for its development and international visibility. Even if this group of professors experienced difficulties to communicate in English, the very strong ties and development of the dental school with other Latin countries (particularly in South America), may explain a part of this very high score. The recent efforts of the new generation of teachers/researchers towards North American Universities also explain a part of this positive result, as a form of significant enthusiasm promoted at the scale of the dental implant groups themselves.

However, the scores fell down significantly in the postgraduate group tested in this study (this was a lowest score of all the groups tested in the University of Granada).

This result was clearly associated with unfulfilled expectations, with a frustration to not have more openings and more internationalization opportunities during their postgraduate studies. This group perceived the language as a much bigger difficulty than the group of teachers/researchers (young postgraduate students wished and expected to communicate in English, while teachers/researchers appeared satisfied to communicate in Spanish). As this group of postgraduate students was at the Frontier between the promoting internationalization policies of the University of Granada and the practical difficulties to fulfill concretely this internationalization, their answers to this test appeared more negative. This study therefore confirmed the paradox of the internationalization in Granada University observable in the field (Altbach et al., 2007), between strong policies and practical limitations, and the need to develop more concrete opportunities to be able to compete with the North American model of massive internationalization of Higher Education.

9.3.4.3. About the Implant/biomaterial Group at the Chonnam National University

In local clinics in Korea, the demand for dental implant grew intensively from the 90s. However, education in dental implants only started around 10 years ago for dental school students. Most general practitioners learnt dental implant surgery through seminars. Many dentists also went abroad for learning implant dentistry. The situation evolved very quickly in the last 10 years, simultaneously to the growth of the implant dentistry and biomaterial industry in Korea, and large quantities of seminars or courses for teaching implant dentistry are now organized in the country, becoming one of the most active center on the topic in Asia. Actually, Korea is in the top countries by number of implants per inhabitant, close to the statistics of Switzerland.

As dental implant is now a general treatment option in Korea, dental schools are trying to teach implant treatment to students as well as general practitioners. In CNU dental hospital, a special clinic for dental implant patients exists, and periodontics, maxillofacial and oral surgery, and prosthodontics groups are actively treating these patients in this special clinic. All these groups are involved in some way in dental implant and biomaterial education in the school. In the third year of CNU dental school, the subjects named “dental implantology”, “dental implant materials”, and “implant

surgery” are listed on the curriculum, and students experience implant surgery and prosthodontics on the models. CNU Dental School was among the first schools to prepare such curriculum in Korea.

In Korea, a specialist system in dentistry started about 10 years ago, but no specialist in dental implant exists: periodontists or oral surgeons do most dental implant surgeries. To pass this specialist board, a certain number of cases must be done during the training in the dental hospital. These postgraduate students and their leaders constitute therefore the main dental implant and biomaterial groups and activities for education of the school. For implant and biomaterial research, CNU received several major national grants, such as the Brain Korea 21 (BK21), the NRF (National Research Foundation of Korea) Medical Research Center (MRC) for Biomineralization disorders and others, to promote this activity in the school. The development of bone regenerative biomaterials and strategies to improve peri-implant tissues has been an important objective of these groups (as a complement to the development of the dental implant industry), promoted at the level of the Ministry. However, the results of these efforts remain quite embryonic at this time. CNU implant and biomaterial groups have a good reputation in South Korea, but are not so visible internationally. As it is frequent in Korean universities, the cultural and language limitations seemed to impact significantly this endeavor.

International interaction is welcome at CNU dental school, as it is in the general policies of the university to promote internationalization of higher education and research to create “global leaders” (Kim, 2005). Practically speaking, the actual internationalization is not so much animated and there is no real global strategy. The reason of this situation is that the CNU dental implant groups have a lot of patients, cases, materials and well-organized implant surgery procedures to manage, and an efficient internationalization strategy is not perceived as an immediate significant need. This is the paradox of Korean society where there is a wish for internationalization pushed by the authorities (which are expected to be obeyed, as it is a very collectivist Confucianist and pragmatic society with strong power distance) (Hofstede et al., 2010; Lee, 2001; Kim, 2005; Kim, 2016; Lee et al., 1998), in a very hierarchic and closed Academic environment that refrains this endeavor (Kim, 2005; Lee, 2004). The CNU dental groups like to develop links with foreign schools to have global reputation, and

the School even recruited a famous foreign professor for research and publication activity. Periodically they open a symposium to promote global relationships. It is also common to see dentists from China and Mongolia coming to CNU to learn dental implant surgery. As Korea has one of the most advanced implant dentistry industry in Asia, many Asian dentists are interested to have experience in Korea, and CNU dental school participates to this effort. Because of the specific cultural environment, this interaction remains, however, very limited in comparison to what could be developed (observations of foreigners), and the development of internationalization of these groups remains much lower than what can be observed in North American Universities.

The results observed in this study highlighted the problematic of the situation in CNU. The FAST scores of the teachers/researchers and post-graduate students were quite high (the postgraduate group had the highest score among the 4 dental schools), proving a real wish to internationalization, engraved in their thinking by the strong hierarchic pressure of the University and Ministry policy (the need to create “global leaders”). Moreover, many Professors/researchers in CNU have spent some years abroad (often in the US) for their PhD or research leave, and were therefore quite opened to the concept of internationalization. On the other hand, the field study highlighted the relative weakness of this internationalization, mostly due to the practical organizational culture of the university and the limitations imposed by the hierarchic organization of the school (Jon, 2013; Byun, 2011; Handy, 1981; 1995; 1986; Heidemann, 2000). This kind of discrepancy between the wish to internationalization and the concrete result can be found in the Asian countries with a strong collectivist Confucianist organization (Hofstede, et al., 2010; Lee, 2001; Kim, 2005; Heimer, et al., 1998; Heidemann, 2000). The FAST score of CNU revealed therefore the real potential of the dental implant group, more than its current practical reality, and is an invitation to push for a more efficient organization in order to improve the international impact of the CNU dental implant groups (Heidemann, 1999).

9.3.4.4. About the Implant/biomaterial Group at the University of Paris

Even if the field of biomaterials and implantable material research is now a major center of interest worldwide, it is difficult to point out in the Paris University a

real strategy or a strong well-identified group of research and teaching in this field with a worldwide fame and recognition. Some research groups have a good reputation in some aspects of dental materials (composites, ceramics particularly) and oral biology, but the research in implantable biomaterials and implant dentistry remains limited in both Paris dental schools.

In France, due to historical reasons and the administrative organizational culture, the concept of post-graduate diploma and specialization in periodontology and implant dentistry (as it is found in the Anglo-Saxon countries for example) does not exist. However, many diplomas have been developed to teach the basic clinical techniques and knowledge in periodontology and/or implant dentistry, mostly in the form of University Diplomas (DU) or as a part of the new Diploma of Specialization in Oral Surgery. In all cases, independently from these major diplomas, most dentists learn implant dentistry through companionship, private courses and their own experience. Dental schools can also deliver various kinds of certificates or attestations. Paris 7 Diderot dental school has a significant tradition of clinical teachings in implant dentistry and related applied biomaterial research, and it is probably the most active dental school in France on this topic; for the Academic year 2014-2015, 5 active clinical University Diplomas covering different aspects of periodontology and implant dentistry can be observed.

Dental Implant Groups at Paris University do not have a global and coherent strategy of internationalization, in the way it is defined in major Anglo-Saxon Universities. These groups are developing links with foreign schools, mostly in the French speaking area (particularly in Africa and the Middle-East), and the university diplomas are in theory opened to all foreigners (with the obligation to speak and understand French). These university diplomas can only receive a very small number of participants (4 to 10 for example) and therefore the quantity of foreigners is very small. Moreover, these groups have limited research and publication activity in English (while they are much more active in French publications and meetings), what is also reducing the opportunities of internationalization. On the other hand, the few students following some leaders of the dental implant groups of Paris University have the opportunity to develop their intercultural skills through the international experience (contacts,

international meetings, access to international journal and motivation to read them) associated to their leaders.

The results observed in this study highlighted the problematic of the situation in Paris University. The mean scores of the teachers/researchers were the lowest from the 4 universities, below the medium level (2). However, 2 very different patterns of responders could be observed (through the questionnaire and field research). Some Professors had very opened attitude toward international activities in Academia and these mostly reflected positive outcomes of international collaboration in the questionnaire (higher FAST score), while others (particularly the youngest responders) appeared refractory to internationalization basic understanding and concepts. This result confirmed the field observations gathered during the study and the knowledge about the dimensions of the French national culture (high power distance, high individualism and high uncertainty avoidance) (Hofstede, et al., 2010), where many young teachers/researchers, paradoxically, were very French-centered, what did not correspond to the attitudes of the more experienced professors.

On the other hand, the group of postgraduate students showed a much higher FAST score (second, just a bit lower than the Korean one), with a very positive attitude, even with the difficulties in knowledge and comprehension. The score of this group was the highest from all French groups tested in this 3-part study, and it can be directly connected to the leadership of a few strong personalities in the dental implant/biomaterial groups promoting this positive behavior. Therefore, Paris dental schools are good examples of closed systems that are able to open considerably as soon as an adequate leader of internationalization is activated.

9.3.4.5. About the Implant/biomaterial Group at University Federico II of Naples

The University of Naples “Federico II” has a significant tradition of clinical teaching in implant dentistry and related applied biomaterial research; there are several research groups on this topic that have significant reputation recognized nationally and internationally. The activity in implant dentistry started about 30 years ago and the results have been presented initially at national congress and private courses. The first international articles were published about 10 years ago. The barrier of the language has

been being clearly a significant limitation, even if the situation has been improving slowly in the recent years.

In Italy, Universities can deliver various kinds of certificates or attestations in implant dentistry, but only the post-graduate Diploma of Specialization in Oral Surgery (which is a more general specialization) has a significant legal value. Followers can occasionally attend lectures on specific subject given by foreign teachers invited by the academic director of the diploma. However, the University does not support other significant post-graduate activities and the economical resources remain scarce, as they come only from the very limited subscription fees of the followers. The circumstances described above may explain how, in this highly competitive scientific field, no strong or large group of research has been developed. Professors organizing these diplomas have a key role in the internationalization of the Napolitan University in the field of implant dentistry and related applied biomaterials, but they have often to develop everything by themselves.

Dental Implant Groups at Naples University do not have a global coherent strategy of internationalization as it is defined in major Anglo-Saxon Universities. In recent time, Conventions have been set up with other Mediterranean Universities to promote cultural exchanges. The university diploma, even though opened to foreign students, is not a real vector of internationalization, as the proposed postgraduate activities remain very Italian-centered in the actual globalized and competitive post-graduate education offer. Only few students following some leaders of the dental implant groups of Naples University have the opportunity to develop their intercultural skills through the international experience (contacts, international meetings, access to international journal and motivation to read them) associated to their leaders.

The results observed in this study highlighted the problematic of the situation in the University of Naples. The FAST scores of both teachers/researchers and postgraduate students were positive and very similar. Correlated to the field study, the results showed a visible wish for internationalization within the practical limitations related to the organizational culture of the school. Teachers/researchers and postgraduate students showed higher scores in development of different aspects of intercultural competences in comparison to the undergraduate students of this dental school. This positive result was mostly related to the impact of active leaders of

internationalization in their close environment. However, this impact appeared limited by the practice: very limited mobility, rare foreign colleagues, etc. The absence of global strategy and difficulties of investment from the dental school to promote a more global activity and leadership for the specialized dental implant groups could be seen among reasons. Italy is a society with a high individualism, quite high uncertainty avoidance level and middle pragmatism (Hofstede et al., 2010), what can explain easily this very stable attitude, positive but limited. It is a model that needs a better organization of the school to promote a stronger leadership in the field (opinions).

9.3.5. Conclusion of the third part

Dental Implant/Biomaterial Groups had different ISAIAS FAST scores between the different universities, however, there was a convergence towards higher scores at the postgraduate level and between teachers/researchers. The groups in direct contact with the main identified leaders of internationalization of each dental implant group had in general the highest possibility for development of intercultural competences. However, field studies clearly showed that the Academic environment (organizational culture) and the absence of global strategy was often a limitation for the efforts of these leaders of internationalization.

This convergence may explain why the cooperation within the POSEIDO network is going smoothly, as all key members are active leaders of international academic collaborations with strong intercultural sensitivity. Those are major characteristics for the development of international, interdisciplinary projects in education and research and for the general improvement of the internationalization process of a campus in specialized fields such as implant dentistry and biomaterial research.

This last step of the study allowed highlighting the daily mechanisms of internationalization of a campus through nodes of internationalization built around some groups and a few leaders, particularly when more concrete strategies at the scale of the University are lacking. It showed the similarities and the major specificities of these specialized dental groups within the more general environment of the dental school and university. It provides transversal information to complete the answer to the research questions, and brings a relevant perspective to this investigation about

internationalization of higher education and research, national and organizational cultures and the development of intercultural competences in these Asian and European contexts.

As a more general conclusion for this 3-part study, the ISAIAS FAST questionnaire and the score are interesting instruments of observation, but it should be never forgotten, that the calculation of a score value is not the real objective. First of all because this questionnaire allowed to go in direct contact and discussion with the groups of academic stakeholders and to perform elegantly a field evaluation of internationalization, where concrete information can be obtained. If the final scores and the field observation appeared to be well connected in this study, it is the sign that the questionnaire was well thought and the field study properly managed, but the score alone does not mean anything without a deep evaluation and understanding of the context in which it was calculated. It is a methodology proposed to see closer the dimensions of internationalization of a campus, overcoming limitations of evaluation through mobility statistics. The ISAIAS protocol is first of all a bridge of intercultural communication, and a first step to understand and improve the interfaces between groups of Academic entities.

10. General Results and Discussion

The principal hypothesis of this Thesis was that national culture and organizational culture impact the development of intercultural competences on the university campus. To investigate this main hypothesis, this Thesis reports professional field experiences and investigations in internationalization of higher education and research in the Asian and European contexts. During this professional field study, the ISAIAS FAST scores were calculated in 4 different Academic environments (France, Italy, Korea, Spain) within the member Academic entities of the POSEIDO network, to evaluate and understand the internationalization patterns of these Universities, dental schools and implant and biomaterial research and education significant groups. The Universities serving as examples in this first study were selected to highlight the differences between a specific Asian model (the Korean model in this case) (Kaneko, 1997; Kim, 1997; Kim, 2005; Lee, 2001; Wisniewska, 2014a; 2014b; 2014c) with 3 different versions of the European environment. The ISAIAS FAST methodology of assessment of intercultural competences at the scale of a campus was described, following the concepts and list of components of the intercultural competences developed initially by Deardorff (2004; 2006; Wisniewska, 2011; Wisniewska, 2014a).

The objectives of this Thesis were:

- to observe which components of the intercultural competences participants of the internationalization processes developed on Asian and European campuses;
- to observe how the national and organizational cultures of the campus influence the development of the intercultural competences;
- to find out the differences and similarities in internationalization of higher education and research in European and Asian contexts;
- finally, to observe the differences and similarities in the internationalization of general campuses and specialized faculties (Models: Dental Schools and Implant Dentistry Research and Education Groups), to investigate how the specific ecosystem of a specialized field and local leaderships of internationalization impact the general patterns of internationalization met at a University.

The answers to these objectives are described in the previous chapter (chapter

9). This final chapter will synthesize and present some general conclusions obtained from this professional experience in the field of internationalization of higher education and research in Asian and European contexts (specifically case study of one Korean University, two Europeans (French and Spanish, general campuses) and four specialized Schools of Dentistry and research/education groups in implant/biomaterials (one Korean and three Europeans: Spanish, French, Italian)). Limitations of the study as well as ethical considerations will be mentioned.

This chapter also reports on a similar field experience at the University of Michigan, Ann Arbor, USA, a major U.S. University with old long-term policies in terms of internationalization of higher education and research and world leadership position in Academia, as an interesting model of comparison with the Korean model and the 3 versions of the European model investigated and presented in this Thesis. This section is particularly interesting to develop perspectives and highlight the potential evolutions of internationalization on these 3 continents.

This general results and discussion chapter will allow to conclude on proposed implications to improve the practices in the area of internationalization of higher education and research taking into consideration national culture and organizational culture of campus in the era of internationalization of education and research and development of intercultural competences. The implications for further research will be presented as well.

10.1. Different approaches to Internationalization and convergences of Higher Education and Research in European and Asian contexts

All universities which took part of this study have a classical model of internationalization of higher education and research (Knight, 2015), although, the Spanish University and French University have campuses in other continents, the Spanish one in Africa - Campus in Ceuta and Campus in Melilla (since 1979) - and the French one in Asia - Paris-Sorbonne Abu Dhabi (since 2006). As old traditional universities, they opted mostly for *rational approach* and *activity approach* toward internationalization (Zha, 2003). On the campus of the prestigious French university, *reciprocity approach* also has been observed. The difference can be noticed especially

in comparison to *process approach* and *competency approach* chosen for the strategy of “internationalization at home” on Norwegian campuses (Wisniewska, 2011).

Asian Universities are in the process of introducing their convergence and recognition of qualifications within the region, looking at the European experience. The European universities implemented administratively the Bologna and Copenhagen processes. Moreover, internationalization of higher education and research takes place in both continents and in last years international mobility and research trans-disciplinary collaborations were reinforced. While in Asia, the internationalization processes are taking more patterns of the Anglo-Saxon internationalization immersed in Confucian values (Kim, 2005; Kim, 2010; Lee, 2000; Lee, 2001), in European campuses (embedded in the humanistic values and Aristotelian logic) more diversity in approach to internationalization of university can be observed (de Wit et al., 2015). Teacher centered methodology is strongly present in Asian environment; while in European context student centered and teacher centered methodologies are in practice. The English language teaching and its use during lectures increased in both contexts, and very significantly in Asia. Learning of foreign languages (other than English) also increased, especially those of host countries (in both contexts). In case of South Korea, almost all students who come to pursue their career there have to learn the Hangul; however, in order to attract international students, some courses run in English have been offered (Kim, 2012; Kim, 2016). Even if the mobility of students and researchers increased in both continents, in the European universities, which since decades were preparing these practices, it goes smoother (even if still some problems with recognition of exams abroad can occur).

The Asian universities started to run strong/aggressive internationalization strategies focused on international recruitments of freshman, especially those from Asian countries, viewing in this approach a good source of economical incomes (Kim, 2016; Kim, 2010). Governmental and universities scholarships were offered to international students in order to spread attractiveness of Korean campuses. In the European context, it can be found a larger variety of approaches to bringing international students and scholars on the campus (economic approach, reciprocity approach, exchange and *portage* approach, “internationalization at home” approach, source of diversity for local students, etc.), as in some countries higher education is free

or the charges are significantly lower especially in comparison to the U.S. or even UK campuses.

Insignificant or no specific/formal preparation in order to work in intercultural environment among administrative and academic staff could be noticed, especially in Asian context (observation from the campus). On the other side, good practices in this matter can be observed: implication of academic staff who gained their diploma abroad (Kim, 2010), or have already had professional international experience, international faculty (still very limited, as most statistically noted foreign faculty is of Korean origin), as well as international students' work in the International Affairs Office and buddy program (for students and scholars). In case of European universities (participants of this study), the tendency is also focused on gained informal experiences in intercultural and international relations (through sabbatical year abroad, collaboration in international research projects, international workshops and meetings or staff with double nationalities and native speaker lectures). It should be highlighted here, that the observation from the Asian and European campuses confirmed opinions that, study abroad does not make someone more interculturally competent (Deardorff, 2013), and the academic or administrative staff with diploma from abroad does not make the university internationalized (Kim, 2005).

In case of internationalization of research, some similarities between Asian and European Academia can be noticed: in both contexts the Americanization of investigation takes place. More and more articles have to be published in high impact factor journals, which frequently are American.

The game of rankings, in the way it is known nowadays, it has also started in the American environment. Currently, many Asian and European Universities work hardly on organizational and academic strategies (through creation of interdisciplinary clusters, international/global hub research centers, participation in international research projects, etc.) in order to gain international visibility through different international rankings (Kim et al., 2008).

Other common element observed in internationalization of research, in both contexts, is the production of more papers or doctoral theses prepared in the framework of international educational programs such as master or PhD, and these often include international comparisons.

In both contexts, international meetings, workshops and conferences are organized. Another point worthy to be highlighted, is the institutionalization of research in Asian and European universities (creation of international centers, international offices for management of the projects and help in preparation of the proposals, for example European Framework Program, where active European-Korean collaboration can be observed). Other similar way of international involvement in research is collaboration on the level of departments as well as personal academic contacts.

Common point can be found also in the way the internationalization of research is evaluated. In this case, similarities in the evaluation of internationalization of higher education, mostly statistical evaluation based on the number of articles published in international journals, could be observed (internal and external evaluation). The incentives and professional curriculum points are applied. In the case of French university, more specific, descriptive evaluation of the internationalization of education and research has been prepared by AERES (*Agence d'évaluation de la recherche et de l'enseignement supérieur*) and its methodology was proposed especially in 2009. It contained qualitative contextualized evaluation and indications for improvement.

Taking into consideration the internationalization of research and its evaluation, a proposal of assessment of international collaboration in international articles was prepared during the doctoral stay at the University of Michigan 2015/2016 (see part 5. the SCIENTI protocol). This original method proposed through the ISAIAS project took into consideration the cultural area of all coauthors' academic affiliations.

One difference, which was noticed among the European universities, was also observed in Korean Academia. While some universities worked on specific strategies in order to encourage new, not experienced researchers to write proposals and participate in *high prestige international research projects (initiative of Sorbonne Universités)*, others focus their support just on experienced researchers who have already participated in similar type of programs (example Spanish university).

The development of collaboration between Asian and European Higher Education and Research has taken a stronger form since last decade (ASEM, ASEF meetings, Framework Program, KORANET; White Paper (2010)). The Republic of South Korea is one of the countries with which the EU strengthens significantly collaboration through many research, educational and cultural projects. One of the

biggest challenges in collaboration between Asian, Korean and European Universities are cultural differences, as it was mentioned in the KORANET project, which was held with the objective of finding possible ways of cooperation.

Taking into consideration, on one hand, the cultural differences and, on the other hand, increasing phenomena of globalization, internationalization and massive immigrations, the development of the intercultural competences among university students become one of the important objectives (OECD, 2014; 2016; UNESCO, 2013; Council of Europe, 2008) in all continents.

However in Asia and in Europe, this endeavor takes different specific forms. In Asia, one of the principal goals of internationalization policy in higher education becomes the education of “*global leaders*”, the development of “*global competences*”, while in the European context within the mission of a university can be noticed the development of “intercultural competence”, “global competences”, “*competencias interculturales*”, “globally competent citizens” or “global citizens”. This difference in terminology reflects very clearly the differences of objectives and perspectives between continents, and their major cultural differences influencing the future they wish to develop.

10.2. National and organizational cultures and components of the intercultural competences in Asian and European contexts

According to the findings from this research, it has been observed that on the **Asian and European campuses**, taking into consideration the impact of national and organizational culture on development of ICC among campus stakeholders, the firstly developed were (1) **Attitudes** and secondly (2) **Skills** (with bigger variation between dimensions in the European context). On the other side, the differences between Asian and European campuses have been noticed especially in the development of the dimensions of (3) **Knowledge and Comprehension** placed on the 3rd positions in Asia and 4th positions on the European campuses. The dimension of the (4) **Desire Internal Outcomes** on Asian campuses was classified on 4th position in the development of ICC through the curricular and extracurricular activities, while in Europe the Knowledge and Comprehension came on 4th position and Desire Internal Outcomes on 3rd position.

Going more into the details for closer comparison of differences and similarities between development of the components of ICC in Asian and European contexts, one Korean group and one European group [undergraduate students of dentistry of the CNU (n=60) and of the UGR (n=60)], were taken into consideration. The results showed that: among components of the attitudes, which take active role in development of ICC in both contexts the most impacted on the campuses were: at the CNU: (1) *respect for other cultures* and (2) *respect for people from other cultures*, while at the UGR: (1) recognition of the need of *intercultural competences in future work* and similar like on Korean campus (2) *interest in people from other cultures*. The smallest impact of campus culture (build through curricular and extracurricular activities) on development of the attitudes dimension was noted on both campuses in the same component: on impact of *prejudices and stereotypes*.

The results showed that: among components of the skills dimension, which take active role in development of ICC in both contexts the most impacted on both campuses was the same component: (1) *capacity to observe people from other culture*; while on the UGR campus (2) *capacity to listen people from other culture* was scored on the second position, on the CNU campus students scored on second position (2) *capacity for cultural self-assessment*. The smallest impact of campus culture on development of components of ICC within the skills dimension was noted on UGR campus on *making sense of information related to different cultures*; while on the CNU campus the smallest impact was noted on – *analyzed the information related to different cultures and analyzed, interpret and relate information presented in different cultural contexts*.

Further results showed that: among components of the knowledge and comprehension dimension, which take active role in development of ICC in both contexts, the most impacted on the both campuses was: *understanding culture of others*. While the less developed on the campuses were: on the CNU - *understand the impact of culture on the social and historical contexts and improvement of sociolinguistic competences*. On the UGR campus the smallest impacted was noted on: *better understand other's world views*.

In relation to development of desire internal outcomes, the most developed component in both cultural contexts was: *cultural empathy*. On the other side, the less developed components of ICC on the CNU campus were: *change of point of view about*

cultural community where I belong and become more flexible with people from other cultures; while on the UGR campus the smallest impact was noted on: becoming more flexible with analysis of matters looking at them from different cultural perspectives and slightly higher evaluated (like in case of the CNU), change of point of view about cultural community where I belong.

The students from the UGR density campus noted that ICC is a very important competence needed in their future professional life. However, on the CNU campus, even if general academic approach toward of development of ICC was positive (because of many social factors), students of dentistry do not perceive it as very important competence for future professional practices. No student was thinking about professional activity abroad, and neither the increasing number of Asian immigration into South Korea has been taken into consideration. The most developed component of ICC on the Spanish campus was: *capacity to observe people from other cultures*, while on the Korean campus *respect for the other cultures and interest in people from other cultures*. The less developed component of ICC on the Spanish campus was: *better understand other word views*, while on the Korean campus - *impact on prejudices and stereotypes*.

10.2.1. General mechanisms

National culture (power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, long-term orientation vs. short-term orientation, Korean Confucianism) and organizational culture of a university, impact the way the internationalization of higher education and research is planned, implemented and assessed, as well as the way ICC among campus stakeholders developed.

All planned factors (internationalization strategy and other organizational strategies) and unplanned factors (national culture and “silent aspects” of organization culture) build campus culture and impact the development of ICC among students, academic and administrative staff (domestic and foreign).

The campus culture created by the relationship between national and organizational culture (where organizational culture depends strongly on national culture and personal values and attitudes of leaders, administrative and academic staff and students), impacts the development of ICC through the teaching/learning process as

well as other kinds of relationships (formal and not formal) between campus stakeholders.

Taking into consideration universities with the national context of high power distance, it is quite easy for them to introduce some policies (like the policy of internationalization), however, it is difficult to expect that this kind of culture will allow to develop deep internationalization and ICC among campus population. In order to reach deep internationalization of a campus, the ownership of the internationalization at home has to be developed among all campus stakeholders on all levels; however, the gaps in communication as well as the lack of feedback about results on practices on the campus (more if the Zeus and Apollo culture is established (Handy, 1995)), make the process difficult.⁴⁹ The cases of the general campuses of this study well illustrate this issue.

One of the objectives of this research was to look for the relation between national and organizational culture, and the development of ICC among campus population. This study showed that the national culture impacts organization culture through the power distance, uncertainty avoidance, masculinity vs. femininity, long-term short-term orientation and in this way impacts the development, implementation of internationalization strategy (especially internationalization at home) and teaching-learning processes; all these elements have impact on the development of ICC on the campus. However it has to be highlighted that leaders of internationalization (through organizational and academic strategies) shape considerably the culture of the campus and through it (taking into consideration diversity impact and developmental growth theory), the development of ICC among all campus population.

In the era of globalization and internationalization of economy and knowledge, the national culture impacts educational policies at the national level, what consequently impacts the policy of the higher education institutions. On the institutional level, the dimensions of national culture impact the management as well as the teaching/learning process and the development of ICC.

⁴⁹ The author of this Thesis (using the same kind of methodology) observed different results, on three Norwegian campuses, where the power distance was significantly lower (31/100 according to Hofstede, 2010) and Apollo and Athena organizational culture dominated in the process of implementation of internationalization at home. The collaboration and feedback culture were significantly developed (Wisniewska, 2011).

The national culture shaped by history remembers international relations, and those - through the national narrative - impact attitudes toward strangers; the knowledge and comprehension about culture in general and some culture in particular, the skills to observe, listen and reflect on own culture and culture of others, help in the interaction with foreigners and in the development of ICC.

The high uncertainty avoidance will shape the thoughts to more likely avoid contact with strangers. However, this attitude can be reshaped by the provided knowledge on culture, intercultural communication, on mechanisms of intercultural collaboration, as well as by the opportunity to practice intercultural skills on the campus. Individuals coming from 2 different countries with different scores on cultural dimensions, the first contact (if the uncertainty avoidance is not too strong to abandon interaction) may discourage or encourage for further cultural contacts. It will depend mostly on previous intercultural preparations and personal curiosity.⁵⁰

10.2.2. Culture and ICC in the Korean model - CNU

Contemporary Asian higher education is influenced by its historical traditions. “*No Asian university is truly Asian in origin – all are based on European models and traditions*”, in many cases imposed by others or voluntarily adopted from Western models (Altbach, 2004; Kim, 1997; Kim, 2005). Korean Higher Education has been strongly impacted by the Japanese colonialism and lately the USA influence. Furthermore, most of the Asian universities submerged in Confucianism have similar values that shape considerably dimensions of national cultures. The case of Korean University, which represents high national power distance (60/100; Hofstede, 2010; Lee, 2001), Zeus and Apollo culture (Handy, 1995; 1986) embedded additionally in philosophy of Korean Confucianism (focused on respect to education and to leader and hierarchy), showed example of a university which as one of the objectives of the internationalization of higher education and research sees education of global leaders. Even if the CNU has been categorized in this study as a monocultural organization (Sue, 2001; Yeager et al., 2013), the internationalization efforts on the campus are sporadic and international academic staff almost none (most of international faculties have Koreans origin as well), still, the dimensions of Attitudes of ICC (proposed by

⁵⁰ It is calling to theory of Hofstede about tree levels of uniqueness in mental programming (2010: 6) and process development of ICC (Deardorff, 2006; 2009; 2013; Bennet, et al., 2004).

Deardorff, 2004; 2006; 2013) were marked highly in the ISAIAS score. It is a positive result of communication on educational policy about developing global leaders, which match also social perceptions on prestigious practices of the Korean high social class. On the other side, the internationalization policy and its practices justified by statistical evaluations in front of the ministry requirements, are very limited and superficial on the campus. This study showed that, despite the positive attitude toward international and intercultural interactions, Korean students still feel some kind of discomfort while acting with foreigner colleagues: *“It is not that comfortable”*, *“I feel like studying him [referring to foreign student]”*, *“I feel curiosity rather than comfort,”* *“I feel awkward”*, *“Korean culture is rather conservative and sometimes I feel embarrassed with opened Western culture.”* Moreover, many students prefer to be in the relationship with other Asian students rather than with the Africans, Americans or Europeans - as they explained during discussion - *“cultural proximity”* and *“similar appearance”* [as they mentioned], played important role in this perception. Community culture (individualism 18/100) on one side, can facilitate significantly development of ICC by a wish to be part of the group, on the other side, can discourage to ICC development if for any reason the group or a newcomer do not share same values or same opinions. Harmony cultivated by the Korean Confucianism often can lead to the ostracism toward a foreign faculty or student. Moreover, the high long-term orientation (100/100) and quite low Indulgence (29/100) of Korean culture sometimes discourage Korean students to international contacts when they know that this foreign colleague is just for short stay, (like one semester) in Korea: *“this interaction need a lot of effort and it is not worthy if a student is here just for one semester.”*

The long-term orientation (100/100) developed in Korean culture through ages makes this society very “practical”, and it can justify the first position of Skills in the development of ICC among students on the Korean campus. Taking into consideration the practices of memorization stimulated strongly by the Korean Confucianism, the dimension of Knowledge and Comprehension related with development of ICC was brought on the third position in the scale of development on the campus. It was surprising that this dimension has not been noticed much stronger, and one of the justifications can be found in not sufficient providing of knowledge about other cultures (or culture in general) at the university. The dimension of Desire Internal Outcomes

based on reflection was mostly noticed in the last position. Among the biggest difficulty in the relationship with foreign colleagues on the campus, the issue of “language”, “communication”, “culture” were highlighted.

Moreover, Korean Confucianism maintains male dominant culture in Academia, “*I was the closest to her [referring to staff from the international service], but she firstly gave a paper to all the boys around and after she gave it to me. And it happened each time she had to spread something among the group. She was very fluent at English as she was graduated in English literature*”, said one of the international stakeholders (woman) of the campus. The academic females are present in the university but their real impact in hierarchic male environment is limited.

10.2.3. Culture and ICC in the French model - Paris University

The French University (with the highest power distance in this group = 68/100 and high uncertainty avoidance score = 83/100), even if placed in the very international context of Paris city, does not move fast in the Anglo-Saxon way of internationalization, nor the concept of *internationalization at home* can be observed. The practices of massification in the international mobility (case of Asian universities) are not among its objectives. However, the reciprocity, exchange and *portage* has been chosen as a key factor of its in student mobility (Erasmus, Erasmus+, Bilateral Agreements) and international research collaboration. Clearer policies on internationalization came out quite recently and still are in the constant process of changes, passing through different organizational strategies (example, cluster approach), what permits to this humanistic institution (till now) become slowly more dynamic, interdisciplinary and visible internationally. Its rich cultural and historical heritage as well as high scientific prestige shapes significantly its mission and vision embedded deeply in traditional French culture. It was one of the strong arguments to categorized Paris IV as a monocultural organization (Sue, 2001; Yeager et al., 2013; Conrarley et al., 2005). The impact on intercultural competences development on its humanistic campuses was low.⁵¹ Among the biggest difficulty in the relationship with foreign

⁵¹ It needed to be highlighted that this study did not have as objective to measure ICC of the students or academic staff in general. The stakeholders of the campuses can develop their ICC in many other places and activities. However, the objective of this study was to gather the opinion of the campus stakeholders how much the campus culture (curricular and extracurricular activities, participation in research and educational international projects; etc.) helps them in development of ICC.

colleagues the domestic students mentioned, “*la barrière de la langue*” and “*lack of time*”, “*organization*” [example, with relation to the class organization, where foreign students often work separately in different assignments than domestic students], and “*lack of communication.*” Zeus culture and Apollo culture are present in this traditional and prestigious European university, what has its advantages and disadvantages in the implementation of internationalization of higher education and research process. The *Service de Relations Internationales* has been mentioned by all contacted staff of Paris IV, as a model service within this university. Its mix of Apollo and Athena organizational culture gives transparency and efficiency within university collaboration and that was highly appreciated in the uncertainty avoidance environment.

In relation to the international collaborations in research, the characteristic of the Paris IV’s international dimension is that it has not been institutionalized unlike many other universities (such as the Paris VI University). However, “*traditionally the collaborations were extensive from team to team and between researchers but - because of the high French individualism – they were difficult to assess globally and presented a clear lack of visibility.*” However, according to the information gathered during interviews, with academic as well as administrative staff, the international collaborations between faculties, professors and researchers of the Paris IV and foreign universities have been developed and actively maintained. This organizational culture, impregnated deeply by national culture, is appreciated by many faculty, and perceived as an academic freedom so needed for creative results at work.⁵²

In dentistry school, the most often met foreign colleagues on the campus were from Spain, Tunisia, Morocco, Belgium, Sweden, Quebec, Holland, Portugal, Japan, China and Brazil among others. The most often mentioned countries as a possible destination for professional development were: Asia, USA, Canada, Spain and Europe in general. Among the reasons for which the students of dentistry would like to go abroad were pointed out: learn the newest techniques and methodologies of work, humanitarian and change of life. The dentistry students recognized positive impact of the meetings with Erasmus colleagues or foreign assistants on the campus, what was showed in the ISAIAS FAST score of ICC development. On the other side, some limits of organizational strategies of the university were pointed out by students, “*Paris V*

⁵² Deep organizational and cultural analysis and its impact on internationalization of the Université Paris-Sorbonne PIV, and its context have been presented in the professional report in Annex 3.

should organized more possibility of meeting between domestic and foreign students. Les étudiants Erasmus ne sont pas très bien accueillis à Paris Descartes, c'est vraiment dommage !"(Erasmus students are not so well welcome at Paris Descartes, it is a pity!").

An important impact on the development of ICC among future dentists has their practical work in hospital, where they have an opportunity to meet culturally diverse patients, what was highlighted by students. It is one of the "silent" effects of the pedagogical strategies (Wisniewska, 2011).

10.2.4. Culture and ICC in the Spanish model - University of Granada

The Spanish University embedded in national context (smaller power distance = 57/100 (Hofstede, 2010) in comparison to other general campus of this study, and high uncertainty avoidance 86/100), since many years promotes strongly internationalization of higher education and research, international mobility of the students becoming a host university for many European, Maghreb and South American as well as recently Asian students. It was also noted as the University with the highest number of Erasmus students in the EU. This historical university established 1531 has strongly developed organizational strategy of internationalization (many rules and indications dictated by high national ambiguity avoidance 86/100), and plays active role in the discussion on internationalization of higher education and research on the global level.

On the other side, the pedagogical approach is still very teacher centered; the score given by the campus population on the development of ICC were a bit higher, but not much higher than other universities of this study. The knowledge about international and intercultural issues was scored as the weakest developed dimension of the ICC among students on the campus, but the attitude toward intercultural contacts was higher noted. The positive atmosphere of Granada city and large number of international students (undergraduate, master and doctoral) make the UGR culture quite experienced and opened toward newcomers, however, the limitations coming out of organizational culture (Zeus culture and Apollo culture (Handy, 1995), and quite high power distance and uncertainty avoidance culture) in internationalization of education and research has been noticed; the need of further support in the matter of internationalization and ICC development has been noted by campus population. In this study the UGR was

categorized as mix monocultural and nondiscriminatory organization (Sue, 2001; Conravelly et al., 2005). Having the long-term orientation (48/100) not so high like it was in case of the Korean campus and Indulgence middle score (44/100), Spanish students take opportunities of interactions with foreign colleagues without really taking into consideration the longitude of foreign stays on the campus.

Among the biggest difficulty in the relationship with foreign colleagues the students mostly mentioned: *“language”*, *“different technics of work”*, *“diferentes horarios de clases”*, *“mi timidez”*, *“verguenza”*, *“practices”* and that *“they (international students) do not attend the class”*. As it could be noticed, having into consideration the three levels of uniqueness in mental programming (Hofstede et al., 2010), many of these barriers are coming from the level of personality. On the other side, adequately prepared pedagogical strategy that significantly builds campus culture could facilitate cultural interaction (Piaget, 1971; Gurin, 1999, 2002). The domestic dentistry students (ex-participants of Erasmus program) appreciated international experience, highlighting that it was *“the biggest impact on the development of their ICC and intercultural experience provided by the UGR.”* Among other opinions related to organizational strategies the students noted that, *“the UGR does not inform sufficiently about events for domestic and international students together”*, *“UGR should organize intercultural events and workshops”*, *“UGR did not organized any programs (for intercultural exchange on the campus), but indirectly it (UGR) helps me to know people from other cultures, cities and countries, and this was grand enrichment for me.”* Among the most often mentioned origins of foreign colleagues were countries such as: Albania, Paraguay, Mexico, Czech Republic, France, Italy, Chile, Europe and South America.

Taking into consideration development of ICC, among the biggest strengths of the UGR internationalization strategy should be mentioned: long experience in internationalization of higher education and research, well-developed organizational strategy (however, limited to administrative dimension), activity and process approach to internationalization (Zha, 2003), many international students on the campus, very favorable geographical position in historical city of Granada famous for its mix of cultures; relatively low fees and cost of life for international students; international, national and regional resources for internationalization (mobility, activities, research) (Keller, 1983; Davies, 1995); self image: traditional and modern (Keller, 1983); foreign

language policy easily developed in cooperation with the *Centro de Lenguas Modernas de la UGR*. Bringing many international students on campus as well as sending many students abroad does not make university international (Harari, 1989), but facilitates building of the diversity culture on the campus, however, additional actions (organizational and pedagogical) should have place in order to use that source of richness for development of ICC. Among the UGR weaknesses could be mentioned: focus on rational approach to internationalization (income generation), strong Zeus and Apollo culture in administrative dimension while dealing with international stakeholders and in the domain of internationalization of research (Wisniewska, 2010; Wisniewska, 2014a; 2014b; 2014c).

10.2.5. Culture and ICC in the Italian model - University Federico II of Naples

Taking into consideration the South Italian context of national culture in which the University of Naples Federico II organization culture is placed [power distance the lowest in the group of researched campuses 50/100 (Hofstede et al., 2010), while individualism 76/100 higher than in other campuses of this research], the activity approach towards internationalization, as well as program and organizational strategy have been chosen (Knight, 2004). The academic community is proud of its historical heritage (founded in 1224) and open to international mobility and collaboration. In this study it was categorized as monocultural organization (Sue, 2001; Conravley et al., 2005). The population of Dentistry School (part of School of Medicine and Surgery) scored positively on development of ICC on the campus. The opinions of three research groups agreed on the highest score in Attitudes development, second position was divided between Desire Internal Outcomes and Skills (among postgraduates students). Many of the responders (40%) would like to go abroad for study or work in order “*to train a foreign language*” (specially English) and “*to gain new professional experience in the field*”, as well as “*to learn new surgical technics*” and “*to develop experience in international research projects*”. As a wished destination countries the most often among the Unina campus stakeholders were mentioned: (1) among students - mostly Spain, France (Strasbourg), United Kingdom (London), Europe, and South America; (2) among researchers - USA and Canada. The foreign colleagues who enrich the Unina

culture with their cultural and linguistic diversity usually came from: Europe, Tunisia and Palestine. As the biggest difficulty in the relationship with foreign colleagues Dentistry students of the Unina campus mentioned: (1) no difficulty, (2) language, (3) relationship and (4) different culture. The lack of initiatives in internationalizing more efficiently the campus was noticed by students (specially undergraduate level). The limited participants of Erasmus program appreciated very much the international practice (domestic students from the Unina).

10.3. Differences and similarities in internationalization of general campuses and specialized faculties

Among similarities in internationalization of higher education and research on general campuses and specialized faculties such as Schools of Dentistry noticed during this Research, it can be mentioned:

- ✓ Introduction of Bologna process, ECTS credits and qualifications recognition within the EU; similar initiatives are starting to take place among Asian campuses in Dentistry - about mutual recognition of dentists.
- ✓ The internationalization of higher education and research depends strongly on leaders of internationalization, which shape significantly culture of the campus by impacting through their personality the national culture and organizational culture of a university.
- ✓ Intercultural competences of the future professionals are developed through campus culture (created by national and organizational culture), opportunities of international and intercultural contacts, curricular and extracurricular activities.
- ✓ Lack of formal programs for the development of intercultural competences. Intercultural competence - or global competence - is an element, which is supposed to be developed at the university; however, it is very difficult to say “how” and “where”, “when” this competence is developed and how it is assessed.
- ✓ General lack of assessment of intercultural competences. In case they are assessed, who is assessing them and how?
- ✓ It seems that the foreign language learning is overtaking the responsibility related with intercultural competence development.

- ✓ This study showed that the Attitudes within the process of intercultural competences development were the most developed dimension on the general campus and faculty of dentistry.
- ✓ International mobility of dentistry students usually takes place at the postgraduate level; the same regularity was observed at the scale of the general campuses (for example in Paris-Sorbonne, most of the international mobility take place in Master 1, Master 2). However, the international mobility (long term) in dentistry in Korean and European contexts is very limited, in comparison with international mobility within other disciplines.
- ✓ Policy of development of the lifelong learning attitudes (varied also between disciplines and universities).
- ✓ Methodology of the teaching-learning process is influenced strongly by dimensions of national culture and types of organizational culture of a university and class.
- ✓ Financial support for internationalization efforts can be received from external and internal sources.
- ✓ Evaluation of internationalization of education and research focus on quantitative data (classical model of internationalization).
- ✓ International conferences, workshops, foreign visiting faculties as tools of internationalization strategy.

In this multiple, international and transdisciplinary case study, **among the main differences** in internationalization of higher education and research between general campus and specialized faculties such as Schools of Dentistry, some major aspects have to be highlighted.

The missions of Dental Schools (from this study) do not relate directly to internationalization of education or to development of intercultural competences, or global leaders. There are focused mostly on educating good professionals who can give excellent service locally and “beyond” (case of CNU), as well as developing the culture of lifelong learning among dentists. This last point is related with national and international meetings and conferences which offer training and knowledge about constantly changing world of dentistry and which participants wish to try and implement in their daily professional practices. This point gives the feeling of being

very different from the theoretical knowledge provided in the general campuses (soft disciplines), where the international dimension seems to be less practical. This atmosphere of modesty of intercultural and international approach (which still is perceived as an added value in different faculties) is more ambitious in philological faculties, where intercultural competences are usually taken for granted. However, are the literature, history and cultural data as well as theory and grammar of foreign languages sufficient to say that the intercultural competences have been developed among absolvents? This assumption is wildly present among students and faculty of philology. Thinking about faculties of philology, most of the academic staff (or all) are nationals and the native speakers among students (mobility students) are very limited. So how the ICC of these domestic students can be practiced on the campus?

The development of international competences in Dentistry (in Asian and European contexts) is not a priority; however, English knowledge is becoming indispensable, especially competences of reading and understanding the subject-related literature. Recently taking into consideration the demographic changes in the European continent, the EU recognized the need of intercultural competences among health professionals (for example, the Erasmus+ program).

The international mobility among students in Dentistry, especially on the undergraduate level, is very limited. Foreign students can be met much more on the postgraduate level. There is a very limited number of international PhD diploma in Dentistry, comparing with other sciences where the international mobility during doctoral program became a common practice and more and more almost obligatory.

However, the internationalization in the field of Dentistry gave the impression to happen smoother and “deeper” than in the case of the general campuses (when comparing to social sciences, humanities and education, etc.). Why? The knowledge about techniques, protocols and materials is very internationalized. The impact of using this or another material, this and another tool, is quicker observed more immediately verified in practice. In this discipline, the questions of academics, students or experienced dentists are focused on concrete problems. The answers are elaborated often locally but with the knowledge from abroad - for example with the use of the L-PRF (Leukocyte- and Platelet-Rich Fibrin) or the research about dental implants (Dohan Ehrenfest, et al., 2010; Del Corso, et al., 2012); or in the contrary, there are international

standards elaborated globally and introduced locally (ISO). The questions and results in the field of Dentistry are more tactile, passing in this way the borders of countries and cultures, as the focus is centered on very concrete problems.

10.4. Ethical considerations and potential limitations

Participant collaboration was voluntary. The study was conducted with the approval of all research participants. All data from all respondents during the research process was kept anonymous. In case some names were mentioned, it was with the personal agreement of the participant. The purpose of the informal interviews was explained. The responsibility of the researcher for the welfare of the participants was taken into consideration. Leaders of international offices support this initiative as they were informed about conversations on international matters with domestic and foreign students. The leaders hoped that the research might provide them information that they were unable to obtain in this form and with such details, especially in the case of the University Paris-Sorbonne.

Despite the significant volume of data gathered in so many Universities during the elaboration of this professional Thesis, this study presents several limitations to mention:

- ✓ The *qualitative study* raised some limitations, such as: possible misunderstanding of information due to the linguistic limitations (in Korean campus, as the Korean language of the author was in the basic level of communication). However, these limitations were minimalized by help of the Korean colleague (CNU student and graduated in English education) who often participated in process of data gathering and discussions, long-term observations of the Korean campus and Dentistry School (2011-2013) as well as constant reflection and discussions about the observed issues with Korean colleagues and professors, and with foreign participants of the campus. Similar strategy to minimalize limitations and avoid bias of research were applied in other campuses participating in this study.
- ✓ The *quantitative study* raised a number of limitations: 1) the samples are quite small; 2) missing values of some questions were completed by statistical procedures (mode value for the item), what may be a potential bias. However, the limitations of

quantitative study were minimalized by qualitative study and data, as well as source triangulation.

10.5. Perspectives and evolutions: an insight from the University of Michigan

This professional Thesis presents the data and the experience obtained in 4 Universities located in 4 countries, to observe the internationalization patterns in Asian and European context. However, this field study was done in several other universities worldwide through the ISAIAS project, and this work constitutes an added value to the professional experience gathered during the preparation of this Thesis.

Particularly the author of this Thesis worked during 1,5 year at the University of Michigan (**UMich**), what offered a major opportunity to gather data from inside about internationalization from one of the most important U.S. Universities, and one of the most advanced Universities worldwide in the strategies and process of internationalization of higher education and research.

The University of Michigan was founded in 1817 and is often called the “Harvard of the Midwest”. It is often considered as one of the few best public Universities in the USA.

The University of Michigan School of Dentistry is ranked as the best dental school in the USA from the last world rankings. Historically, many major innovations and concepts started in this School in the past, such as addition of Fluoride in the water to prevent decay, cone beam technology and many concepts in periodontology.

Currently, 10 Deans of major US Dental Schools are former Faculty or Alumni from the UMich Dental School; this School is labeled as a research-intensive School and it is the most funded dental school for research by the NIH (National Institute of Health). If we observe specifically the Department of Periodontology and Oral Medicine (POM) where the main implant and biomaterial education and research activities are organized, it can be noticed that the Postgraduate diploma is ranked as the best in the USA, with Prof. Hom-Lay Wang as its leading supervisor. The Head of the Department, Prof. William Giannobile, is the Editor-in-Chief of the Journal of Dental Research (JDR), the leading dental journal with an impact factor of 4.6. This School is very attractive for students from the USA and abroad, and there is a large population of

foreign students enrolled in the UMich postgraduate programs. In the renowned periodontology program, a majority of students are foreigners, mostly from Asia, South America, and also from Europe.

Therefore this University is a very relevant example as an internationalized U.S. University, with major investments for internationalization since many years. The data collected in this campus and school are interesting for comparison with the data from other campus, to provide some perspectives to what was observed and provide indications on what may be the evolutions of the Asian and European campuses and schools observed in this Thesis.

The very same methodology as described in this Thesis was applied on the campus of the University of Michigan, and even on a much larger number of students considering the support from some Colleagues in the School. For the purpose of this Thesis, the ISAIAS FAST scores were calculated on a sample of stakeholders of similar size like in the 4 other participant Universities in this Thesis, and are presented in the **Table 11** below.

As a general pattern, the scores observed at the University of Michigan were all significantly higher than in the other investigated Universities of this Thesis work. It was also noticed that the scores of the general campus population at UMich were even higher than the scores (already very high) calculated in the UMich Dental School. This reflects very clearly the considerable effort done by the University leaderships since more than 20 years to promote internationalization of the campus, to attract students (and sometimes Faculty) from everywhere in the World, and it also reflects the very large quantity of foreigners (students, visitors, professors) on the campus, sharing their culture with their colleagues. The students met on the UMich campus identify internationalization of the campus as “*cultural diversity*.” The principal strategies for internationalization of the university are study abroad programs, recruiting international students and the internationalization of faculty [as observed also by Cantu, (2013)]. In the perspective of campus culture, among main narratives of the UMich, which were observed during author stay on the campus, should be mentioned: diversity, inclusion, affirmative action and campus climate.

ISAIAS FAST Scores at the University of Michigan, Ann Arbor, USA					
Population on the campus	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
Professors/Researchers on the general campus	3.3	3.35	3.15	3.29	3.27
Students on the general campus	3.2	3.19	3.1	3.15	3.16
Undergraduate Dental Students	3.08	3.04	3.04	3.01	3.04
Professors/Researchers in the Dental School	3.25	3.28	3.12	3.28	3.23
Postgraduate Students in the Dental School	3.15	3.2	3.18	3.21	3.18

Table 11. Intercultural dimensions and total ISAIAS FAST scores of 5 different groups of stakeholders at the University of Michigan, Ann Arbor, USA. The reported 5 population samples were composed respectively of 20 Professors/Researchers on the general campus, 100 students on the general campus, 100 undergraduate dental students, 20 Professors/Researchers in the Dental School and 20 postgraduate students connected to an implant and biomaterials research leader (Prof. Hom-Lay Wang).

However, paradoxically, despite these very high scores, the in-depth interviews and observation of the daily life on the campus also revealed a very divided population. Everyone is supposed to be trained to a multi-cultural environment and aware of the differences of perception and actions, everyone is supposed to be free in its actions and

thoughts, but the consequence appeared to be that the population was very divided in groups (usually based on the parameter of ethnicity) that did not really exchange and communicate, and were remaining very separated. The normative effect of the U.S. culture was very strong and allowed all these groups to interact on a daily basis, but this interface appeared to be very politically correct and professionally-driven (**Figure 55**, repetition of **Figure 6**). As an interesting paradox, it appeared that in the most advanced intercultural environment, individuals were trained to interact but remained very divided. The philosophy of inclusion spread on the campus (also during training for faculty of the UMich “Training for Diversity and Inclusive Teaching“ in which the author of the Thesis participated) was focused on diversity and differences understood according to U.S. narratives.

The observations at the University of Michigan were numerous, but this perspective sounds also like a warning for the future evolutions of the internationalization of higher education and research in Europe and Asia: making a campus more international is useful to improve some aspects of the intercultural cooperation, but a too strong internationalization may finish to dissolve the cultural and social links between people, divided into communities, and it can lead to tensions and the contrary effects than what was expected. Somehow, as long as internationalization is handle with care and used a controlled instrument, it is a positive policy; when it becomes a more social ideology, the society outcomes may be more uncertain. Culture is the software of the Mind, and it cannot be manipulated so easily.

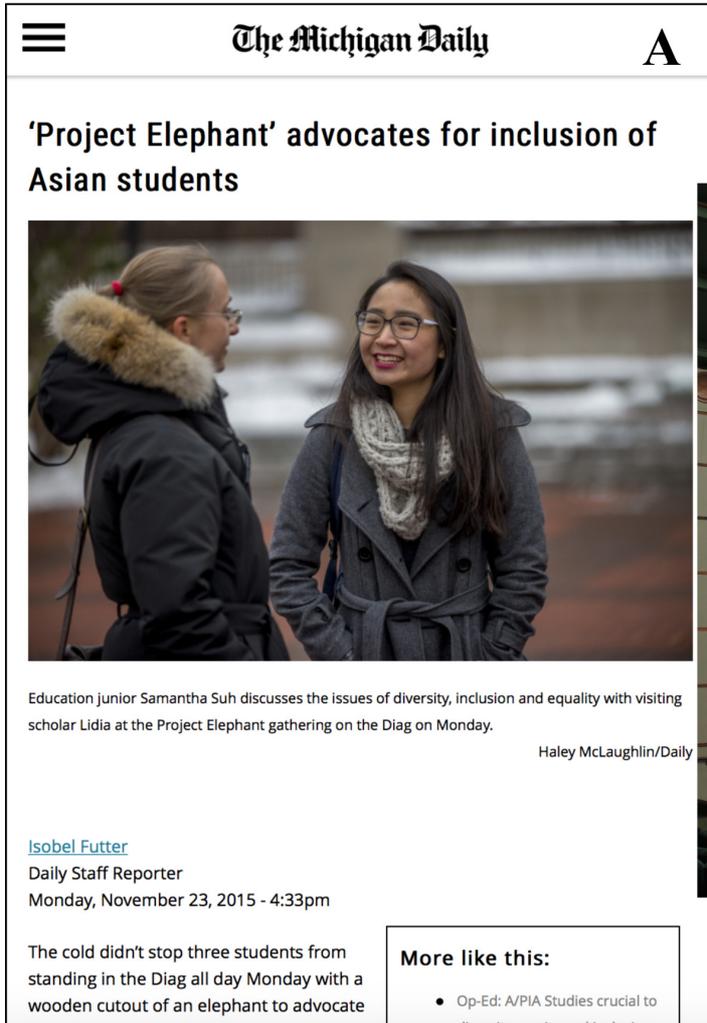


Figure 55. Debates on internationalization of higher education and issues of diversity, inclusion and equality are very strong at the University of Michigan, and were part of the duties and investigation of the author of this Thesis. **A.** View of the Michigan Daily journal (November 2015) about the issues of diversity and inclusion of students with Asian origin on the campus, in which the author of this Thesis was involved (Project Elephant). **B.** Conference about the issues of diversity and inclusion of minorities and intercultural cooperation in Academia, organized on the Campus main Auditorium in presence of the President of the University and several other high-ranking Academic leaders of the country.

11. General Conclusions

As a conclusion to this Thesis, it is necessary to highlight the fruits of this global long-term experience and this investigation in the 4 different campuses and dental schools. This research work provides perspectives and numerous implications to improve the daily practice in the process of internationalization of campuses and specialized faculties.

- ✓ A strategy of internationalization of higher education and research is a good way for the implementation of innovation, interdisciplinarity or new approaches on the campus.
- ✓ Analysis of the campus culture and spreading its results among campus stakeholders is needed.
- ✓ Intelligent internationalization is needed.
- ✓ In order to give an opportunity to all students and all campus stakeholders for the development of their international perspective and intercultural competences, a holistic plan of smart internationalization is needed.
- ✓ Each university should have its own plan of internationalization adapted to the national, local and institutional contexts.
- ✓ Awareness of the impact of national culture and organizational culture on the implementation of an internationalization strategy and development of intercultural competences is needed.
- ✓ Awareness about the impact of dimensions of national culture on the teaching-learning process is needed in all disciplines.
- ✓ Assessment of the internationalization strategy going beyond statistical data is needed. It seems to be one the most efficient way of verifying strengths and weaknesses of the internationalization plan, its implementation and outcomes.
- ✓ Analysis of institutional and contextual strengths, weaknesses, opportunities and threats of a university, in order to plan, implement or change educational policy is needed.
- ✓ Constant reflection on implementation of internationalization on the campus is needed.
- ✓ Intercultural training for administrative, academic staff, outgoing and returned students is recommended. It plays a key role in potential cultural shock, mental

health, attitudes of “university ambassadors” and “country ambassadors” in host institutions, efficiency of intercultural and international collaboration and future international contacts.

- ✓ Intercultural competences should be the most demanded competence among academic and administrative staff who deal with international students. This kind of training is specially required in Asian-European contacts.
- ✓ Observation and reflection on good practices in internationalization of higher education and research in completely different domains are recommended.
- ✓ Transparency in the university (in internationalization strategy, in academic and administrative initiatives) is needed.
- ✓ Development of culture of feedback on the campus is recommended.

This research work also opens widely the complex theme of national and organizational cultures and their impact on the development of ICC in different contexts (general campus/specialized faculties in Asia/Europe) and provides many opportunities **for further research:**

- ✓ Implementation of the ISAIAS methodology on more campuses for the evaluation of the internationalization efforts through the development of intercultural competences among campus population (students, administrative and academic staff - domestic and visiting scholars) would be interesting.
- ✓ More studies about the impact of national and organizational culture on the development of intercultural competences in different cultural contexts are needed.
- ✓ Development of intercultural competences through contacts between visiting scholars, students and administrative staff of a university (formal and non formal).
- ✓ Research on how the age of the participants of a diverse cultural campus impacts the development of intercultural competences.
- ✓ Research on how the cooperation with the international office of a university is perceived by the international partners?
- ✓ More interdisciplinary studies on internationalization of higher education and research are needed.
- ✓ More research about the need and possible ways of development of intercultural competences in the Korean society is needed.

- ✓ More studies about the perception of the dentists about their need of intercultural competences are required.
- ✓ More studies on European and Asian collaboration in education, research and vocational training are needed.
- ✓ More studies about the impact of projects and good practices in Korean-European cooperation are needed.
- ✓ More in depth studies on how the intercultural competences can be developed on the campus are recommended.

Finally, this professional Thesis highlighted the significant impact of national and organizational cultures on the development of ICC, which components of ICC appeared to be more affected depending on the cultural contexts (in Asian and European campuses in general, and in these 4 universities in particular), the differences and similarities in internationalization of higher education and research in European and Asian contexts on one hand and between general campuses and specialized faculties (specifically dental schools and specialized research groups) on the other hand. As previously discussed, the results of this experience are multiple and complex, but all of them recall us the expression of Hofstede that “culture is software of the mind” which can be learnt but it cannot be taught - different between continents, between countries and finally even between the schools of a very same campus. Because of that, it should be consciously taken into consideration by such important institution as a university.

12. Bibliography

- Abdallah-Pretceille, M. (1986). Vers une pédagogie interculturelle. *Publications de la Sorbonne et de l'Institut National de Recherche pédagogique*. Paris.
- Abdallah-Pretceille, M., & Porcher, L. (1996). *Education et communication interculturelle*. Paris: PUF.
- Abdallah-Pretcelle, M., & Procher, L. (1999). *Diagonales de la communication interculturelle*. Paris: Anthropos.
- Abdallah-Pretcelle, M. (1999). *L'éducation interculturelle*. Paris: PUF.
- Adler, P. A., & Adler, P. (1987). *Membership roles in field research*. Newbury Park: Sage.
- Aguado, M. T. (2003). *Pedagogía intercultural*. Madrid: Mc Graw-Hill. ISBN: 9788448139759.
- Aguirre, S. (1995). Interview and questionnaires. In A. A. Batzan, *Ethnography. Methodology in sociocultural research*. Barcelona: Marcombo.
- Actor, L., & Risager, K. (2001). Cultural understanding in Danish Schools. In M. A. Byram, A. Nichols, & D. Stevens, *Developing Intercultural competences in Practice*. Multilingual matters Ltd.
- Albrektsson, T., Sennerby, L., & Wennerberg, A. (2008). State of the art of oral implants. *Periodontol 2000*, 47, 15-26.
- Allaire, Y., & Firsirotu, M. E. (1984). Theories of organizational culture. *Organization Studies*, 5(3), 193–226.
- Altbach, P. G., & Knight, J. (2007). The Internationalization of Higher Education: Motivations and Realities. *Journal of Studies in International Education*, 11(3-4), 290-305.
- Altbach, G. F., & Umakoshi, T. (2004). *Asian Universities. Historical Perspectives and Contemporary Challenges*. Baltimore, Md.: Johns Hopkins University Press.
- Arnal, J., Del Rincón, D., & Latorre, A. (1992). *Investigación educativa. Metodologías de investigación educativa*. Barcelona. Labor Universitaria.
- ASEAN Mutual Arrangement on Dental Practitioners. Retrieved from www.asean.org
- ASEF www.asef.org
- ASEM Conference 2008 (First). *Asia-Europe Leadership dialog "Between Tradition and Reform: Universities in Asia and Europe at the Crossroad"*. 27-29 October,

2008. Retrieved from
http://www.hrk.de/uploads/tx_szconvention/FIRST_ASEM.pdf
- ASEM Conference 2010 (Second). Asia-Europe Leadership dialog “*Asia-Europe University Cooperation: Contributing to the Global Knowledge Society*”. Retrieved from <http://www.asem-education>
- ASEM Conference 2012 (Third). *Universities, Businesses and You: For a Sustainable Future*. Retrieved from
<http://www.asef.org/index.php/projects/themes/education/2357-3rd-asem-rectors-conference#2570-3rd-asem-rectors-conference-register-now>
- ASEMM1 *Conference of Ministers Responsible for Education* (ASEMM1). Berlin May 2008. Retrieved from
<http://www.aseminfoboard.org/component/rsevents/event/32-1st-asem-ministerial-meeting-on-education.html?Itemid=0>
- ASEMM2 *Conference of Ministers Responsible for Education Vietnam* (ASEMM2). May 2009. Retrieved from
<http://www.aseminfoboard.org/component/rsevents/event/36-2nd-asem-education-ministers-meeting.html?Itemid=0>
- ASEMM3 *Conference of Ministers Responsible for education* (ASEMM3). Denmark. May 2010. Retrieved from
<http://www.aseminfoboard.org/component/rsevents/event/262-3rd-asem-education-ministers-meeting.html?Itemid=0>
- Baker, D. (2008). *Dimensions of Asian Spirituality: Korean Spirituality*. University of Hawaii Press.
- Barley, S. R., Meyer, G. W., & Gash, D. C. (1988). Cultures of culture: Academics, practitioners and the pragmatics of normative control. *Administrative Science Quarterly*, 24, 24-60.
- Bartell, M. (2003). Internationalization of universities: a university culture-based framework. *Higher Education*, 45, 43-70.
- Bastedo, M. N. (2005). The making of an activist governing board. *Review of Higher Education*, 28, 551-570.
- Bastedo, M. N. (2007). Social frameworks for Higher Education policy research. In P. J. Gumbort (Ed.), *The sociology of higher education: Contributions and contexts*

295-316.

- Bastedo, M. N. (2009). Conflicts, commitments, and cliques in the university: Moral seduction as trustee independence. *American Educational Research Journal*, 46, 354-386.
- Bastedo, M. N. (Ed.). (2012). *The Organization of Higher Education. Managing Colleges for a New Era*. The Johns Hopkins University Press.
- Bassett, M. R., & Maldonado-Maldonado, A. (2009). *International Organizations and Higher Education Policy. Thinking globally acting locally?* Retrieved from <http://www.routledge.com/books/details/9780415990431/>
- Bebbington, K., LacLeod, C. T., Ellison, M., & Fay, N. (2017). The sky is falling evidence of a negativity bias in the social transmission of information. *Evolution and Human Behaviour*, 38(1), 92-101.
- Becher, T. (1981). Towards a definition of disciplinary cultures. *Studies in Higher Education*, 6(2).
- Becher, T. (1987). The disciplinary shaping of the profession. In B. R. Clark (Ed.), *The academic profession: National, disciplinary, and institutional settings* (pp. 271–303). Berkeley: University of California Press.
- Becher, T. (1989). *Academic tribes and territories: The intellectual enquiry and cultures of disciplines*. Bury St. Edmunds: SRHE & Open University Press.
- Becher, T. (1994). The significance of disciplinary differences. *Studies in Higher Education*, 19(2), 151-161.
- Beelen, J., & Jones, E. (2015). Redefining Internationalization at home. In A. Curaj, L. Matei, R. Pricopie, J. Salmi, & P. Scott (Eds.), *The European Higher Education Area. Between Critical Reflections and Future Policies* (pp. 59-72). Springer International Publishing. ISBN 978-3-319-18767-9.
- Bennett, M. J. (2001). *Intercultural competence for global leadership*. Retrieved from http://www.idrinstitute.org/allegati/IDRI_t_Pubblicazioni/4/FILE_Documento.p
- Bennett, J. M., & Bennett, M. J. (2004). Developing intercultural sensitivity: An integrative approach to global and domestic diversity. In D. Landis, M. Bennett, M., & J. M. Bennett (Eds.), *Handbook of intercultural training* (3rd Ed. pp.147-165) Thousand Oaks, C A: Sage.
- Bennett, J. R., & Simone E. (2013). "I'd Say it's Kind of Unique in a Way": The

- Development of an Intercultural Student Relationship. *Journal of Studies in International Education*.
- Berardo, K., & Deardorff, D. K. (2012). *Building Cultural Competence: Innovative Activities and model*. Sterling, VA: Stylus.
- Bertelsmann, S., & Fondazione, C. (2006). *Intercultural Competence. The key competence in the 21st century?* Retrieved from <http://www.ngobg.info/bg/documents/49/726bertelsmanninterculturalcompetences.pdf>
- Brandenburg, U., & Federkeirl, G. (2007). *How to measure internationality and internationalization of higher education institutions! Indicators and key figures*. Retrieved from http://www.che.de/downloads/How_to_measure_internationality_AP_92.pdf
- Brandenburg, U., & de Wit, H. (2011a). *The end of internationalization. International Higher Education*. The Boston College Center for International Higher Education. 62, Winter 2011.
- Brandenburg, U. (2011b). *The end of internationalization? Some reflections*. Retrieved from <http://www.eurashe.eu/wp-content/uploads/2011/10/intlztion-Misconceptions.pdf>
- Barao, V. A., Shyamsunder, N., Yuan, J. C., Knoernschild, K. L., Assuncao, W. G., & Sukotjo, C. (2012). Trends in funding, internationalization, and types of study for original articles published in five implant-related journals between 2005 and 2009. *Int J Oral Maxillofac Implants*, 27(1), 69-76.
- Bunk, G. P. (1994). La transmisión de las competencias en la formación y el perfeccionamiento profesionales de la RFA. *European Journal of Vocation Training*, 1, 8-14.
- Blaikie, N. (2000). *Designing Social Research. The Logic of Anticipation*. Polity Press. UK.
- Blaikie, N. (2010). *Designing Social Research*, 2nd, Polity Press, Cambridge, UK.
- Bolívar Botía, A. (2012). *Política Actuales de Mejora y Liderazgo Educativo*. Málaga: Ediciones Aljibe, S.L.
- Bolten, J. (2012). *Interkulturelle Kompetenz. Erfurt: Landeszentrale für Politische Bildung*, Council of Europe.

- Boone, E. J. (1985). *Developing programs in adult education*. Englewood Cliffs, NJ.
- Byram, M. (1989). *Cultural Studies and Foreign Language Education*. Clevedon: Multilingual Matters.
- Byram, M. (1997a). *Teaching and Assessing Intercultural Communicative Competence*. Clevedon: Multilingual Matters.
- Byram, M. (1997b). *Face to Face. Learning Language and Culture through Visits and Exchanges*. London: CILT.
- Byram, M., Nichols, A., & Stevens, D. (2001). *Developing Intercultural Competence in Practice*. Clevedon: Multilingual Matters.
- Byram, M., & Fleming, M. (1998). Perspectivas interculturales en el aprendizaje de idiomas. Enfoques a través del teatro y la etnografía. Cambridge: Cambridge University Press. *Colección Cambridge de Didáctica de Lenguas*, 2001.
- Byun, K., & Kim, M. (2011). Shifting Patterns of the Government's Policies for Internationalization of Korean Higher Education. *Journal of Studies in International Education*, 15(5), 467-486.
doi:10.1177/1028315310375307 <http://jsie.sagepub.com>
- Buendía Eximan, L., González González, D., Pozo Llorente, T., & Sánchez Núñez, C.A. (2004). Identidad y competencias interculturales. *RELIEVE*, 10(2), 135-183. Retrieved from http://www.uv.es/RELIEVE/v10n2/RELIEVEv10n2_1.htm
- Cano García, E. (1998). *Evaluación de la Calidad Educativa*. La Muralla, S.A.
Retrieved from http://terras.edu.ar/biblioteca/12/ECPI_Cano_3_Unidad_1.pdf
- Cano García, E. (2003). *Organización, calidad y diversidad*. Madrid: La Muralla, S.A.
- Cano García, E. (2015). *Evaluación por Competencias en Educación Superior*. Madrid: Acro/Libros-La Muralla, S. L.
- Cantu, M. P. (2013). The effective strategies of internationalization in American Universities. *Journal of International Education and Leadership*, 3(3). ISSN: 2161-7252.
- Cardoso de Oliveira, R. (2004). 'El movimiento de los conceptos en la antropología', In A. Grimson, G. Lins Ribeiro, & P. Semán (comps.) *La antropología brasileña contemporánea: contribuciones para un diálogo latinoamericano*, pp. 35–52. Buenos Aires: Prometeo.
- Chan, S.-J. (2012). "Shifting Patterns of Student Mobility in Asia." *Higher Education*

- Policy*, 25(2), 207–224. doi:10.1057/hep.2012.3
- Chen, G. M., & An, R. (2009). A Chinese model of intercultural Leadership Competence In D. K. Deardorff (Ed.), *The SAGE Handbook of Intercultural Competence* (pp.197-208). Thousand Oaks, CA.: SAGE Publications. Inc. ISBN: 9781412960458.
- Chen, G. M., & Chen, V. (2002). An examination of PRC business negotiations, *Communication Research Reports*, 19, 399-408.
- Chen, G. M., & Starosta, W. (1996). Intercultural communication competence: A synthesis. *Communication yearbook*. 19. 353- 383.
- Choi, J. Y., & Kim, M. R. (2007). A study on internationalization index of higher education CR 2007-85. *Ministry of Education, Science and Technology & Korean Educational Development Institute*. (In Korean).
- Cho, I. (2010). *Internationalization of the Campus. The case of two major Korean Universities*. Lambert Academic Publishing. ISB: 978-3-8383-8702-4.
- Clark, B. R. (1963). Faculty cultures. In T. F. Lunsford (Ed.), *The study of campus cultures* (pp. 39–54). Boulder, CO: Western Interstate Commission for Higher Education.
- Clark, B. R. (1970). *The distinctive college: Antioch, reed & swarthmore*. Chicago: Adline.
- Clark, B. R. (1972). The organizational saga in higher education. *Administrative Science Quarterly*, 17(2), 178–184.
- Coelho, P. G., Granjeiro, J. M., Romanos, G. E., Suzuki, M., Silva, N. R., Cardaropoli, G., Thompson, V. P., & Lemons, J. E. (2009). Basic research methods and current trends of dental implant surfaces. *J Biomed Mater Res B Appl Biomater*, 88(2), 579-96.
- Cohen J., & Manion. P. (1990). *Métodos de investigación educativa*. Madrid: La Muralla.
- Conravley, M. L., & Pederson, P. B. (2005). Leadership in a Diverse and Multicultural Environment. Developing Awareness, Knowledge and Skills. London: SAGE Publications.
- Council of Europe. (2008). The White Paper on Intercultural Dialog. “Leaving Together Like Equals in Dignity.” Retrieved from

- http://www.coe.int/t/dg4/intercultural/source/white%20paper_final_revised_en.pdf
Council of European Dentists. *Manuel of Dental Practice* 2015. Edition 5.1.
- Cook, T. D., & Reichard, Ch. S. (1986). *Métodos cualitativos y cuantitativos en investigación evaluativa*. (1a ed.). Madrid: Ediciones Morata, S. L., ISBN 84-7112-310-X.
- Coppola, D., & Carmina, D. (2009). L'incontro con l'alto nella comunicazione interculturale In D. Coppola, *Parlare, compendersi, interagiere. Glottodidattica e formazione interculturale* (pp. 17-28). Università di Pisa. Ghezzano, Felici Editore.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA.: SAGE Publications.
- Curaj, A., Matei, L., Pricopie, R., Salmi, J., & Scott, P. (Ed.). (2015). *The European Higher Education Area. Between Critical Reflections and Future Policies*. Springer International Publishing. ISBN: 978-3-319-18767-9.
- Dall, E., Scheck, H., Steinberger, M. & Westphal, H. (Eds.). (2013). *Korea and Europe—Meeting through science. Exploring the opportunities of R&D cooperation with KORANET*. 2nd Edition. Retrieved from http://www.koronet.eu/_media/Korea_and_Europe_Meeting_through_Science.pdf
- Davies, J. L. (1995). University Strategies for Internationalization in Different Institutional and Cultural Settings, In P. Bok (Ed.), *Policy and Policy Implementation in the Internationalization of Higher Education*. Amsterdam: European Association for International Education.
- Deal, T., & Kennedy, A. (1982). *Corporate Culture: The Rites and Rituals of Corporate Life*. Reading, PA: Addison-Wesley.
- Deardorff, D. K. (2004). *The Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization at Institutions of Higher Education in the United States*. Unpublished PhD. Thesis. North Carolina State University.
- Deardorff, D. K. (2006). Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization. *Journal of Studies in International Education*, 10(3), 241-66.
- Deardorff, D. K. (2008). Intercultural Competence: A Definition, Model and Implications for Education Abroad. In V. Savicki (Ed.), *Developing*

- Intercultural Competence and Transformation: Theory, Research, and Application in International Education*, (pp. 32-52). Sterling, VA: Stylus.
- Deardorff, D. K. (Ed.). (2009). *The SAGE Handbook of Intercultural Competence*. Thousand Oaks, CA.: SAGE Publications. Inc. ISBN: 9781412960458.
- Deardorff, D. K. (2009). "Implementing Intercultural Competence Assessment." In D. K. Deardorff (Ed.), *The SAGE Handbook of Intercultural Competence*, (pp. 477-491). Thousand Oaks, CA: Sage.
- Deardorff, Darla K. (2010). *A Comparative Analysis and Global Perspective of Regional Studies on Intercultural Competence*. Paris: UNESCO.
- Deardorff, D. K., de Wit, H., Heyl, J. D., & Adams, T. (2012). *The SAGE Handbook of International Higher Education*. SAGE Publications, Inc. ISBN: 9781412999212.
- Deardorff, D. K. (2013). Forum 7 November. Handout. Duke University.
- Declaración de Bolonia (1999). El Espacio Europeo de la Enseñanza Superior. Declaración de los ministros europeos de educación reunidos en Bolonia el 19 de junio de 1999.
- Deem, R., Mok, K., & Lucas, L. (2008). Transforming Higher Education in Whose Image? Exploring the Concept of 'World-Class' University in Europe and Asia. *Higher Education Policy*, 21(1), 83–97. doi:10.1057/palgrave.hep.8300179
- Denison, D. R. (1990). *Corporate culture and organizational effectiveness*. New York: Wiley.
- Denzin, N. (1989). *The Research Act. A Theoretical Introduction to Sociological Methods*. Englewood Cliffs. N. J.
- Denzin, N. (2006). *Sociological Methods: A Sourcebook*. Aldine Transaction. (5th edition).
- Del Corso, M., Vervelle, A., Simonpieri, A., Jimbo, R., Inchingolo, F., Sammartino, G., & Dohan Ehrenfest, D. M. (2012). Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 1: Periodontal and dentoalveolar surgery. *Curr Pharm Biotechnol*, 13(7), 1207-30.
- Del Rincón, D., Arnal, J., Latorre, A., & Sans, A. (1995). *Técnicas de investigación en ciencias sociales*. Madrid: Dykinson.

- Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications (Text with EEA relevance). *Official Journal of the European Union of 2005*, L 255, p. 22.
- de Wit, H. (2002). *Internationalization of Higher Education in the United States of America and Europe, a Historical, Comparative and Conceptual Analysis*. USA: Greenwood Publishing Group. ISBN: 0-313-32075-6, ISSN: 1531-8087.
- de Wit, H. (Ed.). (2009). *Measuring the Success of the Internationalization of Higher Education*. EAIE Occasional Paper 22. European Association for International Education, Amsterdam. Retrieved from <http://researchrepository.murdoch.edu.au/469/2/02Whole.pdf>
- de Wit, H. (Ed.). (2010). *Measuring Success in the Internationalization of Higher Education*. Occasional Paper 22, EAIE, Amsterdam *Modernity*, 10 (3), 539-557.
- de Wit, H. (2011a). *Trends, Issues and Challenges in Internationalization of Higher Education*. Centre for Applied Research on Economics & Management, School of Economics and Management of the Hogeschool van Amsterdam.
- de Wit, H. (2011b). *Misconceptions on internationalization of higher education*. Retrieved from <http://www.eurashe.eu/wp-content/uploads/2011/10/intlztion-Misconceptions.pdf>
- de Wit, H., Hunter, F., Howard, L., & Egron-Polak, E. (2015a). *Internationalisation of Higher Education*. Directorate-General for Internal Policies. Policy Department B: Structural and Cohesion Policies. Culture and Education. European Parliament. Retrieved from [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU\(2015\)540370_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540370/IPOL_STU(2015)540370_EN.pdf)
- de Wit, H., & Leask, B. (2015b). *Internationalization, the Curriculum, and the Disciplines*. *International Higher Education*. N. 83. Retrieved from <https://ejournals.bc.edu/ojs/index.php/ihe/article/viewFile/9079/8186>
- Díaz, V. M. (2004). *Las creencias del profesor universitario en el siglo XXI*. Córdoba: Universidad de Córdoba.
- Dohan Ehrenfest, D. M., Coelho, P. G., Kang, B. S., Sul, Y. T., & Albrektsson, T. (2010). Classification of osseointegrated implant surfaces: materials, chemistry and topography. *Trends Biotechnol*, 28(4), 198-206.

- Dohan Ehrenfest, D. M., Sammartino, G., & Bernard, J. P. (2013a). The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing. *POSEIDO*, 1(1), 1-5.
- Dohan Ehrenfest, D. M., Sammartino, G., & Bernard J. P. (2013b). The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing. *POSEIDO*, 1(1), 1-5.
- Dohan Ehrenfest, D. M., Sammartino, G., Shibli, J. A., Wang, H. L., Zou, D. R., & Bernard, J. P. (2013c). Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO. *POSEIDO*, 1(1), 17-27.
- Dohan Ehrenfest, D. M., Kang, B.S., Sammartino, G., Shibli, J. A, Wang, H. L., Zou, D. R., & Bernard, J. P. (2013d). Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization. *POSEIDO*, 1(1), 7-15.
- Dohan Ehrenfest, D. M., Del Corso, M., Kang B. S., Leclercq, P., Mazor, Z., Horowitz, R. A., Russe, P., Oh, H. K., Zou, D. R., Shibli, J. A., Wang, H. L., Bernard, J. P., & Sammartino, G. (2014a). Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system. *POSEIDO*, 2(1), 7-22.
- Dohan Ehrenfest, D. M., Del Corso, M., Kang, B. S., Leclercq, P., Mazor, Z., Horowitz, R. A., Russe, P., Oh, H. K., Zou, D. R., Shibli, J. A., Wang, H. L., Bernard, J. P., & Sammartino G. (2014b). Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 2: anodized and Titanium Plasma-Sprayed (TPS) surfaces (Group 1, metallurgy modification). *POSEIDO*, 2(1), 23-35.
- Dohan Ehrenfest, D. M., Del Corso, M., Kang, B. S., Leclercq, P., Mazor, Z., Horowitz, R. A., Russe, P., Oh, H. K., Zou, D. R., Shibli, J. A., Wang, H. L., Bernard J. P., & Sammartino, G. (2014c). Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 3: sand-

- blasted/acid-etched (SLA type) and related surfaces (Group 2A, main subtractive process). *POSEIDO*, 2(1), 37-55.
- Dohan Ehrenfest, D. M., Del Corso, M., Kang, B. S., Leclercq, P., Mazor, Z., Horowitz, R. A., Russe, P., Oh, H. K., Zou, D. R., Shibli, J. A., Wang, H. L., Bernard, J. P. & Sammartino, G. (2014d). Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 4: Resorbable Blasting Media (RBM), Dual Acid-Etched (DAE), Subtractive Impregnated Micro/Nanotextured (SIMN) and related surfaces (Group 2B, other subtractive process). *POSEIDO*, 2(1), 57-79.
- Dohan Ehrenfest, D. M., Del Corso, M., Kang, B. S., Leclercq, P., Mazor, Z., Horowitz, R. A., Russe, P., Oh, H. K., Zou, D. R., Shibli, J. A., Wang, H. L., Bernard, J. P., & Sammartino, G. (2014e). Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 5: chemically coated surfaces (Group 3, coating) and implant collar surfaces (Group 4, collar). *POSEIDO*, 2(1), 81-104.
- Dohan Ehrenfest, D. M., Wisniewska, L. M., Shibli, J. A., Mirgazizov, M. Z., Zou, D. R., Pinto, N. R., Bernard, J. P., Sammartino, G., & Wang, H. L. (2014f). Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research. *POSEIDO*, 2(3), 167-77.
- Dohan Ehrenfest, D. M., Wisniewska, L. M., Pinto, N.R., Mirgazizov, M. Z., Zhang, C. Q., & Piattelli, A. (2014g). The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity. *POSEIDO*, 2(4), 225-31.
- Dohan Ehrenfest, D. M., Wisniewska, L. M., Cieslik-Bielecka, A., Wang, H. L., & Fernández-Cruz, M. (2017). Editorial: Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International cooperation, translational research and transdisciplinarity. *Current Pharmaceutical Biotechnology*.
- Domingo Segovia, J. (2013). Un marco crítico de apoyo para ubicar y redireccionar experiencias innovadoras en educación: comprensión y transformación. *Tendencias pedagógicas*. 21. 9-28.

- Retrieved from <https://dialnet.unirioja.es/servlet/articulo?codigo=4182689>
- Engberg, M. E. (2007). Educating the workforce for the 21st Century: A crossdisciplinary analysis of the impact of the undergraduate experience on students' development a pluralistic orientation. *Research in Higher Education*, 48(3), 283-317.
- EACEA. Retrieved from http://eacea.ec.europa.eu/bilateral_cooperation/eu_ici_eep/index_en.php
- Ericson, E. (1946). Ego development and historical change. *Psychoanalytic study of the child*, 2, 359-396.
- Elliott, J. (1991). *Action Research for Educational Change*. Buckingham: Open University Press.
- EURASIAPAC. (2011). EU-ASIA-PACIFIC Cooperation Strategy. Retrieved from <http://eurasiapac-fp7.eu/files/2012/03/EU-Asia-Pacific-Cooperation-Strategy.pdf>
- European Commission, Education and Formation. Retrieved from https://ec.europa.eu/education/policy/international-cooperation/korea_fr
- Eisman, L. B., González González, D., Llorente, P. T., & Sánchez Núñez, C. A. (2004). Identidad y competencias interculturales. *RELIEVE*, 10(2), p. 135-193.
- Etxebarria, F. (1992). Educación intercultural, racismo y europeísmo. In AAVV. *Educación multicultural e intercultural*. Granada: Impredisur.
- Fantini, F. (2005). Risvolti teorice applicativi in contesto multiculturale. Unpublished Dissertation. Facoltà Psicologia Università Cattolica del Sacro Cuore di Milano, Milan, Italy.
- Fantini, F. (2006). Assessment Tools of Intercultural Communicative Competence.
- Fantini, A., & Tirmizi, A. (2006). Exploring and Assessing Intercultural Competences. World Learning Publications. Paper 1. H. Retrieved from p://digitalcollections.sit.edu/worldlearning_publications/1
- Fernández Cruz, M. (2015). *Formación y Desarrollo de la Formación: Un Enfoque Profundo*. ftochon@deepuniversity.net. ISBN: 9781939755100.
- Fetterman, D. M. (1998). *Ethnography: Step-by-Step*. SAGE Publications.
- Friedrichs, F. (1973). *Methoden empirischer Sozialforschung*. Reinbek Rowohlt.
- Fralinger, B., & Olson, V. (2007). *Organizational Culture at the University Level: A*

- Study Using the OCAI Instrument. *Journal of College Teaching & Learning*. 4 (11).
- Flick, U. (2004). Photography as Social Science Data, In E. v. Kardorff & I. Steinke (Ed.), *A Companion to Qualitative Research* (pp. 231-236). London: Sage.
- Flick, U. (2008). *Designing Qualitative research*. London: SAGE.
- Furushiro, N. (2006). *Developing Evaluation Criteria to Assess the Internationalization of Universities*. Final Rapport Grant-in-Aid for Scientific Research, Japan: Osaka University.
- Gacel-Avila, J. (2003). *La internacionalización de la educación superior. Paradigma para la ciudadanía global*. México: Universidad de Guadalajara.
- Gach, D. (2007). Relacje między kultura a realizacja procesów zarządzania wiedza w organizacjach (I and II). *E-mentor* 4(21). *Dwumiesięcznik Szkoły Głównej w Warszawie*. Retrieved from <http://www.e-mentor.edu.pl/artykul/index/numer/21/id/461>
- Glaser, E., Guilherme, M., Garcia, M., & Mugnant, T. (2007). *Compétence interculturelle pour le développement de la mobilité professionnelle*, Strasbourg, Editions du Conseil de l'Europe.
- Glinos, I. A. (2015). Health professional mobility in the European Union: Exploring the equity and efficiency of free movement. *Health Policy*. European Observatory on Health Systems and Policies, Eurostation.
- Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction*. White Plains, NY: Longman.
- Gopal, A. (2011). Internationalization of Higher Education: Preparing Faculty to Teach Cross-culturally. *International Journal of Teaching and Learning in Higher Education*, 23(3), 373-381, ISSN 1812-9129.
- Griffith, R. L., Wolfeld, L., Armon, B. K., Rios, J., & Liu, O. L. (2016). *Assessing Intercultural Competence in Higher Education: Existing Research and Future Directions*. 2 (pp.1-44). doi: 10.1002/ets2.12112
- Grupo de Trabajo de Internacionalización de Universidades (2014). *Estrategia para la internacionalización de la universidades españolas 2015 – 2020*. Gobierno de España. Ministerio de Educación, Cultura y Deporte.
- Gurin, P. (1999). Expert report of Patricia Gurin, Gratz et al., v. Bollinger et al., No.

- 97–75321 (E.D.Mich.; Grutter, et al. v. Bollinger, et al., No. 97–75928 (E.D.Mich.). In *The compelling need for diversity in higher education*, pp.99–234. Ann Arbor: University of Michigan, Office of the Vice President and General Counsel.
- Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2002). Diversity in higher education: Theory and impact in educational outcomes. *Harvard Educational Review*, 72 (3), 330-366.
- Handy, C. B. (1981). *Understanding Organizations*. Harmondsworth, Penguin Books.
- Handy, C. B. (1995). *Gods of Management. The Changing Work of Organizations*. Oxford University Press.
- Handy, C. B. (1986). *Understanding Schools as Organizations*. Penguin Books. Great Britain.
- Harari, M. (1989). *Internationalization of Higher Education: Effecting Institutional Change in the Curriculum and Campus*. Long Beach, CA: Center for International Education, California State University.
- Harrison, R. (1995 [1972]). Understanding Your Organisation's Character. In: *The Collected Papers of Roger Harrison* (pp. 149–164). Jossey-Bass Publishers.
- Harvard Business Review (2011). Retrieved from <https://hbr.org/2011/04/four-reasons-to-keep-a-work-di>
- Heidemann, T. (2000). Organizational culture and intercultural competences. *SPROGFORUM*, 18(6). Retrieved from <http://inet.dpb.dpu.dk/infodok/sprogforum/Espr18/heidemann.html>
- Heidemann, T. (1999). Differences create change - internationalization and school development' (Vejle, Kroghs Forlag, 1999). Unpublished PhD Dissertation.
- Heimer, C., & Vince, R. (1998). Sustainable learning and change in international teams: from imperceptible behavior to rigorous practice. *Leadership & Organization Development Journal*, 19(2), 83-99.
- Hénard, F., Diamond, L. & Roseveare, D. (2012). Approaches to Internationalization and Implications for Strategic Management and Institutional practices. A Guide for Higher Education Institutions. OECD. Better Policies for Better Lives.
- Hernandez, R. S., Fernández, C. C., & Baptista, P. L. (1991). *Metodología de la investigación*. ISBN 968-422-931-3.

- Herrera, S. (2008). Effectiveness of study abroad in developing global competence and global consciousness: essential outcomes for internationalizing the curriculum. Unpublished doctoral dissertation, University, University of Florida, Gainesville.
- Hofstede, G., & Bond, M. H. (1988). 'The Confucius connection: From cultural roots to economic growth', *Organizational dynamics*, 16(4), 5-21.
- Hofstede, G. (2001). *Culture's Consequences: comparing values, behaviors, institutions, and organizations across nations* (2nd Ed.). Thousand Oaks, CA: SAGE Publications.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations. Software of the mind. Intercultural Cooperation and Its Importance for Survival*. London. McGraw-Hill.
- Hohmann, U. (2006). *Quantitative Methods in Education Research*. Retrieved from <http://www.edu.plymouth.ac.uk/resined/Quantitative/quanthme.htm>
- Hormuth, S. E. (1990). *The ecology of the self*. Cambridge: Cambridge University Press.
- Hurtado, S. (2001). Linking diversity and educational purpose: How diversity affects the classroom environment and student development. In G. Orfield (Ed.), *Diversity challenged: Evidence on the impact of affirmative action*, (pp. 187-203). Cambridge, MA: Harvard Education Publishing Group and The Civil Rights Project at Harvard University.
- Hurtado, S., & Ponjuan, L. (2005). Latino educational outcomes and campus climate. *Journal of Hispanic Higher Education. Sage Publications*, 4(3). doi: 10.1177/1538192705276548
- Hymes, D. H. (1984). *Vers la compétence de communication*, Paris: Hatier-Crédif.
- Janesick, V. A. (1994). The dance of qualitative research design. In N. A. Denzin & Y. S. Lincoln (Ed.), *Handbook of Qualitative Research*, (pp. 209-219). Thousand Oaks, Sage.
- Jon, J. E. (2013). Realizing Internationalization at Home in Korean Higher Education: Promoting Domestic Students' Interaction with International Students and Intercultural Competence. *Journal of Studies in International Education*, 17(4), 455-70.

- Jorgensen, H. (1989). *Participant Observation: A Methodology for Human Studies*. London Stage.
- Kaneko, M. (1997). *University and Society: Emerging Issues from East Asian Perspectives*. In *East Asia and the University in the Twenty-first Century. Proceedings of the 1996 International Symposium Commemorating the Fiftieth Anniversary of Seoul National University*. Seoul National University Press, Korea. ISBN 89-7096-329-4.
- Kehm, B., & de Wit, H. (Eds). (2006). *Internationalization in higher education: European responses to the global perspective*. European Association for International Education and the European Association for international Research. Amsterdam, The Nederland's: EAIE/EAIR.
- Keller, G. (1983). *Academic Strategy: the Management Revolution in American Higher Education*. Jon Hopkins University Press.
- Kim, B. (1145). *Samguk-sagi* (Historical Record of the Three Kingdoms). Lee, B. (trans.), Seoul, Korea: Eulyu-moonhwasa.
- Kim, H. (2012). An Analysis of Korean Universities Educational Environment in Terms of Internationalization. *Korean Journal of General Education*, 6(1), 211-240.
- Kim, K. K, Kim, J.-S., & Lee, K.-H. (2008). Examining internationalization index of higher education: Implications for South Korea. *Korean Journal of Comparative Education*, 18(4), 83-111. Australian Council for Educational Research.
- Kim, K.-S. (1997). *University and Society: Emerging Issues from East Asian Perspectives*. In *East Asia and the University in the Twenty-first Century. Proceedings of the 1996 International Symposium Commemorating the Fiftieth Anniversary of Seoul National University*. Seoul National University Press, Korea. (pp. 143-147). ISBN 89-7096-329-4.
- Kim, S. K. (2016). Western faculty 'flight risk' at a Korean university and the complexities of internationalization in Asian higher education. *Comparative Education*. 52(1), 78-90.
- Kim, T. (2005). Internationalisation of Higher Education in South Korea: Reality, Rhetoric, and Disparity in Academic Culture and Identities. *The Australian Journal of Education*, 49 (1), 1-28.
- Kim, T. (2010). *Higher Education in South Korea. Towards ethnocentric*

internationalisation or global commercialisation of higher education? Centre for East Asian Studies (CEAS) VC Initiative, University of Bristol and The Society for Research into Higher Education (SRHE) South West Higher Education Network Seminar.

- Kim, R., & Ahn Y. S. (1995). Higher Education in South and North Korea. In H. A. Yee (Ed.), *Issues in Higher Education. East Asian Higher Education. Traditions and Transformations.* (pp. 102-122). IAU PRESS, Paris.
- Knight, J. (2001). Monitoring the Quality and Progress of Internationalization. *Journal of Studies in International Education*, 5(3), 228-43.
- Knight, J., & de Wit H. (1997). *Internationalization of higher education in Asia Pacific Countries.* Amsterdam: European Association for International Education.
- Knight, J. (2004). Internationalization remolded: definitions, rationales and approaches. *Journal for Studies in International Education*, 8 (1), 5-31.
- Knight, J. (2007). Cross-border higher education: Issues and implications for quality assurance and accreditation. In *Global University Network for Innovation (GUNI). Higher education in the world 2007: Accreditation for quality assurance: What is at stake?* (pp. 134-146), New York: Palgrave Macmillan.
- Knight, J. (2008a). Internationalization of higher education in the 21st century: Concepts, rationales, strategies, Issues. In S. Kaur, M. Sirat, & N. Azman (Eds.), *Globalization and internationalization of higher education in Malaysia*, (pp. 22-50). Penang: Penerbit Universiti Sains Malaysia.
- Knight, J. (2008b). *Higher Education in Turmoil: the Changing World of internationalization.* Rotterdam. Nederland's. Sense Publishers.
- Knight, J. (2010). Internationalisation: Key concepts and Elements. In: Raabe (Ed.), *EUROPEAN UNIVERSITY ASSOCIATION. Internationalisation of European Higher Education.* Berlin.
- Knight, J. (2011). Five myths about Internationalization. In *International Higher Education.* Boston, Center for International Higher Education Boston College, Volume 62, Winter.
- Knight, J. (2015). International Universities: Misunderstandings and Emerging Models? *Journal of International Education*, 19(2), 107-121.
doi: 10.1177/1028315315572899 jsi.sagepub.com

- Klasek, C. B., & Charles, B. (Eds.). (1992). *Bridges to the future: Strategies for internationalizing higher education*. Carbondale, IL: Association of International Education Administrators (AIEA).
- Koehn, P. H., Deardorff, D. K., & Bolognese, K. D. (2011). Enhancing International Research and Development-Project Activity on University Campuses: Insights From U.S. Senior International Officers. *Journal of Studies in International Education*, 15(4), 332-50.
- Koo, Y., & Suh, D. S. (Eds.). (1984). *Korea and the United States: A century of cooperation*. Honolulu: University of Hawaii Press.
- Krueger, J. (1996). Personal beliefs about racial characteristics. *Journal of Personality and Social Psychology*, 71(3), 536-548.
- Kuh, G., & Whitt, E. (1988). The invisible tapestry: Culture in American colleges and universities. *ASHE-ERIC Higher Education Reports 1988*.
- Kuh, G. D. (1993). Cultural perspectives in student affairs work (Ed.), Washington, DC: American College Personnel Association.
- Kuptsch, C. & Pang, P. (2006). *Competing for global talent*. Geneva: International Institute for Labor Studies, ILO.
- Jayakumar, U. M. (2008). Can Higher Education Meet the Needs of an Increasingly Diverse and Global Society? Campus Diversity and Cross-Cultural Workforce Competencies. *Harvard Educational Review*, 78(3).
- Lee, J. J. (2004). Comparing institutional relationships with academic departments: A study of five academic fields. *Research in Higher Education*, 45(6), 603–624.
- Lee, J. J., & Kim, D. (2009). Brain gain or brain circulation? U.S. doctoral recipients returning to South Korea. *Higher Education*, 59, 627-643.
- Lee, J. K. (1998). A Comparative Study of Leadership and Ethical Values in Organizational Culture Reveled in the Thoughts of Confucius and Aristotle: From the Perspective of Educational Administration, *The Journal of Educational Administration*, 16 (2), 76-107.
- Lee, J. K. (2001). Korean Higher Education. A Confucian perspective. *Korean Studies Series*, 22. Edison. Seoul. Jimoondang International.
- Lee, S. H. (2000). Argument of Asiatic Value and the Future of Confucian Culture, in Korean Identity in the New Millennium (5 Section). Seoul, Korea: *The Academy*

of Korean Studies, 12-27.

- Lee, S. H. (2004). Korean Higher Education. History and Future Challenges. In P., Altbach, & T., Umakoshi (Eds.), *Asian Universities. Historical Perspectives and Contemporary Challenges*. The Johns Hopkins University Press.
- Lee, S. H. (2006). *Korean Higher Education: its emergence, development & future challenges*. Seoul: Hakjsa. ISBN 8958913355.
- Lehman, A. (2012). Future European education strategies. European Union. Delegation to China and Mongolia. Retrieved from http://www.emeuropaasia.org/upload/EMECW11/Conf_Lehmann_Future_European_strategies_in_education.pdf
- Lisbon Strategy. (2000). Europe Unit. Retrieved from http://www.europeunit.ac.uk/sites/europe_unit2/europe_2020_strategy/lisbon_strategy_2000_2010_.cfm
- Lusting, M. W., & Koester, J. (2010). *Intercultural competence. Interpersonal communication across cultures*. (7th Ed.), Pearson. ISBN-13: 978-0205211241.
- Lyons, A., & Kashima, Y. (2001). The Reproduction of Culture: Communication Processes Tend to Maintain Cultural Stereotypes. *Social Cognition*, 19(3), 372-294.
- Madera, I. (2005). Un Nuevo Paradigma Educativo: La Internacionalización del Currículum en la Era Global. Retrieved from http://ofdp_rd.tripod.com/encuentro4/apec.html
- Manian, R., & Naidu, S. (2009). India. A Cross- Cultural Overview of Intercultural Competences. In D. Deardorff (Ed.), *The SAGE Handbook of Intercultural Competence*. Thousand Oaks, CA: Sage.
- Manning, K., & Coleman-Boauwirtght, P. (1991). Students affairs initiatives toward a multicultural university. *Journal of College Students Development*, 32, 367-374.
- Marshall, C., & Rossman, B. (1989). *Designing Qualitative Research*. SAGE Publications.
- Masemann, V., Bray, M., & Manzon, M. (Eds.). (2007). *Common Interests, Uncommon Goals: Histories of the World Council of Comparative Education Societies and its Members*. Hong Kong: Comparative Education Research Centre, the University of Hong Kong, and Dordrecht: Springer. 128-138.

- Marradi, A. A., Archenti, N., & Piovani, J. (2007). *Metodologia de las ciencias sociales*. Editores SA. Argentina.
- Mergner, J. (2011). *Internationalization Strategies in South Korean Higher Education. Explanatory Analysis of the Internationalization efforts of four Korean Universities through the Lenses of Resource Dependency and Normative Match*. Master Thesis University of Twente. School of Management and Governance.
- Meyer, S. B., & Lunnay, B. (2013). The application of abductive and retroductive inference for the design and analysis of theory-driven sociological research. *Sociological Research Online*, 18(1).
- Michailova, S., & Huthings, K. (2006). National culture influences on knowledge shearing: a comparison of China and Russia. *Journal of Management Studies*. 43 (3), 383-405. Blackwell Publishing Ltd.
- Min, T. K. (1997). *The identity and prospects of East Asia: a historical approach*. In *East Asia and the University in the Twenty-first Century. Proceedings of the 1996 International Symposium Commemoration the Fiftieth Anniversary of Seoul National University*. Seoul National University Press. Korea. ISMB: 89-7096-329-4.
- Moon, R. J. (2016). Internationalisation without cultural diversity? Higher education in Korea. *Comparative Education*, 52(1), 91-108.
- Moosmuller, A., & Schonhuth, M. (2009). Intercultural competence in German Discourse. In D. K. Deardorff (Ed.), *The SAGE Handbook of Intercultural Competence*. USA.
- Murtiningsih, B. S. E. (2016). The role of cultural competence to overcome intercultural communication conflict: Case of Indonesian and Korean students in Kyungsoong University, South Korea. *Mediterranean Journal of Social Sciences*, 7(6). doi:10.5901/mjss.2016.v7n6p213
- Museus, S. D., & Jayakumar, U. M. (Ed.). (2012). *Creating campus culture. Fostering Success among Racially Diverse Student Populations*. Routledge. Taylor & Francis Group. ISBN: 978-0-415-88819-6.
- Nieto, S. (2004). *Affirming diversity: The socio-political context of multicultural education*. Boston, Massachusetts: Pearson.
- Nilsson, B. (2003). *Internationalisation at Home From a Swedish Perspective: The Case*

- of Malmö. *Journal of Studies in International Education*, 7(1), pp. 27-40.
- O' Donoghue, T., & Punch K. (2003). *Qualitative Educational Research in Action: Doing and Reflecting*. Canada and USA: RoutledgeFalmer.
- OECD. (2014). *OECD Indicators, Education at Glance 2014*.
- OECD. (2016). *Global competency for an inclusive world. Better policies for better lives*.
- Olmedo Moreno, E. M., Berrocal de Luna, E., Olmos Gómez, M. C., & Expósito López J. (2014). Structural Equations Model (SEM) of a questionnaire on the evaluation of intercultural secondary education classrooms. *Suma Psicológica*, 21(2), 107-115.
- Olson, C. L., & Kroeger, K. R. (2001). Global Competency and Intercultural Sensitivity. *Journal of Studies in International Education*, 5(2), 116-37.
- Orfield, G. (Ed.). (2001). *Diversity challenged: Evidence on the impact of affirmative action*. Cambridge, MA: *Harvard Education Publishing Group* and *The Civil Rights Project* at Harvard University.
- Otrí, J. R. (2004). Estudio de competencia intercultural a partir de análisis sociocultural de interacciones orales con arabohablantes. *TONOS*. Revista Electronica de Estudios Filosoficos. Retrieved from <http://www.um.es/tonosdigital/znum8/estudios/16-publicroberto.htm>
- Ouchi, W. G., & Jaeger, A. M. (1978). Type Z organization: Stability in the midst of mobility. *Academy of Management Review*, 3(2), 305–314.
- Ouchi, W. G. (1981). *Theory Z*. Reading, MA: Addison-Wesley.
- Ozmon, H., & Craver, S. (1990). *Philosophical foundations of Education*. New York, NY: Macmillan Publishing Company.
- Panter, A. T., & Sterba, S. K. (2011). *Handbook of ethic in quantitative methodology*. Taylor and Francis Group, LLC, New York, London.
- Park, J. Y. (2002). *Diagnosis of public education and measures to provide quality education*. Retrieved from <http://www.moe.go.kr/en/index.html>
- Paige, R. M., & Goode, M. L. (2009). Intercultural competence in international education administration-cultural mentoring: International education professional and the development of intercultural competence. In D. K.

- Deardorff (Ed.), *The SAGE Handbook of International Competence* (pp.333-349). Thousand Oaks, CA: SAGE.
- Park, S. Y. (1996). Confucian Influences on Education. In J. W. Kim (Ed.), *Koreana: Korean Cultural Heritage, 2, Thought and Religion*, Seoul, Korea: Samsung Moonhwa Printing Co.
- Piaget, J. (1971). The theory of stages in in cognitive development. In D. R. Green, M. P. Ford, & G. B. Flamer (Eds.), *Measurement and Piaget* (pp. 1-111). New York: McGraw-Hill.
- Peterson, M. W., Cameron, K. S., Jones, P., Mets, L. A., & Ettington, D. (1986). *The organizational context for teaching and learning: A review of the research literature*. Ann Arbor, MI: Cultural Perspectives of Academia 42. National Center for Research to Improve Postsecondary Teaching and Learning, University of Michigan.
- Pettigrew, A. M. (1979). *On studying organizational culture*. *Administrative Science Quarterly*, 24, 570–581.
- POSEIDO, The Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization. Retrieved from <http://www.poseido.net>
- Pretceille, M. A. (2011). La pedagogie interculturelle: entre multiculturalisme et universalisme. *L I N G V A R V M A R E N A*, 2, 91 – 101.
- Pring, R. (1999). “Reflecting on the reflective practitioners.” In A. Chen (Ed.), *Reflective spin: case studies of teachers in higher education transforming action*, (p.10). New Jersey: World Scientific Publishing Co.
- RAABE. (2010). *Internationalization of European Higher Education*. An EUA/ACA Handbook.
- Ragin, Ch. C. (1994). *Constructing Social Research. The Unity and Diversity Method*. Pine Forge Press.
- Rapaport, A. (1982). *The meaning of the built environment*. Beverly Hills, CA: Sage Publications.
- Redden, E. (2013). *The Internationalization Agenda*. Retrieved from <http://www.insidehighered.com/news/2013/02/21/international-higher-education-administrators-discuss-future-field>
- Rhee, B.-S. (2006). A holistic approach to unravel the current state of

- internationalization of higher education in Korea. *Ewha Journal of Educational Research*, 37, 279-298.
- Riesman, D., & Jencks, C. (1962). The viability of the American college. In N. Sanford (Ed.), *The American college: A psychological and social interpretation of higher learning* (pp. 74–192). New York: John Wiley.
- Sadlak, J., & Liu N. C (Eds.). (2007). *Universities in the World: What for? The World-Class University and Ranking: Aiming beyond status*. Bucarest: UNESCOPEPES/Shanghai Jiao Tong University, 31-33.
- Sammartino, G., Del Corso, M., Wisniewska, L. M., Bielecki, T., Andia, I., Pinto, N. R., Zhang, C.Q., Zou, D. R., & Dohan Ehrenfest, D. M. (2014). The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine. *POSEIDO*, 2(2), 105-15.
- Santos, F. M., & Eisenhardt, K. M. (2004). Multiple Case Study. In: M. S. Lewis-Beck, A. Bryman, & F. T. Liao (Eds.), *The SAGE Encyclopedia of Social Science Research Methods*.
- Sanz, N., & Bergan, S. (2006). *The heritage of European universities*. ISBN:13:978-92-871-6120-8. Council of Europe.
- Schein, E. H. (1983). *The role of the founder in creating organizational culture*. *Organizational Dynamics* (summer), 12, 13–28.
- Schein, E. H. (1984). Coming to a new awareness of organizational culture. *Sloan Management Review*, 25(2), 3-16.
- Schein, E. H. (1985). *Organizational culture and leadership* (1st Ed.). San Francisco: Jossey-Bass.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45, 109-119.
- Schein, E. H. (1991). What is culture? In P. Frost, L. Moore, M. Louis, C. Lundberg, & J. Martin (Eds.), *Reframing organizational culture* (pp. 243–253). Newbury Park, CA: Sage.
- Schein, E. H. (1992). *Organizational Culture and Leadership*, (2nd Ed.), John Wiley & Sons, Inc.
- Schein, E. H. (2004). *Organizational Culture and Leadership*, (3rd Ed.), Jossey-Bass.
- Schein, E. H. (1999). *The Corporate Culture Survival Guide: Sense and Nonsense*

- About Culture*. San Francisco: Jossey-Bass.
- Simonpieri, A., Del Corso, M., Vervelle, A., Jimbo, R., Inchingolo, F., Sammartino, G., & Dohan Ehrenfest, D. M. (2012). Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 2: Bone graft, implant and reconstructive surgery. *Curr Pharm Biotechnol*, 13(7), 1231-56.
- Sinicrope, C., Norris, J., & Watanabe, Y. (2007). Understanding and assessing intercultural competence: a summary of theory, research, and practice (technical report for the foreign language program evaluation project). *Second Language Studies*, 26 (1), pp. 1-58.
- Skutnabb-Kangas, T. (2000). Linguistic Genocide or Linguistic Human Rights in the Education of Sign Language Users and other Linguistic Minorities. *Excerpt from a plenary paper*. WFD-News (World Federation of the Deaf), 13(1), 17-19.
- Soriano, E. (2004). La construcción de la identidad cultural en contextos multiculturales. *Ponencia presentada en el XIII Congreso nacional y II Iberoamericano de Pedagogía*. Valencia. Septiembre.
- Sporn, B. (1996). Managing university culture: an analysis of the relationship between institutional culture and management approaches. *Higher Education*, 32, 41-61. doi:10.1007/BF00139217
- Spradley, J. P. (1980). *Participant Observation*. Holy, Rinehart and Winston. ISBN-10: 0030445019
- Strange, C. C., & Banning, J. H. (2001). *Educating by design: Creating campus learning environments that work*. San Francisco: Jossey-Bass.
- Sue, D. W. (2001). Multidimensional faces of cultural competence. *Counseling Psychologist*, 29, 790-821.
- Śleziak, T. (2013). The Role of Confucianism in Contemporary South Korean Society. *Rocznik Orientalistyczny*, T. LXVI, Z. 1, 27-36.
- Soto Molina, J. E., García Burgos, A., & Gaercía Burgos, D. A. (2015). The intercultural competence and intercultural awareness. *International Journal of English and Literature*, 5(5), 103-112.
- Taylor, S., & Bogdan, R. (1992). *Introducción a los métodos cualitativos de investigación. La búsqueda de significados*. Barcelona, Buenos Aires, México:

Paidos.

The Copenhagen Declaration. (2002). Declaration of the European Ministers of Vocational Education and Training, and the European Commission, convened in Copenhagen on 29 and 30 November 2002, on enhanced European cooperation in vocational education and training. “*The Copenhagen Declaration*”.

Retrieved from

http://ec.europa.eu/dgs/education_culture/repository/education/policy/vocational-policy/doc/copenhagen-declaration_en.pdf

The Higher Education Academy (2014). *Intercultural Competencies*. Retrieved from https://www.heacademy.ac.uk/system/files/resources/intercultural_competencies.pdf

Teichler, U. (2004). The changing debate on internationalisation of higher education. *Higher Education*, 48(1), 5–26.

doi:10.1023/B:HIGH.0000033771.69078.41

Teichler, M. (2009). Internationalization of higher education: European experiences. *Asia-Pacific Educ. Rev.*, 10, 93-106. doi: 10.1007/s12564-009-9002-7

Tejada, F. (2009). *Profesionalización docente en el escenario de la Europa de 2010. Una mirada desde la formación*.

Retrieved from http://www.revistaeducacion.mec.es/re349/re349_22.pdf

Tellis, W. M. (1997). *Application of a Case Study Methodology e Qualitative Report*, 3(3), 1-19. Retrieved from [hp://nsuworks.nova.edu/tqr/vol3/iss3/1](http://nsuworks.nova.edu/tqr/vol3/iss3/1)

Tierney, W. G. (1988). Organizational culture in higher education: defining the essentials. *Journal of Higher Education*, 95, 2-21.

Trent, J. (2012). The internationalization of tertiary education in Asia: Language, identity and conflict. *Journal of research in International Education*. Retrieved from <http://jri.sagepub.com/content/11/1/50.full.pdf+html>

UNESCO. (2013). *Intercultural Competences. Conceptual and Operational Framework*. BSP-2012/WS/9.

University of Oxford. (2015). *International Trends in Higher Education*.

Retrieved from

<https://www.ox.ac.uk/sites/files/oxford/International%20Trends%20in%20Higher%20ducation%202015.pdf>

- University World News. (2014). The shifting stands of international students mobility, 334, 12 September 2014. Retrieved from www.universityworldnews.com
- Vaiá, (2003). La comunicación intercultural en E. S. O. Test de competencia comunicativa intercultural. In L. Buendía et. al. *Actas del XI Congreso nacional de Modelos de Investigacion Educativa: Investigacion y Sociedad*. Granada: GEU.
- Van Maanen, J., & Barley, S. (1984). Occupational communities: Culture and control in organizations. In B. Staw, & L. Cummings (Eds.), *Research in organizational behavior*, 6, 287-365.
- Van Maanen, J., & Barley, S. (1985). Cultural organization: Fragments of a theory. In Frost, P., Moore, L., Louis, M. R., Lundberg, C., & Martin, J. (Eds.), *Organizational culture* (pp. 31-53). Beverly Hills, California: Sage Publications.
- Vince, R. (1996). *Managing change: Reflections on Equality and Management Learning*. The Policy Press. Bristol.
- Vince, R., & Martin, L. (1993). Inside action learning: the psychology and politics of the action learning model, *Management Education and Development*, 24(3), 205-215.
- Weick, K. E. (1985). The significance of corporate culture. In P. Frost, L. Moore, M. Reis Louis, C. Lundberg, & J. Martin (Eds.), *Organizational culture* (pp. 381–389). Beverly Hills, California: Sage Publications.
- White, G. P., & Godbey, G. C. (2006). What does it mean to be globally competent? *Journal of Studies in Intercultural Education*, 10, 267-285.
- White Paper. (2010). *White Paper Strategies to Strengthen Collaboration in Higher Education between Europe and South East Asia October 2010*. Retrieved from www.aunsec.org/site/main/web/upload/ACCESSWhitePaper2010.pdf
- Wiśniewska, L. (2003). *Bushido Ethos and its impact on the development of Japanese Nation*. Department of Philosophy of Culture. University Maria Curie Skłodowska. Lublin. Poland. Unpublished bachelor Thesis.
- Wiśniewska, L. (2006). *Muslim immigration in West of Europe after World War Second: case of Germany, France, Spain and England*. Department of Contemporary History. Maria Curie Skłodowska University. Lublin. Poland.

Unpublished Master Thesis.

- Wisniewska, L. M. (2010). *Memoria Final de Practicas Profesinales. La Oficina de Proyectos Internacionales de la Universidad de Granada*. Retrieved from <https://latlablidia.files.wordpress.com/2012/07/lidia-wisniewska-informe-de-practicum-de-la-ofpi-2010-doc6.pdf>
- Wisniewska, L. M. (2011). *Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals*. Høgskolen i Akershus, Master Thesis Erasmus Mundus. Retrieved from <https://oda.hioa.no/en/research-on-professional-practice-internationalization-of-university-campuses-and-its-formative-impact-on-the-development-of-intercultural-competences-among-professionals>
- Wisniewska, L. M., Jo, Y. W., Kim, S. Y., Amr, S., Khoury, G., Galindo-Moreno, P., Sánchez-Fernández, E., Carrillo-Badillo, A. M., Renta-Davids, A. I., Marenzi, G., Sammartino, G., Wang, H. L., Dohan Ehrenfest, D. M., & Fernández-Cruz, M. (2014a). The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. *POSEIDO*, 2(3), 209-23.
- Wisniewska, L. M., Jo, Y. W., Kim, S. Y., Amr, S., Khoury, G., Galindo-Moreno, P., Sánchez-Fernández, E., Carrillo-Badillo, A. M., Renta-Davids, A. I., Marenzi, G., Sammartino, G., Wang, H. L., Dohan Ehrenfest, D. M., & Fernández-Cruz, M. (2014b). The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score. *POSEIDO*, 2(3), 179-94.
- Wisniewska, L. M., Jo, Y. W., Kim, S. Y., Amr, S., Khoury, G., Galindo-Moreno, P., Sánchez-Fernández, E., Carrillo-Badillo, A. M., Renta-Davids, A. I., Marenzi, G., Sammartino, G., Wang, H. L., Dohan Ehrenfest, D. M., & Fernández-Cruz, M. (2014c). The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and

- research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. *POSEIDO*, 2(3), 195-207.
- Wisniewska, L. M. (2014). *Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne (Paris IV) in Paris*. Research project prepared for the Service des Relations Internationales of the Université Paris-Sorbonne (Paris IV). Paris 2014/2015. Unpublished.
- Wisniewska, L. M., Dohan Ehrenfest, D. M., Galindo-Moreno, P., Domingo Segovia, J., Inchingolo, F., Wang, H. L., & Fernández-Cruz, M. (2017). Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective. *Current Pharmaceutical Biotechnology*.
- Wood Johnson Foundation (2011). *Qualitative Research Guidelines Project*. Retrieved from <http://www.qualres.org/HomeInfo-3631.html>
- Wursten H. (2016). Mental images. *The influence of culture on economic policy*. Retrieved from https://www.researchgate.net/publication/239595764_Mental_images_The_influence_of_culture_on_economic_policy
- Wursten, H., & Jacobs, C. (2013). *The Impact of Culture on Education*. Retrieved from http://geerthofstede.com/tl_files/images/site/social/Culture%20and%20education.pdf
- Wursten, H., Lanzer, F., & Fadrhonc, T. (2010). *Managing people across cultures*. Itim International.
- Wursten, H. (2008). *Culture and Change Management*. Itim International.
- Yang, R. (2002). University internationalization: its meanings, rationales and implications. *Intercultural Education*, 13(1), 2002.
- Yeager, K., Culter, D., Svendsen, D., & Sills, G. M. (2013). *Modern Community Mental Health. An Interdisciplinary Approach*. Oxford University Press.
- Yee H. A. (1995). *Issues in Higher Education. East Asian Higher Education. Traditions and Transformations*. IAU PRESS, Paris.
- Yin, R. K. (1996). *Case study research: design and methods*. Sage Publications.

London.

Yin, R. (1989). *Case study research: Design and methods* (Rev. ed.). Newbury Park, CA: Sage Publishing.

Yin, R. K. (2003). *Case Study Research: Design and Methods*, (3rd ed.). Sage, Thousand Oaks, CA.

Zha, Q. (2003). Internationalization of Higher Education: towards a conceptual framework. *Policy Futures in education*, 1(2). Retrieved from http://www.ses.unam.mx/docencia/2007II/Lecturas/Mod2_Qiang.pdf

Zhang, Y. (2012). *Pour une approche interculturelle de l'enseignement du français comme spécialité en milieu universitaire chinois*. Linguistique. Université du Maine, 2012. Français. Retrieved from <https://halshs.archives-ouvertes.fr/tel-00793142/document>

Annexes

Index of Content of the Annexes

This Annex gathers some main documents prepared by the Author during this Thesis. These documents are presented in their original version with original page numbering, following this order: 11 questionnaires used for this field study in 5 countries, 8 international scientific articles, and the official report prepared for the Presidency of Paris-Sorbonne University Paris IV (Paris, France).

Annex 1.

Questionnaires used for the field study

1.1. Questionnaire for students about the impact of internationalization efforts at the Chonnam National University, South Korea

1.2. Questionnaire for faculty about the impact of internationalization efforts at the Chonnam National University, South Korea

1.3. Questionnaire for students (dental) about the impact of internationalization efforts at the University of Granada, Spain

1.4. Questionnaire for faculty (dental) about the impact of internationalization efforts at the University of Granada, Spain

1.5. Questionnaire for students about the impact of internationalization efforts at the University Paris-Sorbonne, France

1.6. Questionnaire for students (dental) about the impact of internationalization efforts at the University of Paris, France

1.7. Questionnaire for faculty (dental) about the impact of internationalization efforts at the University of Paris, France

1.8. Questionnaire for students (dental) about the impact of internationalization efforts at the University Federico II of Naples, Italy

1.9. Questionnaire for faculty (dental) about the impact of internationalization efforts at the University Federico II of Naples, Italy

1.10. Questionnaire for students (dental) about the impact of internationalization efforts at the University of Michigan, USA

1.11. Questionnaire for faculty (dental) about the impact of internationalization efforts at the University of Michigan, USA

Annex 2.

Eight international scientific articles related to this Thesis

2.1. Wisniewska LM, Dohan Ehrenfest DM, Galindo-Moreno P, Domingo Segovia J, Inchingolo F, Wang HL, and Fernández-Cruz M. *Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective.* Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802.**

2.2. Dohan Ehrenfest DM, Wisniewska LM, Cieslik-Bielecka A, Wang HL, and Fernández-Cruz M. *Editorial: Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International cooperation, translational research and transdisciplinarity.* Current Pharmaceutical Biotechnology, 2017; **Impact factor: 1.802.**

2.3. Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014;2(3):179-94.

2.4. Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014;2(3):195-207.

2.5. Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* POSEIDO, 2014; 2(3):209-23.

2.6. Dohan Ehrenfest DM, Wisniewska LM, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. *Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research.* POSEIDO. 2014;2(3):167-77.

2.7. Sammartino G, Del Corso M, Wisniewska LM, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine.* POSEIDO. 2014;2(2):105-15.

2.8. Dohan Ehrenfest DM, Wisniewska LM, Pinto NR, Mirgazizov MZ, Zhang CQ, Piattelli A. *The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity.* POSEIDO. 2014;2(4):225-31.

Annex 3.

Official report prepared for the Presidency of the Paris-Sorbonne University (Paris, France)

Wisniewska LM, *Role of the Service des Relations Internationales in the implementation of the international policy of the Université Paris-Sorbonne (Paris IV) in Paris.* Research project prepared for the *Service des Relations Internationales* of the Université Paris-Sorbonne (Paris IV). Paris 2014/2015. Updated in 2016.

Annex 1

Questionnaires used for the field study

한국의 대학에서 제공하는 국제 교류 활동이 문화적 다양성에 대한 이해를 형성하는데 미치는 영향

인적사항	
성별: 여성 <input type="checkbox"/> 남성 <input type="checkbox"/>	
나이: 20 대 미만 <input type="checkbox"/> 20-25 <input type="checkbox"/> 26-30 <input type="checkbox"/> 30-40 <input type="checkbox"/> 40-50 <input type="checkbox"/> 50 대 이상 <input type="checkbox"/>	
직업: 연구원 <input type="checkbox"/> 학부생 <input type="checkbox"/> 대학원생 <input type="checkbox"/> 교직원 <input type="checkbox"/> 기타(구체적으로) _____	
1. 전남대학교에서 얼마나 공부/근무 하셨습니까? ____ 개월 혹은 ____ 년	
2. 전남대학교에서 주관하는 국제 행사에 참여한 적이 있으십니까? 예 / 아니오 “네”라고 답하셨다면, 어떤 행사였습니까? a) 공식적 행사: 국제 회의 <input type="checkbox"/> 국제 워크샵 <input type="checkbox"/> 기타 _____ b) 교외 행사: 외국인들과의 모임 <input type="checkbox"/> 세계 음식 <input type="checkbox"/> 기타 _____	
3. 교환학생 프로그램으로 외국에 나가보신 적이 있습니까? 예 / 아니오 “네”라고 답하셨다면, 기간은? _____ 국가는? _____ 어디에서 주관한 프로그램이었습니까? _____	
4. 외국에서 공부/근무 하고 싶으십니까? 예 / 아니오 “예”/“아니오”를 선택하신 이유는? _____	
5. 전남대학교에서 만난 외국인들은 “수업에서 만났다” / “다른 활동에서 만났다” 어느 국가 사람들이었습니까? _____	
6. 외국인들과 있는 것이 불편하다. 예 / 아니오	
7. 외국인들과의 관계에서 가장 어려운 점은 _____ (이)다.	

이 설문지는 전남대학교에서 주관하는 국제 교류 활동이 여러분에게 다음과 같은 항목에 어떤 영향을 주었는지 알아보기 위한 것입니다. 해당 칸에 체크해 주시기 바랍니다.

1 - 매우 동의하지 않음 2 - 동의하지 않음 3 - 동의 4 - 매우 동의

전남대학교의 (공식/비 공식)활동이 다음에 영향을 주었음	1	2	3	4
---------------------------------	---	---	---	---

1. 타인(특히 외국인)의 시각을 이해하는데 도움을 주었다.				
2. 문화적 자기 인식(자신의 정체성과 세계관이 한국 문화의 영향을 받았음을 이해함)에 도움을 주었다.				
3. 문화적 자기 평가 능력을 향상시켜주었다.				
4. 문화적으로 다른, 새로운 환경에 적응하는 능력을 길러주었다.				
5. 다른 문화권 사람들에 대한 관심이 생겼다				
6. 문화간 학습에 흥미가 생겼다.				
7. 다른 문화권 사람들에게 귀를 기울일 수 있게 되었다.				
8. 다른 문화권 사람들을 주의 깊게 관찰할 수 있게 되었다.				
9. 다른 문화권 사람들이 있는 환경에서 (듣고 관찰하며) 정보를 수집할 수 있게 되었다.				
10. 문화간 의사소통과 학습 양식의 차이에 적응하는 능력이 향상되었다.				
11. 다른 문화권 사람들과의 소통이 유연해졌다.				
12. 다른 문화적 맥락으로부터의 정보를 분석, 이해, 연관 짓는 능력이 향상되었다.				
13. 다른 문화와 관련된 정보를 분석하는 능력이 향상되었다.				
14. 다른 문화와 관련된 정보를 이해하는 능력이 향상되었다.				
15. 다른 문화와 관련된 정보를 연관 짓는 능력이 향상되었다.				
16. 다양한 문화권 사람들이 속한 group 의 일원으로서, 서로 다른 표현 방식에 관대한 태도를 갖게 되었다.				
17. 나의 문화를 더 잘 이해하게 되었다.				
18. 상대방의 문화를 더 잘 이해하게 되었다.				
19. 다른 문화를 존중하게 되었다.				
20. 다른 문화권 사람들의 감정, 생각 등에 문화적으로 공감할 수 있게 되었다.				
21. 문화가 각 나라의 사회적, 역사적 맥락에 미치는 영향을 이해할 수 있게 되었다.				
22. 다양한 문화적 관점으로 유연하게 문제를 바라볼 수 있게 되었다.				
23. 사회언어적 능력(문화나 사회에 대한 지식이나 경험에 뒷받침 되는 것으로, 화제와 상황, 인간관계 등에 따라 적절한 말을 사용하는 능력)이 향상되었다.				
24. 문화 다양성의 가치를 잘 이해하게 되었다.				
25. 다른 문화에 대한 편견 및 선입견이 없어졌다.				
26. 문화적 다양성을 발견하고 호기심을 갖게 해주었다.				

27. 자신이 속한 문화 공동체에 대한 관점이 바뀌었다.				
28. 외국인과의 상호작용을 통해 학습하는 능력이 향상되었다.				
29. 외국인 동료의 문화와 전통을 이해하는데 도움을 주었다.				
30. 간문화능력이 내가 하는 일에 필요하다.				

설문에 응해주셔서 감사합니다.

긍정적인 영향 ____ 부정적인 영향 ____.

11. 외국인들과 있는 것이 불편하다. 예 ____ 아니오 ____

12. 외국인들과의 관계에서 가장 어려운 점은 _____ (이)다.

13. 내 생각에 상호 문화적 능력은 _____ (이)다.

이 설문지는 전남대학교에서 주관하는 국제 교류 활동이 여러분에게 다음과 같은 항목에 어떤 영향을 주었는지 알아보기 위한 것입니다. 해당 칸에 체크해 주시기 바랍니다.

1 - 매우 동의하지 않음 2 - 동의하지 않음 3 - 동의 4 - 매우 동의

국제 연구 및 교육 사업 참여	1	2	3	4
1. 타인(특히 외국인)의 시각을 이해하는데 도움을 주었다.				
2. 문화적 자기 인식(자신의 정체성과 세계관이 한국 문화의 영향을 받았음을 이해함)에 도움을 주었다.				
3. 문화적 자기 평가 능력을 향상시켜주었다.				
4. 문화적으로 다른, 새로운 환경에 적응하는 능력을 길러주었다.				
5. 다른 문화권 사람들에 대한 관심이 생겼다				
6. 문화간 학습에 흥미가 생겼다.				
7. 다른 문화권 사람들에게 귀를 기울일 수 있게 되었다.				
8. 다른 문화권 사람들을 주의 깊게 관찰할 수 있게 되었다.				
9. 다른 문화권 사람들이 있는 환경에서 (듣고 관찰하며) 정보를 수집할 수 있게 되었다.				
10. 문화간 의사소통과 학습 양식의 차이에 적응하는 능력이 향상되었다.				
11. 다른 문화권 사람들과의 소통이 유연해졌다.				
12. 다른 문화적 맥락으로부터의 정보를 분석, 이해, 연관 짓는 능력이 향상되었다.				
13. 다른 문화와 관련된 정보를 분석하는 능력이 향상되었다.				
14. 다른 문화와 관련된 정보를 이해하는 능력이 향상되었다.				
15. 다른 문화와 관련된 정보를 연관 짓는 능력이 향상되었다.				
16. 다양한 문화권 사람들이 속한 group 의 일원으로서, 서로 다른 표현 방식에 관대한 태도를 갖게 되었다.				
17. 나의 문화를 더 잘 이해하게 되었다.				

18. 상대방의 문화를 더 잘 이해하게 되었다.				
19. 다른 문화를 존중하게 되었다.				
20. 다른 문화권 사람들의 감정, 생각 등에 문화적으로 공감할 수 있게 되었다.				
21. 문화가 각 나라의 사회적, 역사적 맥락에 미치는 영향을 이해할 수 있게 되었다.				
22. 다양한 문화적 관점으로 유연하게 문제를 바라볼 수 있게 되었다.				
23. 사회언어적 능력(문화나 사회에 대한 지식이나 경험에 뒷받침 되는 것으로, 화제와 상황, 인간관계 등에 따라 적절한 말을 사용하는 능력)이 향상되었다.				
24. 문화 다양성의 가치를 잘 이해하게 되었다.				
25. 다른 문화에 대한 편견 및 선입견이 없어졌다.				
26. 문화적 다양성을 발견하고 호기심을 갖게 해주었다.				
27. 자신이 속한 문화 공동체에 대한 관점이 바뀌었다.				
28. 외국인과의 상호작용을 통해 학습하는 능력이 향상되었다.				
29. 외국인 동료의 문화와 전통을 이해하는데 도움을 주었다.				
30. 간문화능력이 내가 하는 일에 필요하다.				

설문에 응해주셔서 감사합니다.

CUESTIONARIO SOBRE EL IMPACTO DE INTERNACIONALIZACIÓN DE LA UNIVERSIDAD DE GRANADA EN LA FORMACIÓN PARA LA DIVERSIDAD CULTURAL (EDUCACIÓN DENTAL)

Este cuestionario tiene como objetivo determinar en que medida el programa propuesto por la Universidad de Granada (UGR) – a través de su **currículum** (cursos y actividades obligatorias) y a través de **actividades extracurriculares** (todas las actividades no obligatorias relacionadas con la vida del campus, tales como conferencias, deportes, actividades propuestas por asociación de estudiantes o reuniones informales o personales con colegas extranjeros, etc.) – le ha ayudado a desarrollar las cuestiones que a continuación se contemplan.

DATOS DE IDENTIFICACIÓN	
Sexo: <input type="checkbox"/> Mujer <input type="checkbox"/> Hombre	
Edad: _____	
Situación profesional:	
- Investigador _____	- Estudiante de grado _____ - Estudiante de postgrado _____
- Técnico/ administrativo _____	- Otros (especificar) _____
1. ¿Cuanto tiempo lleva vinculado con la UGR? ___ meses, ___ años	
2. ¿Alguna vez ha participado en eventos internacionales propuestos por la UGR? SI ___ NO ___	
Si su respuesta es afirmativa, por favor indique el tipo de evento en el que usted participó:	
a) Obligatorio: conferencias internacionales _____, talleres internacionales _____, otros _____	
b) Extracurricular: reuniones internacionales _____, comida internacional _____, otros? (especificar) _____	
3. ¿Alguna vez ha estado en el extranjero a través de un intercambio universitario? SI ___, NO ___ ¿Quién organizó su estancia en el extranjero? _____	
Si su respuesta es afirmativa - ¿Cuánto tiempo duro su estancia? _____ ¿Dónde? _____	
4. Le gustaría ir al extranjero para estudiar o trabajar? SI ___ ¿Por qué? _____	
_____ ¿Dónde? _____	
NO ___ ¿Por qué? _____	
5. Los extranjeros que ha encontrado en el campus de la UGR (en clase? ___ o en otras actividades? ___) eran de _____	
6. La presencia de colegas extranjeros en el aula / laboratorio ha impactado el valor de la formación? _____ SI, ___ NO. Creo que fue un impacto positivo _____ Creo que fue un impacto negativo _____.	
7. ¿Cree que el programa de estudio de Odontología le ha dado una posibilidad de desarrollar las capacidades / habilidades que le ayudan a desempeñar su profesión en un entorno culturalmente diverso? _____ SI, ___ NO.	
8. ¿Las actividades extracurriculares que ofrece la UGR le han dado una posibilidad de desarrollar las capacidades/ habilidades para ejercer su profesión en un entorno culturalmente diverso? _____ SI ___ NO.	
9. "Me siento incómodo/a al estar con colegas extranjeros". _____ Verdadero _____ Falso.	
10. En mi caso, la mayor dificultad en la relación con colegas extranjeros puede ser causada por _____	

Marque con una "X" la opción que mejor recoge su posición, de acuerdo con la siguiente escala:

1 = Totalmente en desacuerdo 2 = En desacuerdo 3 = De acuerdo 4 = Totalmente de acuerdo

	1	2	3	4
1. El programa propuesto por la UGR (actividades curriculares y extracurriculares) me ha permitido entender mejor otras perspectivas acerca del mundo.				
2. Me ha ayudado a tomar conciencia de la dimensión cultural de mí mismo/a (para entender cómo mi cultura ha influenciado mi identidad y mi visión del mundo).				
3. Ha mejorado mi capacidad de autovaloración cultural.				
4. El programa propuesto por la UGR (actividades curriculares y extracurriculares) ha mejorado mi capacidad de adaptación a nuevos ambientes culturales.				
5. Ha despertado mi interés hacia las personas de otras culturas.				
6. Ha aumentado mi interés en el aprendizaje intercultural (por ejemplo, aprender a				

negociar con personas de diferentes culturas).				
7. Ha mejorado mi capacidad de escucha hacia personas de otras culturas.				
8. Ha mejorado mi capacidad de observación hacia personas de otras culturas.				
9. Me ha ayudado a mejorar mis habilidades para recopilar información (escuchar y observar) en un ambiente intercultural.				
10. Ha mejorado mi capacidad de adaptación a diferentes formas de comunicación intercultural y estilos de aprendizaje.				
11. El programa propuesto por la UGR (actividades curriculares y extracurriculares) me ha ayudado a ser más flexible con la gente de otra culturas.				
12. Me ha ayudado a mejorar mis habilidades para analizar, interpretar y relacionar información proveniente de diferentes contextos culturales (procesar la información).				
13. Me ha ayudado a mejorar mis habilidades para analizar la información relacionada con diferentes culturas.				
14. Me ha ayudado a mejorar mis habilidades para interpretar la información relacionada con diferentes culturas.				
15. Me ha ayudado a mejorar mis habilidades para relacionar la información relacionada con diferentes culturas.				
16. El programa propuesto por la UGR (actividades curriculares y extracurriculares) me ha ayudado a formar parte de un grupo intercultural donde tuve la oportunidad de respetar la forma de expresión de cada uno, siendo más tolerante.				
17. Me ha ayudado a entender mejor mi propia cultura.				
18. Ha mejorado mi comprensión de la cultura de los demás.				
19. Ha aumentado mi respeto por otras culturas.				
20. El programa propuesto por la UGR (actividades curriculares y extracurriculares) ha mejorado mi empatía cultural – (capacidad de identificarse con los sentimientos, pensamientos y comportamiento de la gente de diferentes culturas).				
21. Me ha ayudado a entender el impacto de la cultura en los contextos sociales e históricos.				
22. Me ha permitido ser capaz de analizar los contextos culturales desde una perspectiva emic (desde mi herencia cultural) y también etic (desde fuera de la propia herencia cultural).				
23. Ha mejorado mis competencias sociolingüísticas (asociación entre el lenguaje y su significado en función del contexto social).				
24. Me ha ayudado a entender mejor el valor de la diversidad cultural (atención hacia la diversidad cultural).				
25. Ha impactado prejuicios y estereotipos.				
26. Ha incrementado mi curiosidad y apertura hacia la diversidad cultural.				
27. Ha modificado mi punto de vista respecto a la comunidad cultural a la que pertenezco en algún aspecto.				
28. Me ha ayudado a aprender a través de la interacción con los extranjeros.				
29. El programa propuesto por la UGR (actividades curriculares y extracurriculares) me ha ayudado a conocer y a comprender más las tradiciones culturales de mis colegas extranjeros.				
30. Creo que las competencias interculturales son necesarias en mi trabajo.				

Sí tiene algún comentario que añadir, no dude en utilizar este espacio para ello. ¡Muchas gracias por su colaboración!

CUESTIONARIO SOBRE EL IMPACTO FORMATIVO DE LOS PROYECTOS INTERNACIONALES DE INVESTIGACIÓN/EDUCACIÓN EN ODONTOLOGIA (DIVERSIDAD CULTURAL)

El objetivo principal de este cuestionario es determinar en qué medida su participación en los proyectos internacionales de investigación/educación le ha ayudado a desarrollar las cuestiones que a continuación se contemplan.

DATOS DE IDENTIFICACIÓN	
Sexo: <input type="checkbox"/> Mujer <input type="checkbox"/> Hombre	
Edad: _____	
Situación profesional:	
- Profesor/a /profesor/a titular _____	- Investigador _____
- Técnico/ administrativo _____	- Otro (especificar) _____
1. Cuanto tiempo lleva vinculado con los proyectos internacionales de investigación/ educación? _____ meses, _____ años.	
2. El carácter de los proyectos internacionales con que está relacionado en su mayoría es: a) investigación _____ b) educación _____ c) otro (especificar) _____	
3. Asiste a eventos internacionales vinculados a sus proyectos internacionales (talleres, conferencias, etc.)? SI _____ NO _____ Sí su respuesta es afirmativa ¿en cuántos eventos ha participado en los últimos 2 años? _____% de los eventos propuestos. En estos eventos, ¿cuántos considera como obligatorios (grandes eventos que no podría faltar)? _____ eventos. ¿Cuántos considera como secundarios (eventos más pequeños con menor impacto para sus proyectos)? _____ eventos.	
4. Los proyectos en los que participa o ha participado ¿han requerido su estancia prolongada fuera de su país? SI _____ NO _____ Sí la respuesta es afirmativa – ¿cuanto tiempo ha durado su estancia más prolongada? _____. ¿Dónde? _____	
5. Había estado en el extranjero a través de programas de intercambio universitario antes de iniciar su participación en proyectos internacionales? SI _____ NO _____ ¿Cuánto tiempo ha durado su estancia más prolongada? _____ ¿Dónde? _____	
6. ¿Le gustaría ir al extranjero para seguir su trabajo académico? SI _____ NO _____ ¿Por qué? _____ _____ ¿Dónde? _____	
7. ¿Con qué frecuencia se reúne con sus socios extranjeros, al año o al mes, en relación con sus proyectos internacionales de investigación/educación: a) ¿reuniones presenciales? _____ b) ¿reuniones vía Skype (en línea)? _____ c) ¿conversaciones por correo electrónico? _____ d) ¿otros? _____	
8. Por favor, mencione los países de sus socios de los proyectos internacionales _____	
9. Los extranjeros que ha encontrado en su campus (en clases? _____ en otras actividades? _____) eran de _____	
10. ¿Cree que la presencia de los estudiantes extranjeros en el aula/laboratorio influye en el valor de la educación? _____ SI, _____ NO. Creo que es un impacto positivo _____ Creo que es un impacto negativo _____.	
11. "Me siento incómodo/a al estar con socios extranjeros". Verdadero _____ Falso _____	
12. En mi caso, la mayor dificultad en la relación con colegas extranjeros puede ser causada por _____	
13. En mi opinión, las competencias interculturales se pueden definir como _____	

Marque con una "X" la opción que mejor recoge su posición, de acuerdo con la siguiente escala:

1 = Totalmente en desacuerdo

2 = En desacuerdo

3 = De acuerdo

4 = Totalmente de acuerdo

	1	2	3	4
1. Mi participación en proyectos internacionales de investigación/educación me ha permitido entender mejor otras perspectivas acerca del mundo.				
2. Me ha ayudado a tomar conciencia de la dimensión cultural de mí mismo/a (para entender cómo mi cultura ha influenciado mi identidad y mi visión del mundo).				
3. Ha mejorado mi capacidad de autovaloración cultural.				
4. Mi participación en proyectos internacionales de investigación/educación ha mejorado mi capacidad de adaptación a nuevos ambientes culturales				

5. Ha despertado mi interés hacia las personas de otras culturas.				
6. Ha aumentado mi interés en el aprendizaje intercultural (por ejemplo, aprender a negociar con personas de diferentes culturas).				
7. Ha mejorado mi capacidad de escucha hacia personas de otras culturas.				
8. Ha mejorado mi capacidad de observación hacia personas de otras culturas				
9. Me ha ayudado a mejorar mis habilidades para recopilar información (escuchar y observar) en un ambiente intercultural.				
10. Ha mejorado mi capacidad de adaptación a diferentes formas de comunicación intercultural y estilos de aprendizaje				
11. Mi participación en proyectos internacionales de investigación/educación me ha ayudado a ser más flexible con la gente de otra culturas.				
12. Me ha ayudado a mejorar mis habilidades para analizar, interpretar y relacionar información proveniente de diferentes contextos culturales (procesar la información).				
13. Me ha ayudado a mejorar mis habilidades para analizar la información relacionada con diferentes culturas				
14. Me ha ayudado a mejorar mis habilidades para interpretar la información relacionada con diferentes culturas.				
15. Me ha ayudado a mejorar mis habilidades para relacionar la información relacionada con diferentes culturas.				
16. Mi participación en proyectos internacionales de investigación/educación me ha ayudado a formar parte de un grupo intercultural donde tuve la oportunidad de respetar la forma de expresión de cada uno, siendo más tolerante.				
17. Me ha ayudado a entender mejor mi propia cultura.				
18. Ha mejorado mi comprensión de la cultura de los demás.				
19. Ha aumentado mi respeto por otras culturas.				
20. Mi participación en proyectos internacionales de investigación/educación ha mejorado mi empatía cultural – (capacidad de identificarse con los sentimientos, pensamientos y comportamiento de la gente de diferentes culturas).				
21. Me ha ayudado a entender el impacto de la cultura en los contextos sociales e históricos.				
22. Mi participación en proyectos internacionales de investigación/educación me ha permitido ser capaz de analizar los contextos culturales desde una perspectiva <u>emic</u> (desde mi herencia cultural) y también <u>etic</u> (desde fuera de la propia herencia cultural).				
23. Ha mejorado mis competencias sociolingüísticas (asociación entre el lenguaje y su significado en función del contexto social).				
24. Me ha ayudado a entender mejor el valor de la diversidad cultural (atención hacia la diversidad cultural).				
25. Ha impactado prejuicios y estereotipos.				
26. Ha incrementado mi curiosidad y apertura hacia la diversidad cultural.				
27. Ha modificado mi punto de vista respecto a la comunidad cultural a la que pertenezco en algún aspecto.				
28. Me ha ayudado a aprender a través de la interacción con los extranjeros				
29. Mi participación en proyectos internacionales de investigación/educación me ha ayudado a conocer y a comprender más las tradiciones culturales de mis colegas extranjeros.				
30. Creo que las competencias interculturales son necesarias en mi trabajo.				

Sí tiene algún comentario que añadir, no dude en utilizar este espacio para ello. ¡Muchas gracias por su colaboración!

Questionnaire sur l'impact des efforts d'internationalisation sur le campus de l'Université Paris-Sorbonne - PIV (Développement des compétences interculturelles)

L'objectif de ce questionnaire est de déterminer dans quelle mesure les programmes proposés par l'Université de Paris-Sorbonne, durant le curriculum (cours et activités obligatoires), ou lors d'activités extra-curriculum (toutes activités non obligatoires mais liées à la vie du campus, qu'il s'agisse de conférences, activités sportives, fraternités ou de rencontres informelles ou personnelles avec des collègues étrangers, etc.), vous ont aidés à développer les aspects décrits ci-dessous:

DONNEES D'IDENTIFICATION	
Sexe: <input type="checkbox"/> Femme <input type="checkbox"/> Homme	
Age: _____	
Situation professionnelle: - Chercheur _____ - Etudiant (non thésé/undergraduate) _____ - Etudiant spécialité (thésé/postgraduate) _____ - Technicien / Agent Administratif _____ - Autres (spécifier) _____	
1. Depuis combien de temps étudiez ou travaillez vous à l'Université Paris IV? ____ mois, ____ années	
2. Avez vous déjà participé à des évènements internationaux proposés par PIV sur le campus? OUI ____ NON ____ Si votre réponse est OUI, indiquez SVP le type d'évènement auquel vous avez participé: a) Obligatoire: conférences internationales _____, workshops internationaux _____, autres _____ b) Extracurriculaire: rencontres internationales _____, repas Internationaux _____, autres? (précisez) _____	
3. Avez vous déjà été à l'étranger via des échanges universitaires? _____. Qui a organisé votre séjour à l'étranger? _____ Si votre réponse est positive, combien de temps êtes vous resté à l'étranger? _____, Où? _____	
4. Aimerez vous aller à l'étranger pour travailler ou étudier? OUI ____ Pourquoi? _____ _____ Où? _____ NON ____ Pourquoi? _____	
5. Les étrangers que vous avez rencontrés sur le campus de PIV (en classe? ____ ou au cours d'autres activités? _____) étaient originaires de _____	
6. La présence de collègues étrangers dans votre classe/laboratoire a t'elle influencé la valeur de vos études? OUI _____, NON _____. Je pense que l'impact a été positif _____. Je pense que l'impact a été négatif _____.	
7. Est ce que le curriculum de vos études vous a donné la capacité ou les compétences d'exercer votre profession dans un environnement diversifié culturellement ? OUI ____, NON _____. Pourquoi ? _____.	
9. Est ce que les activités extra-curriculum offertes par Paris IV vous ont donné la capacité ou les compétences d'exercer votre profession dans un environnement diversifié culturellement ? OUI ____, NON _____. Pourquoi ? _____.	
10. "Je me sens mal à l'aise avec des collègues étrangers". Vrai ____ Faux ____	
11. Pour moi, la plus grande difficulté dans la relation avec des collègues étrangers est due à _____	

Mettre une croix "X" dans la case qui correspond le mieux à votre opinion, en suivant l'échelle:

1= Pas du tout d'accord 2= Pas d'accord 3= D'accord 4= Tout à fait d'accord

	1	2	3	4
1. Le programme proposé par PIV (curriculum et activités extra-curriculum) m'a donné l'opportunité de mieux comprendre la vision du monde des autres (étrangers) .				

2. Cela m'a aidé à développer ma conscience de soi culturelle (comprendre la manière dont ma culture française a influencé mon identité et ma vision du monde).				
3. Cela a amélioré ma capacité d'auto-évaluation de mes propres patterns culturels.				
4. Le programme proposé par Paris IV (enseignement obligatoire et activités extra-curriculum) a amélioré ma capacité d'adaptation à des environnements nouveaux et culturellement différents.				
5. Cela a accru mon intérêt pour les personnes provenant d'autres cultures.				
6. Cela a accru mon intérêt pour l'apprentissage interculturel (par exemple apprendre comment négocier avec des personnes de cultures différentes).				
7. Cela a amélioré ma capacité à écouter les personnes provenant d'autres cultures.				
8. Cela a amélioré ma capacité à observer les personnes provenant d'autres cultures.				
9. Cela a amélioré ma capacité à <u>collecter des informations</u> (écouter et observer) dans un environnement interculturel.				
10. Cela a amélioré ma capacité à m'adapter aux différentes formes de communication interculturelle et aux différents styles d'apprentissage.				
11. Le programme proposé par Paris IV (curriculum et activités extra-curriculum) m'a aidé à <u>devenir plus flexible</u> avec les personnes provenant d'autres cultures.				
12. Cela m'a aidé à améliorer mes capacités à analyser, interpréter et associer les informations reçues dans des contextes culturels différents (traiter les informations).				
13. Cela m'a aidé à améliorer mes capacités à <u>analyser</u> les informations liées aux cultures différentes.				
14. Cela m'a aidé à améliorer mes capacités à <u>interpréter</u> les informations liées aux cultures différentes.				
15. Cela m'a aidé à améliorer mes capacités à <u>associer</u> les informations liées aux cultures différentes.				
16. Le programme proposé par Paris IV (curriculum et activités extra-curriculum) m'a aidé à participer à un groupe interculturel où j'ai eu l'opportunité de respecter les modes d'expression de chaque membre, et à devenir plus tolérant.				
17. Cela m'a aidé à mieux comprendre ma propre culture.				
18. Cela a amélioré ma compréhension de la culture des autres.				
19. Cela a augmenté mon respect pour les autres cultures.				
20. Le programme proposé par Paris IV (curriculum et activités extra-curriculum) a accru mon empathie culturelle – la capacité à identifier les sentiments, pensées et comportements d'individus provenant de différents environnements culturels.				
21. Cela m'a aidé à comprendre l'impact de la culture sur les contextes sociaux et historiques.				
22. Le programme proposé par Paris IV (curriculum et activités extra-curriculum) m'a aidé à devenir plus flexible avec l'analyse des choses, en les observant à l'aide de perspectives culturelles différentes (emic- de ma perspective culturelle, et etic- des perspectives culturelles des autres).				
23. Cela a amélioré mes compétences sociolinguistiques (conscience de la relation spécifique entre le langage et sa signification dans chaque contexte social).				
24. Cela m'a aidé à mieux appréhender l'impact de la diversité culturelle (attention portée vis à vis de la diversité culturelle).				
25. Cela a influencé les préjugés et les stéréotypes.				
26. Cela m'a permis des découvertes and a accru ma curiosité envers la diversité culturelle.				
27. Cela a changé mon point de vue sur la communauté culturelle à laquelle j'appartiens.				
28. Cela m'a aidé à apprendre au travers d'une interaction avec des étrangers.				
29. Le programme proposé par Paris IV (curriculum et activités extra-curriculum) m'a aidé à connaître et comprendre davantage la culture et les traditions de collègues étrangers.				
30. Des compétences interculturelles seront nécessaires dans mon travail.				

N'hésitez pas à ajouter vos réflexions ! Merci beaucoup pour votre collaboration !

**Questionnaire sur l'impact des efforts d'internationalisation des études en Chirurgie Dentaire au sein de l'Université Paris 7 – P7
(Développement des compétences interculturelles)**

L'objectif de ce questionnaire est de déterminer dans quelle mesure les programmes proposés par l'Université de Paris, durant le curriculum (cours et activités obligatoires) ou lors d'activités extra-curriculum (toutes activités non obligatoires mais liées à la vie du campus, qu'il s'agisse de conférences, activités sportives, fraternités ou de rencontres informelles ou personnelles avec des collègues étrangers, etc.), vous ont aidés à développer les aspects décrits ci-dessous:

DONNEES D'IDENTIFICATION	
Sexe: <input type="checkbox"/> Femme <input type="checkbox"/> Homme	
Age: _____	
Situation professionnelle:	
- Chercheur _____ - Etudiant (non thésé/undergraduate) _____ - Etudiant spécialité (thésé/postgraduate) _____	
- Technicien / Agent Administratif _____ - Autres (spécifier) _____	
1. Depuis combien de temps étudiez ou travaillez vous à l'Université Paris 7 – P7? ____ mois, ____ années	
2. Avez vous déjà participé à des évènements internationaux proposés par P7 sur le campus? OUI____NON____	
Si votre réponse est OUI, indiquez SVP le type d'évènement auquel vous avez participé:	
a) Obligatoire: conférences internationales____, workshops internationaux____, autres_____	
b) Extracurriculaire: rencontres internationales____, repas Internationaux____, autres? (précisez)_____	
3. Avez vous déjà été à l'étranger via des échanges universitaires? _____. Qui a organisé votre séjour à l'étranger? _____	
Si votre réponse est positive, combien de temps êtes vous resté à l'étranger? _____, Où? _____	
4. Aimerez vous aller à l'étranger pour travailler ou étudier? OUI____ Pourquoi? _____	
_____ Où? _____	
NON____ Pourquoi? _____	
5. Les étrangers que vous avez rencontrés sur le campus de P7 (en classe? ____ ou au cours d'autres activités? ____) étaient originaires de _____	
6. La présence de collègues étrangers dans votre classe/laboratoire a t'elle influencé la valeur de vos études? OUI____, NON _____. Je pense que l'impact a été positif _____. Je pense que l'impact a été négatif _____.	
7. Est ce que le curriculum des études dentaires vous a donné la capacité ou les compétences d'exercer votre profession dans un environnement diversifié culturellement ? OUI____, NON _____. Pourquoi ?_____.	
8. Est ce que les activités extra-curriculum offertes par Paris 7 vous ont donné la capacité ou les compétences d'exercer votre profession dans un environnement diversifié culturellement ? OUI____, NON _____. Pourquoi ?_____.	
9. "Je me sens mal à l'aise avec des collègues étrangers". Vrai____ Faux_____	
10. Pour moi, la plus grande difficulté dans la relation avec des collègues étrangers est due à_____	

Mettre une croix "X" dans la case qui correspond le mieux à votre opinion, en suivant l'échelle:

1= Pas du tout d'accord 2= Pas d'accord 3= D'accord 4= Tout à fait d'accord

	1	2	3	4
1. Le programme proposé par P7 (curriculum et activités extra-curriculum) m'a donné l'opportunité de mieux comprendre la vision du monde des autres (étrangers) .				

2. Cela m'a aidé à développer ma conscience de soi culturelle (comprendre la manière dont ma culture française a influencé mon identité et ma vision du monde).				
3. Cela a amélioré ma capacité d'auto-évaluation de mes propres patterns culturels.				
4. Le programme proposé par Paris 7 (enseignement obligatoire et activités extra-curriculum) a amélioré ma capacité d'adaptation à des environnements nouveaux et culturellement différents.				
5. Cela a accru mon intérêt pour les personnes provenant d'autres cultures.				
6. Cela a accru mon intérêt pour l'apprentissage interculturel (par exemple apprendre comment négocier avec des personnes de cultures différentes).				
7. Cela a amélioré ma capacité à écouter les personnes provenant d'autres cultures.				
8. Cela a amélioré ma capacité à observer les personnes provenant d'autres cultures.				
9. Cela a amélioré ma capacité à <u>collecter des informations</u> (écouter et observer) dans un environnement interculturel.				
10. Cela a amélioré ma capacité à m'adapter aux différentes formes de communication interculturelle et aux différents styles d'apprentissage.				
11. Le programme proposé par Paris 7 (curriculum et activités extra-curriculum) m'a aidé à <u>devenir plus flexible</u> avec les personnes provenant d'autres cultures.				
12. Cela m'a aidé à améliorer mes capacités à analyser, interpréter et associer les informations reçues dans des contextes culturels différents (traiter les informations).				
13. Cela m'a aidé à améliorer mes capacités à <u>analyser</u> les informations liées aux cultures différentes.				
14. Cela m'a aidé à améliorer mes capacités à <u>interpréter</u> les informations liées aux cultures différentes.				
15. Cela m'a aidé à améliorer mes capacités à <u>associer</u> les informations liées aux cultures différentes.				
16. Le programme proposé par Paris 7 (curriculum et activités extra-curriculum) m'a aidé à participer à un groupe interculturel où j'ai eu l'opportunité de respecter les modes d'expression de chaque membre, et à devenir plus tolérant.				
17. Cela m'a aidé à mieux comprendre ma propre culture.				
18. Cela a amélioré ma compréhension de la culture des autres.				
19. Cela a augmenté mon respect pour les autres cultures.				
20. Le programme proposé par Paris 7 (curriculum et activités extra-curriculum) a accru mon empathie culturelle – la capacité à identifier les sentiments, pensées et comportements d'individus provenant de différents environnements culturels.				
21. Cela m'a aidé à comprendre l'impact de la culture sur les contextes sociaux et historiques.				
22. Le programme proposé par Paris 7 (curriculum et activités extra-curriculum) m'a aidé à devenir plus flexible avec l'analyse des choses, en les observant à l'aide de perspectives culturelles différentes (emic- de ma perspective culturelle, et etic- des perspectives culturelles des autres).				
23. Cela a amélioré mes compétences sociolinguistiques (conscience de la relation spécifique entre le langage et sa signification dans chaque contexte social).				
24. Cela m'a aidé à mieux appréhender l'impact de la diversité culturelle (attention portée vis à vis de la diversité culturelle).				
25. Cela a influencé les préjugés et les stéréotypes.				
26. Cela m'a permis des découvertes and a accru ma curiosité envers la diversité culturelle.				
27. Cela a changé mon point de vue sur la communauté culturelle à laquelle j'appartiens.				
28. Cela m'a aidé à apprendre au travers d'une interaction avec des étrangers.				
29. Le programme proposé par Paris 7 (curriculum et activités extra-curriculum) m'a aidé à connaître et comprendre davantage la culture et les traditions de collègues étrangers.				
30. Des compétences interculturelles seront nécessaires dans mon travail.				

N'hésitez pas à ajouter vos réflexions ! Merci beaucoup pour votre collaboration !

Questionnaire sur l'impact des projets de recherche et/ou d'enseignement internationaux sur le développement des compétences culturelles (interculturelles).

L'objectif de ce questionnaire est de déterminer dans quelle mesure la participation à des projets de recherche ou d'enseignement internationaux vous a aidé à développer les aspects décrits ci-dessous:

DONNEES D'IDENTIFICATION	
Sexe: <input type="checkbox"/> Femme <input type="checkbox"/> Homme	
Age: _____	
Situation professionnelle: - Professeur/Maitre de conférences _____ - Autre enseignant/chercheur (spécifier) _____ - Technicien / Agent Administratif _____ - Autres (spécifier) _____	
1. Depuis combien de temps travaillez vous sur des projets de recherche/d'enseignement internationaux? _____ mois/années	
2. Le type de projets internationaux dans lesquels vous êtes impliqués sont surtout: a) recherche _____ b) enseignement _____ c) autres (précisez) _____	
3. Participez vous à des événements internationaux liés à vos projets internationaux (workshops, conférences, etc.)? OUI _____ NON _____. Si votre réponse est OUI, à combien de ces événements avez vous participé au cours des 2 dernières années? _____ événements internationaux. Parmi ces événements, combien étaient « obligatoires » selon vous (perçus comme des événements majeurs que vous ne pouviez pas manquer)? _____ événements.	
4. Votre participation à un projet international de recherche/d'enseignement a t'elle nécessité un long séjour à l'étranger? OUI _____ NON _____. Si votre réponse est positive, combien de temps êtes vous resté à l'étranger? _____ Où? _____	
5. Avez vous déjà été à l'étranger via des échanges universitaires avant de participer à vos projets internationaux? OUI _____ NON _____. Si votre réponse est positive, combien de temps êtes vous resté à l'étranger? _____ Où? _____	
6. Aimerez vous aller à l'étranger pour travailler (en milieu académique)? OUI _____ Pourquoi? _____ _____ Où? _____ NON _____ Pourquoi? _____	
7. Quelle est la fréquence de vos échanges avec vos partenaires étrangers (par an ou par mois) au sujet d'un projet international de recherche/d'enseignement: a) rencontre en personne? _____ b) rencontre par Skype (online)? _____ c) conversations par email? _____ d) autres? _____	
8. Quels sont les pays avec lesquels vous collaborez le plus ? _____	
9. Les étrangers que vous avez rencontrés sur le campus de votre université (en classe? _____ ou au cours d'autres activités? _____) étaient originaires de _____	
10. La présence de collègues étrangers dans votre classe/laboratoire a t'elle influencé la valeur des enseignements? OUI _____, NON _____. Je pense que l'impact a été positif _____. Je pense que l'impact a été négatif _____.	
11. "Je me sens mal à l'aise avec des partenaires étrangers". Vrai _____ Faux _____	
12. Pour moi, la plus grande difficulté dans la relation avec des partenaires étrangers est due à _____	
13. Selon moi, la compétence culturelle/interculturelle peut se définir comme _____	

Mettre une croix "X" dans la case qui correspond le mieux à votre opinion, en suivant l'échelle:

1= Pas du tout d'accord 2= Pas d'accord 3= D'accord 4= Tout à fait d'accord

	1	2	3	4
1. Ma participation à des projets internationaux de recherche/d'enseignement m'a donné l'opportunité de mieux comprendre la vision du monde des autres (étrangers) .				
2. Cela m'a aidé à développer ma conscience de soi culturelle (comprendre la manière dont ma culture a influencé mon identité et ma vision du monde).				

3. Cela a amélioré ma capacité d'auto-évaluation de mes propres patterns culturels.				
4. Ma participation à des projets internationaux de recherche/d'enseignement a amélioré ma capacité d'adaptation à des environnements nouveaux et culturellement différents.				
5. Cela a accru mon intérêt pour les personnes provenant d'autres cultures.				
6. Cela a accru mon intérêt pour l'apprentissage interculturel (par exemple apprendre comment négocier avec des personnes de cultures différentes).				
7. Cela a amélioré ma capacité à écouter les personnes provenant d'autres cultures.				
8. Cela a amélioré ma capacité à observer les personnes provenant d'autres cultures.				
9. Cela a amélioré ma capacité à <u>collecter des informations</u> (écouter et observer) dans un environnement interculturel.				
10. Cela a amélioré ma capacité à m'adapter aux différentes formes de communication interculturelle et aux différents styles d'apprentissage.				
11. Ma participation à des projets internationaux de recherche/d'enseignement m'a aidé à <u>devenir plus flexible</u> avec les personnes provenant d'autres cultures.				
12. Cela m'a aidé à améliorer mes capacités à analyser, interpréter et associer les informations reçues dans des contextes culturels différents (traiter les informations).				
13. Cela m'a aidé à améliorer mes capacités à <u>analyser</u> les informations liées aux cultures différentes.				
14. Cela m'a aidé à améliorer mes capacités à <u>interpréter</u> les informations liées aux cultures différentes.				
15. Cela m'a aidé à améliorer mes capacités à <u>associer</u> les informations liées aux cultures différentes.				
16. Ma participation à des projets internationaux de recherche/d'enseignement m'a aidé à participer à un groupe interculturel où j'ai eu l'opportunité de respecter les modes d'expression de chaque membre, et à devenir plus tolérant.				
17. Cela m'a aidé à mieux comprendre ma propre culture.				
18. Cela a amélioré ma compréhension de la culture des autres.				
19. Cela a augmenté mon respect pour les autres cultures.				
20. Ma participation à des projets internationaux de recherche/d'enseignement a accru mon empathie culturelle – la capacité à identifier les sentiments, pensées et comportements d'individus provenant de différents environnements culturels.				
21. Cela m'a aidé à comprendre l'impact de la culture sur les contextes sociaux et historiques.				
22. Ma participation à des projets internationaux de recherche/d'enseignement m'a aidé à devenir plus flexible avec l'analyse des choses, en les observant à l'aide de perspectives culturelles différentes (<u>emic-</u> de ma perspective culturelle, et <u>etic-</u> des perspectives culturelles des autres).				
23. Cela a amélioré mes compétences sociolinguistiques (conscience de la relation spécifique entre le langage et sa signification dans chaque contexte social).				
24. Cela m'a aidé à mieux appréhender l'impact de la diversité culturelle (attention portée vis à vis de la diversité culturelle).				
25. Cela a influencé les préjugés et les stéréotypes.				
26. Cela m'a permis des découvertes and a accru ma curiosité envers la diversité culturelle.				
27. Cela a changé mon point de vue sur la communauté culturelle à laquelle j'appartiens.				
28. Cela m'a aidé à apprendre au travers d'une interaction avec des étrangers.				
29. Ma participation à des projets internationaux de recherche/d'enseignement m'a aidé à connaître et comprendre davantage la culture et les traditions de collègues étrangers.				
30. Des compétences culturelles/interculturelles seront nécessaires dans mon travail.				

N'hésitez pas à ajouter vos réflexions ! Merci beaucoup pour votre collaboration !

- has helped me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).				
- has improved my capacity for cultural self-assessment.				
- has improved my capacity for adaptation to culturally different and new environments.				
- has increased my interest in people from other cultures.				
- has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).				
- has improved my capacity to listen people from other cultures.				
- has improved my capacity to observe people from other cultures.				
- has improved my capacity to <u>collect information</u> (to listen and to observe) in an intercultural environment.				
- has improved my ability to adapt to different forms of intercultural communication and different learning styles.				
- has helped me to <u>become more flexible</u> with people from other culture.				
- has helped me to improve my abilities to analyze, interpret and relate information brought in different cultural contexts (process information).				
- has helped me to improve my abilities to <u>analyze</u> information related to different cultures.				
- has helped me to improve my abilities to <u>interpret</u> information related to different cultures.				
- has helped me to improve my abilities to <u>relate</u> information related to different cultures.				
- has helped me to take part of an intercultural group where I had opportunity to respect ways of expressions of each member, becoming more tolerant.				
- has helped me to understand better my own culture.				
- has improved my understanding of culture of others'.				
- has increased my respect for other cultures.				
- has increased my cultural empathy -The capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.				
- has helped me to understand the impact of culture on the social and historical contexts.				
- has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic- from others cultural perspectives).				
- has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).				
- has helped me to better understand the value of cultural diversity (mindfulness toward cultural diversity).				
- has impacted prejudices and stereotypes.				
- allowed discovery and increased my curiosity toward cultural diversity.				
- has changed my point of view about cultural community where I belong.				
- has helped me to learn through interaction with foreigners.				
- has helped me to know more and understand more culture and traditions of foreign colleagues.				
Intercultural competences will be needed in my work.				

Feel free to add your reflections! Thank you very much for your collaboration!

QUESTIONNAIRE ABOUT THE IMPACT OF INTERNATIONAL RESEARCH/EDUCATION PROJECTS IN DENTISTRY (INTERCULTURAL COMPETENCES)

The objective of this questionnaire is to determine in which measure the participation in international research and educational projects has helped you to develop matters listed below:

DATA OF IDENTIFICATION
Sex: <input type="checkbox"/> Woman <input type="checkbox"/> Man
Age: _____
Professional situation: - Professor/senior lecturer _____ - Other teacher/researcher (specify) _____ - Technician/ administrative staff _____ - Others (specify) _____
1. How long have you been working with international research/education project? ___ months, ___ years 2. The character of international projects you are related to is mostly: a) research___ b) education__ c) others (what?)___ 3. Do you participate in international events related to international projects (workshops, conferences, etc.)? YES___ NO___ If your answer is positive, how many events did you participate in, in the last 2 years? _____ international events. In these events, how many do you consider as obligatory (major events you could not miss)? _____ events. How many do you consider as secondary (smaller events with lower impact for your projects)? _____ events. 4. Have the participation in international research/education project required from you long stay abroad? YES___ NO___ If your answer is affirmative – How long did you stay abroad? _____. Where? _____ 5. Had you ever been abroad through university exchange programs before you started participation in your international projects? YES___ NO___ How long did you stay abroad? _____. Where? _____ 6. Would you like to go abroad for academic work? YES___ NO___ Why? _____ _____ Where _____ 7. How often do you meet with your foreign partners, per year or month, concerning an international research/education project: a) presence meetings? _____ b) Skype meetings (online)? _____ c) email conversations? _____ d) others? _____ 8. Please mention the countries of the partners you collaborate mostly with _____ 9. The foreigners you have met on the campus of your university (in class? ___ or in other activities? _____) were from _____ 10. Did the presence of foreign students in the classroom/laboratory influence the value of the education? __YES, __NO__. I think it is positive impact _____ I think it is negative impact _____. 11. "I feel uncomfortable being with foreign partners". True _____ False _____ 12. My the biggest difficulty in the relationship with foreign partners is caused by _____ 13. In my opinion, intercultural competence can be defined as _____

Put "X" with the option which best fits to your opinion, according to the scale:

1= Strongly disagree 2= Disagree 3= Agree 4= Strongly agree

	1	2	3	4
1. My participation in international research/education project has given me the opportunity to understand better other's (foreigners) world views.				
2. It has helped me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).				
3. It has improved my capacity for cultural self-assessment.				

4. My participation in international research/education project has improved my capacity for adaptation to culturally different and new environments.				
5. It has increased my interest in people from other cultures.				
6. It has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).				
7. It has improved my capacity to <u>listen</u> people from other cultures.				
8. It has improved my capacity to <u>observe</u> people from other cultures.				
9. It has improved my capacity to <u>collect</u> information (to listen and to observe) in an intercultural environment.				
10. It has improved my ability to adapt to different forms of intercultural communication and different learning styles.				
11. My participation in international research/education project has helped me to become more flexible with people from other culture.				
12. It has helped me to improve my abilities to analyze, interpret and relate information brought in different cultural contexts (process information).				
13. It has helped me to improve my abilities to <u>analyze</u> information related to different cultures.				
14. It has helped me to improve my abilities to <u>interpret</u> information related to different cultures.				
15. It has helped me to improve my abilities to <u>relate</u> information related to different cultures.				
16. My participation in international research/education project has helped me to take part of an intercultural group where I had opportunity to respect ways of expressions of each member, becoming more tolerant.				
17. It has helped me to understand better my own culture.				
18. It has improved my understanding of culture of others'				
19. It has increased my respect for other cultures.				
20. My participation in international research/education project has increased my cultural empathy - The capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.				
21. It has helped me to understand the impact of culture on the social and historical contexts.				
22. My participation in international research/education project has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic – from others cultural perspectives).				
23. It has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).				
24. It has helped me to understand better the value of cultural diversity (mindfulness toward cultural diversity).				
25. It influenced prejudices and stereotypes.				
26. It allowed discovery and increased my curiosity toward cultural diversity.				
27. It has changed my point of view about cultural community where I belong.				
28. It has helped me to learn through interaction with foreigners.				
29. My participation in international research/education project has helped me to know more and understand more culture and traditions of foreign colleagues.				
30. Intercultural competences are necessary in my work.				

Feel free to add your reflections! Thank you very much for your collaboration!

UNIVERSITY OF MICHIGAN – SCHOOL OF DENTISTRY

Thank you very much for responding to this survey. We want to assure you that all your answers are completely anonymous.

THE FIRST QUESTIONS ARE ABOUT YOUR BACKGROUND:

1. Are you male or female? Male Female
2. How old are you? _____ years
3. What is your ethnicity/race? I am _____
4. In which dental school are you enrolled? I am enrolled at _____
5. In which year of your dental school program are you? 1 2 3 4

THE NEXT QUESTIONS ARE ABOUT YOUR EDUCATIONAL EXPERIENCES IN DENTAL SCHOOL

6. On a scale from 1 = disagree strongly to 5 = agree strongly, how much do you disagree / agree with the following statements?

	disagree				agree	
	1	2	3	4	5	5
	strongly				strongly	
The dental school leadership supports a culturally sensitive approach to dental care.	1	2	3	4	5	5
My classroom-based education prepares me well to treat diverse patients.	1	2	3	4	5	5
My clinical education prepares me well to treat diverse patients.	1	2	3	4	5	5
My community-based education prepares me well to treat diverse patients.	1	2	3	4	5	5
My dental education prepares me well to work professionally in culturally diverse environments.	1	2	3	4	5	5
I am comfortable interacting with foreign born students in my class.	1	2	3	4	5	5
I am comfortable interacting with classmates from ethnic/racial backgrounds different from my own.	1	2	3	4	5	5
Having foreign born students in my class has a positive impact on my education.	1	2	3	4	5	5
Having classmates from ethnic/racial backgrounds different from my own has a positive impact on my education..	1	2	3	4	5	5
I am comfortable interacting with foreign born faculty members.	1	2	3	4	5	5
I would like to study abroad.	1	2	3	4	5	5
In our dental schools, we have extracurricular opportunities to learn about different cultures.	1	2	3	4	5	5
The <u>extracurricular activities</u> offered in my dental school increase my ability/skills to function in a culturally diverse professional environment.	1	2	3	4	5	5

Please tell us from which countries foreign born students and faculty members in your dental school are from:
They are from:

- Have you ever participated in any **international events** on your campus? YES NO
- Have you ever participated in any **diversity-related events** on your campus? YES NO
- Have your ever participated in international conferences/workshops? YES NO
- Have you ever participated in a study abroad program or an international exchange program? YES NO

If yes: how long were you abroad?

10. For me the biggest difficulty in the relationship with foreign classmates / faculty / colleagues is caused by

On a scale from 1= Strongly disagree, 2= Disagree, 3= Agree to 4= Strongly agree, how much do you disagree/agree with the following statements?

The curricular and extracurricular activities in my dental school	1	2	3	4
- educate me to better understand others' world views.				
- helps me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).				
- has improved my capacity for cultural self-assessment.				
- has improved my capacity for adapting to culturally different and new environments.				
- has increased my interest in people from other cultures.				
- has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).				
- has improved my capacity to listen to people from other cultures.				
- has improved my capacity to observe people from other cultures.				
- has improved my capacity to <u>collect information</u> in an intercultural environment.				
- has improved my ability to adapt to different forms of intercultural communication and different teaching/learning styles.				
- has helped me to <u>become more flexible</u> with people from other cultures.				
- has helped me to improve my abilities to analyze, interpret and relate information presented in different cultural contexts				
- has helped me to improve my abilities to <u>analyze</u> information related to different cultures.				
- has helped me to improve my abilities to <u>interpret</u> information related to different cultures.				
- has helped me to improve my abilities to make sense of information about different cultures.				
- has helped me to take part in intercultural groups where I had opportunities to respect ways of expressions of each member and become more tolerant.				
- has helped me to understand better my own culture.				
- has improved my understanding of culture of others'.				
- has increased my respect for other cultures.				
- has increased my cultural empathy, e.g., the capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.				
- has helped me to understand the impact of culture on the social and historical contexts.				
- has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic- from others cultural perspectives).				
- has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).				
- has helped me to better understand the value of cultural diversity (mindfulness toward cultural diversity).				
- has impacted prejudices and stereotypes.				
- allowed discovery and increased my curiosity toward cultural diversity.				
- has changed my point of view about cultural community where I belong.				
- has helped me to learn through interaction with foreigners.				
- has helped me to know more and understand more culture and traditions of foreign colleagues.				
Intercultural competence will be needed in my work.				

Please share with us any additional thoughts you may have:

Thank you very much for responding. If you have any questions about this study or would like to learn about our findings, please contact Lidia Wisniewska at lidiawis@umich.edu.

UNIVERSITY OF MICHIGAN – SCHOOL OF DENTISTRY

Thank you very much for responding to this survey. We want to assure you that all your answers are completely anonymous.

THE FIRST QUESTIONS ARE ABOUT YOUR BACKGROUND:

1. Are you male or female? Male Female
 2. How old are you? _____ years
 3. What is your ethnicity/race? I am _____
 4. At which dental school do you work? I work at _____
 5. How long have you been working at this school? _____
 6. Are you engaged in research activities? Yes No
- If yes: are you engaged in collaborations with researchers from other countries? Yes No
- If yes: How long have you been working in international research projects? _____

THE NEXT QUESTIONS ARE ABOUT YOUR EDUCATIONAL EXPERIENCES IN DENTAL SCHOOL

On a scale from 1 = disagree strongly to 5 = agree strongly, how much do you disagree / agree with the following statements?

	1	2	3	4	5
	disagree strongly				agree strongly
The dental school leadership supports a culturally sensitive approach to dental care.	1	2	3	4	5
Our dental school's classroom-based activities prepare students well to treat diverse patients.	1	2	3	4	5
Our dental school's clinical activities prepare students well to treat diverse patients.	1	2	3	4	5
Our dental school's international research activities prepare students well to treat diverse patients.	1	2	3	4	5
My own dental education prepared me well to work professionally in culturally diverse environments.	1	2	3	4	5
I am comfortable interacting with foreign born students in my class.	1	2	3	4	5
Having foreign born students in the class has a positive impact on my teaching.	1	2	3	4	5
I am comfortable interacting with students from ethnic/racial backgrounds different from my own.	1	2	3	4	5
Having students from ethnic/racial backgrounds different from my own in the class has a positive impact on my teaching.	1	2	3	4	5
I am comfortable with foreign born colleagues/faculty members.	1	2	3	4	5
I am comfortable interacting with colleagues from ethnic/racial backgrounds different from my own.	1	2	3	4	5
Having colleagues from ethnic/racial backgrounds different from my own has a positive impact on teaching.	1	2	3	4	5
I would like to have a sabbatical abroad.	1	2	3	4	5
In our dental school, we have extracurricular opportunities to learn about different cultures.	1	2	3	4	5
The <u>extracurricular activities</u> offered in my dental school increase my ability/skills to function in a culturally diverse professional environment.	1	2	3	4	5

Please tell us from which other countries students and faculty members in your dental school are from:
They are from:

Have you ever participated in any **international events** on your campus? YES NO

Have you ever participated in any **diversity-related events** on your campus? YES NO

Have you ever participated in international conferences/workshops? YES NO

If yes: How often did you participate in international conferences/workshops? _____

Has your work ever required you to live in another country? YES NO

If yes: how long were you abroad?

For me the biggest difficulty in the relationship with foreign students / faculty / colleagues is caused by

On a scale from 1= Strongly disagree, 2= Disagree, 3= Agree to 4= Strongly agree, how much do you disagree/agree with the following statements?

My participation in dental school activities:	1	2	3	4
- helps me to better understand others' world views.				
- helps me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).				
- has improved my capacity for cultural self-assessment.				
- has improved my capacity for adapting to culturally different and new environments.				
- has increased my interest in people from other cultures.				
- has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).				
- has improved my capacity to <u>listen</u> to people from other cultures.				
- has improved my capacity to <u>observe</u> people from other cultures.				
- has improved my capacity to <u>collect information</u> in an intercultural environment.				
- has improved my ability to adapt to different forms of intercultural communication and different teaching/learning styles.				
- has helped me to <u>become more flexible</u> with people from other cultures.				
- has helped me to improve my abilities to analyze, interpret and relate information presented in different cultural contexts				
- has helped me to improve my abilities to <u>analyze</u> information related to different cultures.				
- has helped me to improve my abilities to <u>interpret</u> information related to different cultures.				
- has helped me to improve my abilities to make sense of information about different cultures.				
- has helped me to take part in intercultural groups where I had opportunities to respect ways of expressions of each member and become more tolerant.				
- has helped me to understand better my own culture.				
- has improved my understanding of culture of others'.				
- has increased my respect for other cultures.				
- has increased my cultural empathy, e.g., the capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.				
- has helped me to understand the impact of culture on the social and historical contexts.				
- has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic- from others cultural perspectives).				
- has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).				
- has helped me to better understand the value of cultural diversity (mindfulness toward cultural diversity).				
- has impacted prejudices and stereotypes.				
- allowed discovery and increased my curiosity toward cultural diversity.				
- has changed my point of view about cultural community where I belong.				
- has helped me to learn through interaction with foreigners.				
- has helped me to know more and understand more culture and traditions of foreign colleagues.				
Intercultural competence are needed in my work.				

Please share with us any additional thoughts you may have:

Thank you very much for responding. If you have any questions about this study or would like to learn about our findings, please contact Lidia Wisniewska at lidiawis@umich.edu

Annex 2

**Eight international scientific articles
related to this Thesis**

RESEARCH ARTICLE

Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. An Internationalization of Higher Education and Research Perspective

Lidia M. Wisniewska^{1,2,3,*}, David M. Dohan Ehrenfest^{3,4,5}, Pablo Galindo-Moreno⁶, Jesús Domingo Segovia¹, Francesco Inchingolo⁷, Hom-Lay Wang³ and Manuel Fernández-Cruz¹

¹Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain; ²Department of International Relations, Paris Sorbonne University, Paris, France; ³Department of Periodontics and Oral Medicine, The University of Michigan, School of Dentistry, Ann Arbor, Michigan, USA; ⁴Department of Oral and Maxillofacial Surgery, The University of Michigan Health System, Ann Arbor, Michigan, USA; ⁵LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea; ⁶Oral Surgery and Implant Dentistry Department, School of Dentistry, University of Granada, Granada, Spain; ⁷Department of Interdisciplinary Medicine, University of Bari "Aldo Moro", Bari, Italy

Abstract: In dentistry and oral and maxillofacial surgery, the development of implantable biomaterials and the understanding of their molecular, cellular and pharmaceutical aspects are currently major fields of research and education, with a considerable impact on the daily clinical practice and the evolution of therapeutic strategies. In the era of globalized economy of knowledge and science, this scientific domain needs the development of global cooperation and a paradigm evolution in the organizational culture of the dental sciences and related dental industry. Despite political pressure and theoretical efforts, the internationalization of higher education and research today in dentistry and biomaterials remains in general quite superficial and mostly dependent on the efforts of a few leaders of internationalization working through their personal networks, as it was assessed through the FAST scores (Fast Assessment Screening Test) calculated in various dental schools and groups worldwide through the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards). Cooperation in a multipolar multicultural community requires the development of strong intercultural competences, and this process remains limited in most institutions. These limits of international scientific cooperation can be observed through different markers, particularly the difficult and limited production of ISO standards (International Organization for Standardization) and the relatively low SCIENTI scores (Scientific Cooperation Internationalization Effort & Network Test & Index) of the specialized dental literature, particularly in comparison to the most significant medical literature. However, as an analytical tool to assess the scientific international cooperation effort between fields and periods, the SCIENTI screening system also highlighted a significant increase of the internationalization effort in the last years in the best dental biomaterials publications. Finally, an internationalization of higher education and research perspective is a very important approach to assess the evolution of the dental biomaterial science and highlights very clearly the future endeavors of this field, particularly the impact and interferences of private entities and companies in the development of this corpus of knowledge. It also reveals that the concept of independent not-for-profit Cooperation Internationalization Effort Literature (CIEL), in the various informal models that can be found worldwide around diverse leaderships, is the best perspective for a better science and understanding of molecular, cellular and pharmaceutical aspects of biomaterials in dentistry and oral and maxillofacial surgery.

ARTICLE HISTORY

Received: January 20, 2016
Revised: February 15, 2016
Accepted: November 22, 2016

DOI:
10.2174/13892010176661612131525
37

Keywords: Attitudes, culture, dental implants, education, international cooperation, international educational exchange, leadership.

*Address correspondence to the corresponding author at the Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Campus Universitario de Cartuja C.P. 18071, Granada, Spain; Tel: 0034-958248965; E-mail: liliw@interia.pl

1. DENTAL BIOMATERIALS EDUCATION AND RESEARCH: THE MODERN PARADIGM

1.1. A Permanent Evolution

In dentistry and oral and maxillofacial surgery, the development of new biomaterials and biotechnologies had a

considerable impact in the evolution of the therapeutic strategies, increasing considerably the treatment options and improving their reliability and long-term outcomes [1]. In the last 30 years, the research and education related to implantable materials in their various forms introduced a real paradigm shift in the daily practice of clinicians, but also in the organizational culture of the dental sciences and in the related dental industry.

This evolution impacted all aspects of the oral sciences, starting with the restorative materials used in conservative dentistry and prosthodontics in daily practice. But the most significant evolutions in last years have been observed particularly in periodontology and oral and maxillofacial surgery, with the considerable development of dental implants, bone and soft tissue materials and regenerative medicine strategies [2, 3]. All aspects of implant dentistry represent nowadays a considerable volume of scientific literature (with a large number of specialized journals for example, most of them in the highest impact factors of the dental sciences), continuing education courses and meetings. Biomaterials and their daily clinical applications represent today a major research and education topic [4, 5].

After a few major scientific leaps (such as the concept of osseointegration with titanium screws, the improvement of ceramic systems, the development of modern bone materials and modern surgical instruments), the development of new materials and technologies seemed to reach a period of stabilization, where conceptual breakthroughs are less obvious and a majority of discovery are more related to refining classical concepts [4, 6].

Research on oral biomaterials is nowadays more and more complex, far from the empirical enthusiastic beginning that allowed the main early discoveries [4]. This period of maturity implies a quest for a better understanding of the molecular, cellular and pharmaceutical aspects of these materials, in order to refine and sometimes redefine the classical concepts and develop new ideas [2]. This research also implies a significant cost and investment, a difficult effort in a time where resources become more scarce and split between more research groups. Global competition, both Academic and Industrial, also affects the potential resources that can be allocated to the development of new concepts and products.

1.2. Evolution of the Industry

The dental implant Industry is a good illustration of this evolution [7]. In the early years after the validation of the osseointegration concept of titanium screws, most of the Industry was located in Europe (particularly Switzerland and Sweden) and in the USA (particularly in California, Florida, and more scarcely on the East Coast). This Industry was growing and became very profitable, what allowed significant innovations and the permanent improvement of the products [1]. The dark side of this relative monopole in the early times was that the growth of innovation was probably impaired and slowed down by some ideological positions of the early opinion leaders [5]. Passing this first plateau of maturity, this field continued to evolve actively under the

pressure of many newcomers. As this Industry appeared very profitable, many new companies were developed to propose new implant models, bone materials and instruments of implant dentistry [8]. This process was particularly strong in some European countries (France, Italy, Germany, Spain particularly) and in the USA, and finally appeared in completely new cultural areas (particularly in Asia and South America), with the development and maturity of these new markets [9-13]; for example, nowadays, South Korea and Brazil are among the most active implant markets, and South Korean and Brazilian companies became significant industrial players; simultaneously, strong education and research activities in implantology have been developed actively in these countries [14].

Finally, the major companies were massively cloned by smaller producers (sometimes illegally, with significant part of markets occupied by local producers described as “pirates” in some countries), leading to a fall of benefits for most companies and significant cost-cut in Research & Development [7]. The analysis of the current Industrial presence reveals that the Industry is now smaller and more spread worldwide, so are also the source of funding: markets are more split and shared by more actors/stakeholders [14]. This saturation of the market, combined with the fear of proposing innovative but less efficient products (as it happened in fact many times in the last 10 years to major companies), finally induced a relative stagnation in terms of innovation.

1.3. The Need of Global Cooperation in Research and Education

This is a new parameter that appeared in the history of this field: in a multipolar World, the Industry and Academic Communities are no more concentrated in a few countries [14]. No one can claim to be right alone; leadership is shared and clearly debated. This is a positive evolution, what offers more diversity in opinions, allows new ideas to grow and spread, and this is a needed ground for innovation. However, consequently, the development of new materials and paradigms requires nowadays cooperation at a global scale to create a real concrete impact. This implies to learn to share and work together in our research projects, to discuss together and to promote these new concepts together in the world scientific cacophony, particularly through education efforts.

The modern paradigm in research for biomaterials in general, and in oral and maxillofacial applications in particular, implies global cooperation in research and education [15]. Behind the theoretical concept, this approach raises many difficulties, particularly the capacity of intercultural cooperation [16]. This notion of Internationalization of Higher Education and Research is in fact a very important, concrete and actual topic for most Universities (and for the specialists in the sciences of education) as, despite their efforts, it is still a major challenge for everyone [17-19]. In the field of oral and maxillofacial biomaterials and biotechnologies, the internationalization of higher education and research is quite inhomogeneous and difficult, despite the official efforts to promote it and the misleading appearance.

2. INTERNATIONALIZATION OF HIGHER EDUCATION AND RESEARCH TODAY IN DENTISTRY AND BIOMATERIALS

2.1. Dental Education and Research Perspectives

The process of internationalization of higher education and research is one of the most important evolutions of the Academic world in the last decades [17, 20-24]. It is a natural consequence of the general process of globalization of the economy of sciences and knowledge. However, this internationalization is complex and difficult, due to the significant cultural differences between the numerous stakeholders of an Academic environment (teachers, researchers, students and administrative staff) [19, 25]. Each country and institution has a different organizational culture [26], and the national cultural differences of perception and action are frequently very strong barriers for a smooth and efficient international cooperation [18, 20]. The international behaviors of academics belonging to different scientific discipline diverge [27].

In dental education and research, the internationalization process and history reflect the particularities of the dental profession. Dental schools are first of all intended to train future clinicians. Like most medical specialties, dental surgery is in general a protected profession in many countries, with limited international recognition of diploma. This situation evolved only recently with the development of international diploma recognition in some area (particularly between European countries) or through bilateral agreements (for example between France and Quebec). Despite these evolutions, international education in dentistry remains quite limited (in comparison to other specialties on a University campus) at the undergraduate level.

On the other hand, most of the international activities and internationalization process of the dental schools worldwide can be observed in the post-graduate programs and in the research activities. When observing, the activities related to biomaterials in oral and maxillofacial surgery, dental schools are relevant markers of the real internationalization process of their university and the evolution of a campus [28-30].

2.2. Cooperation in a Multipolar Multicultural Community: the ISAIAS Paradigm

The complex internationalization process and associated difficulties can be assessed through different methods, particularly through the evaluation of the development of the intercultural competences of the various stakeholders of the campus [31, 32]. In the last years, the POSEIDO Community (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization), an international scientific network and consortium of Academic Departments and Scientific societies, developed the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards) in order to evaluate the degree of internationalization and intercultural sensitivity of its many members worldwide [16]. This endeavor was funded as a strategy to assess and improve the intercultural competences among members [33], to promote a smooth and efficient global cooperation in the field of implant dentistry and biomaterial research and education.

To assess the intercultural competences in academic environments, Deardorff *et al.* proposed in 2004 a list of components of the intercultural competences, after studying 29 American Universities involved actively in the process of internationalization of higher education [33, 34]. This study is nowadays a reference for the definition of the components of intercultural competences. Based on these concepts, a questionnaire of assessment of the internationalization efforts of an academic environment through the development of intercultural competences had been developed, statistically tested and validated between the University of Granada (Spain) and the Oslo and Akershus University College (Norway) [35]. This questionnaire can be formulated differently (and contextualized) for various stakeholders, and it was selected as an instrument of screening in the ISAIAS project (Fast Assessment Screening Test (FAST) Score) [28].

The field study and FAST scores observed in various campus in Europe, Americas and Asia highlighted differences of form but similarities in content in the internationalization process of these international dental schools [28-30]. One of the important conclusions of these first research works was the observation that the internationalization of research and education in the field of biomaterials and implant dentistry is particularly dependent on the presence of leaders of internationalization in the groups. In short, the capacity of developing international activities is based first of all on the personality (modeled often by previous international and intercultural experiences) of a few leaders (who are able to involve others), and this is particularly strong in dentistry and oral and maxillofacial surgery.

3. INTERNATIONAL COOPERATION IN BIOMATERIAL RESEARCH: THE ISO EXAMPLE

3.1. The Development of ISO Standards

An interesting illustration of the relevance and challenges of internationalization of research and education in the field of oral biomaterials can be observed in a major institution developing standards on all aspects of biomaterials: the ISO (International Organization for Standardization). ISO is the world largest organization for the development and publication of international standards. As an independent non-governmental organization coordinated from a central secretariat in Geneva, Switzerland, ISO is built as a network of national standards entities representing their respective countries on the global scene. ISO was created in 1947 with 25 member countries, with the objective to facilitate the international coordination and unification of industrial standards. Nowadays, the ISO regroups national standard entities from 164 countries and published almost 20 000 international standards covering most aspects of technology, manufacturing and business. The same mechanisms of standardization are applied from medical devices and food safety to electronics, and help to secure the products and services of daily life.

International standards define the state of the art specifications for products, services and good practice. In a globalized economy, the international standards serve to secure the exchanges of products between countries with different organizational cultures and levels of control, but with similar objectives of security and efficiency. Therefore, a standard

should be considered as a major instrument of safety and simplification of international trade.

However, international standards are slow to prepare, particularly because they require a global consensus. Each ISO commission regroups representatives from all stakeholders of a field - users (clinicians in this case), industrials (e.g. implant companies), researchers and academic experts – in order to gather the expertise needed to elaborate a useful and applicable standard and a reference document. But the interests of producers and users may not be the same (if a standard impose more restrictions and controls to the manufacturer); the opinions between countries and Experts can be very different also. The consensus on a very extensive and accurate standard is always difficult to achieve.

3.2. An Illustration of the Limits of International Scientific Cooperation

The development of ISO standards illustrates very well the difficulties of international cooperation in education and research, particularly when considering molecular, cellular and pharmaceutical aspects of biomaterials in dentistry and oral and maxillofacial Surgery.

In the field of dental biomaterials, the number of usable standards is very small, and their content remains very basic. If we consider the wide field of dental implants and related implantable materials (such as bone substitutes and membranes) - one of the most active research and education field in dentistry today - we can count only 7 active international ISO standards at this time, and very limited perspectives of new projects. This ensemble is very small, considering that implantable materials represent the largest amount of new products and publications today in dentistry, and one of the most competitive and active industrial fields. Moreover, the 7 current standards in the “dental implants” section (ISO TC106/SC8) have limited impact and are not qualitative: they mostly describe basic information of technical files such as packaging, sterilization, basic mechanical testing, etc.

The current standards produced through ISO TC106/SC8 are as follows:

- ISO 22803:2004 - Dentistry - Membrane materials for guided tissue regeneration in oral and maxillofacial surgery - Contents of a technical file.
- ISO 14801:2007 - Dentistry - Implants - Dynamic fatigue test for endosseous dental implants.
- ISO 22794:2007 - Dentistry - Implantable materials for bone filling and augmentation in oral and maxillofacial surgery - Contents of a technical file.
- ISO 10451:2010 - Dentistry - Contents of technical file for dental implant systems.
- ISO 11953:2010 - Dentistry - Implants - Clinical performance of hand torque instruments.
- ISO 16498:2013 - Dentistry - Minimal dental implant data set for clinical use.
- ISO 19429:2016 - Dentistry - Designation system for dental implants.

When considering specifically the considerable field of bone biomaterials and membranes for bone regeneration, only 2 standards are associated to this domain in the previous list (both minimal standards limited to the description of the content of technical file). This situation at the ISO illustrates very well the difficulties – and sometimes impossibility – of international scientific cooperation in very accurate fields. In theory, ISO meetings should offer the opportunity of creating chains of inter-laboratory testing between scientific stakeholders (particularly universities from different countries and cultural areas); but practically, ISO standards remain very superficial and do not investigate molecular, cellular and pharmaceutical aspects of implantable biomaterials.

However, international cooperation is not only a problem of cultural area. When considering the European standards related to the previously described fields, it can be observed that the difficulty to cooperate and find agreements remains very strong also between countries part of the same European cultural area. For example, the project of reshaping the European standard and directive on dental implants “EN 1642 - Dentistry - Medical devices for dentistry - Dental implants” is a work on progress since more than 5 years and is still delayed due to disagreements on the very nature of the project.

Despite these failures, many groups continue to try to promote inter-laboratory testing and new standards for biomaterials, sometimes even outside of the ISO. This is difficult leadership to take, but some success can be observed. For example, the OASIS group (Open-Access Standards in Implantable Systems) developed recently an interesting standard for the accurate analysis of dental implant surfaces termed ISI (Implant Surface Identification) Standard [4, 9-13]. This system was acclaimed by professionals (users, some administrations and industries) and used as a scientific academic standard; it was proposed to ISO in 2015, but has not reached the final form of an ISO standard yet. When analyzing the example of ISI, it can be observed a strong leadership of some scientific stakeholders within an academic network, and the gathering of many partners to reach such an interesting result. However, this international cooperation appeared to be quite exceptional.

4. USING THE SCIENTI SYSTEM TO ASSESS THE SCIENTIFIC COOPERATION EFFORT

4.1. The SCIENTI Concept

In the last years, the form and importance of international cooperation has evolved significantly. It is a common governmental policy in most countries to promote and incent the search for real international cooperation [23, 24]. However, this remains quite theoretical, as can be observed in major examples such as ISO. To assess and understand the molecular, cellular and pharmaceutical aspects of biomaterials requires wide resources, and in theory, international cooperation should be an efficient way to improve efficiency. Practically, to evaluate the real level of international cooperation is always a challenge.

In order to evaluate the intensity of the Internationalization Efforts in Research and Education, some analytical methods were developed to screen the international literature in a scientific field, and to highlight the degree of interna-

tional and intercultural cooperation. The SCIENTI Score (Scientific Cooperation Internationalization Effort & Network Test & Index) has been developed through the ISAIAS program for this purpose; it is a good illustration of the methodology to use, and the complexity of assessing the “sincerity” and strength of scientific international cooperation. The SCIENTI Score can be applied to general medicine and dental journals, and point out very clearly the differences of collaboration in these domains.

4.2. To Determine the SCIENTI Score of a Publication

The SCIENTI System is a simple statistical instrument to analyze the internationalization level of an article, a journal or even a field at different times in history. To determine the score of a publication (or by extension of any document from an education/research work), the composition/characteristics of authorship and the main affiliation and cultural area of each author of the article must be observed and classified following 2 rules (rule of Diversity and rule of Majority), as defined in the Table 1. To highlight the score of a journal (or several journals of the same field) during a period of time, the SCIENTI score of each article of this journal must be determined and the mean value SCIENTI score of this ensemble of publications can be easily calculated.

The choice of the item to score is important and must be decided with care when using this analytical method. In general, original research and review articles represent more significant scientific endeavors than letters or short items, and therefore are more representatives of the real state of cooperation. However, this is not always exact, as some journals are exclusively built on a letter format for example. In the examples given in this article (Table 2), all calculations were based only on original research and review articles, what remains the most classical basis of comparison, particularly between different profiles of journals.

The analysis of the authors affiliations can sometime be a bit confusing and complicated (many authors are disclosing several affiliations nowadays). When authors have multiple affiliations, it cannot be considered as an intrinsic cooperation (a cooperation with themselves): it would create a bias, as an artificial cooperation. Therefore, the main affiliation of each author only shall be used (in general the first one, or the one most represented in the group).

To determine the SCIENTI score of an article, the analysis of authorship requires to follow 2 rules:

- The rule of Diversity: how many groups, from how many countries or cultural areas, are part of this work.
- The rule of Majority: no group should have the majority of authorship. The majority is defined as 50%+1 unit. The rule of majority highlights if a study is a real cooperation or if it is the work of one group shared with frequent outside collaborators.
- If a work fits in one category “rule of Diversity”, but does not fulfill the rule of Majority, then the score is diminished by 1. The score falls into the preceding category and gets the associated score. For example: one article is prepared by 3 groups - one Italian, one Korean and one Brazilian (3 cultural areas) - but the Brazilian group is in majority. Then the SCIENTI score is $4-1 = 3$.

4.3. Defining the Cultural Areas in International Cooperation

The definition of the cultural areas (needed in the SCIENTI system) is a very complex, debatable and tricky parameter. Many countries are geographically neighbors, but do not share, or claim to not share, the same cultural background. Their national cultures developed during centuries

Table 1. Rules of evaluation of the characteristics of authorship to determine the SCIENTI score of a publication.

The SCIENTI System: how to determine the internationalization score of a publication/education/research work	
Score composing the Index	Characteristics of the article <i>A Group is defined as a research/education administrative entity (e.g. clinic, institute or university). Ex: 2 Departments from the same University = same Group.</i>
0	All authors from the same Group.
1	Rule of Diversity: Authors belong to at least 2 different Groups, but all Groups in the same country. <i>Rule of Majority: No Group has the majority of authorship.</i>
2	Rule of Diversity: Authors belong to at least 2 different Groups, located in at least 2 different countries in the same cultural area. <i>Rule of Majority: No Group has the majority of the authorship.</i>
3	Rule of Diversity: Authors belong to at least 2 different Groups, located in 2 different cultural areas. <i>Rule of Majority: No Group has the majority of the authorship.</i>
4	Rule of Diversity: Authors belong to at least 3 different Groups located in 3 different cultural areas. <i>Rule of Majority: No Group has the majority of authorship.</i>
5	Rule of Diversity: Authors belong to at least 4 different Groups located in at least 4 different cultural areas. <i>Rule of Majority: No group has the majority of authorship.</i>

The main affiliations and cultural areas of the authors of the article must be observed and classified following 2 rules (rule of Diversity and rule of Majority).

are different. Even if their physical proximity on the map has been facilitating collateral influences, however, the cooperation sometimes is very difficult between many close countries. On the contrary, some groups of countries, while sharing quite different cultural or geographical patterns, are very active in cooperation (for example the European group, or some countries of the Commonwealth), as they share similar political systems that promote their collaboration. For the purpose of the ISAIAS Project funded by the POSEIDO Foundation, a map of the general cultural areas based on the observations and experience in scientific cooperation was suggested (Fig. 1). It voluntarily does not make a strict list of countries per group, but shows different areas recovering several countries and crossing each other. There is no ideal wording or separation for defining such parameter or area, as most neighbor countries influence each other. Moreover, some Universities have branches in other very different countries (for example, NYU and NYU Abu Dabi), while the entities belong in reality to the same cultural area. With this flexible way of separating main areas, it remains easy to determine what are the different cultural groups – as they often appear well identified in the scientific international literature. This approach gives some space for the freedom of interpretation by the users of this SCIENTI index and to adjust accordingly.

4.4. SCIENTI Scores between Categories of Journal and Periods

The SCIENTI scores of international scientific publications reveal very clearly the recent evolution of internationalization of higher education. A few examples of SCIENTI scores (calculated only with original research and review articles) from the 2014 content of 2 major medical and dental biomaterials journals (and one journal more specialized in cooperation) are provided in Table 2 for illustration.

If we compare for example the scores of articles published in the Clinical Oral Implant Research (COIR), the best dental journal (or one of the best depending on the yearly classification) specialized in implantable materials and clinical research, between year 2004 and year 2014, the SCIENTI scores almost doubled moving from 0,65 in 2004 (6 issues per year) to 1,13 in 2014 (6 issues in 6 months). As a general observable movement, publications appear more opened and internationally driven nowadays than 10 years ago.

However, despite this improvement, the SCIENTI score of the COIR journal remains in reality much lower than what could be expected, proving that international cooperation in implantable materials research remains superficial, with teams working more as competitors than as partners.

The score of this dental journal COIR can be compared with smaller specialized journals such as POSEIDO, which is specifically designed to promote internationalization of higher education and research and intercultural cooperation. This is a cooperative platform to promote debate and discussion between groups, and it is therefore the exact contrary from the traditional journals promoting more individualism and competition between groups. This is clearly observable in the SCIENTI scores, POSEIDO journal (all issues in 2014) showing a SCIENTI score of 4.05, almost 4 times higher than the COIR journal during the same period (6 issues from January to June 2014, score of 1.13), with particularly a few major articles regrouping a wide international team of co-workers.

Finally, the SCIENTI scores of the COIR can also be compared with the scores of a major-medical journal such as the Lancet, the most important medical journal for clinical research (impact Factor 39.207) with the New England Journal of Medicine (Impact Factor 59.558). In a comparable 6 months' period, the monthly COIR published in 2014 almost

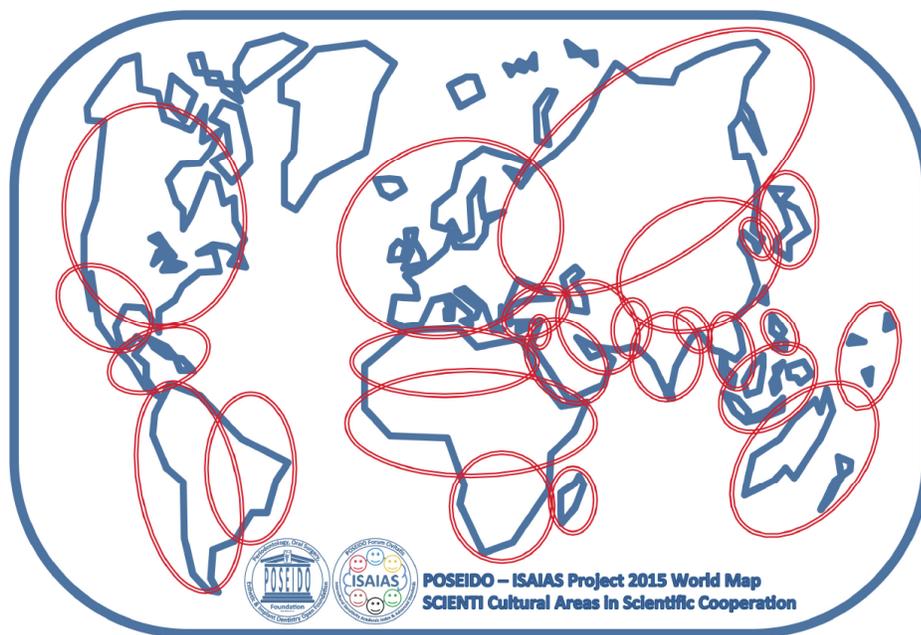


Fig. (1). SCIENTI system map of the general cultural areas in scientific cooperation (ISAIAS Project, POSEIDO Foundation).

Table 2. SCIENTI scores of 4 different journals (mean value, original research and review article only).

Journal & Year	Lancet 2014	COIR 2004	COIR 2014	POSEIDO 2014
SCIENTI Score	2,05	0,65	1,13	4,05

In the Table 2, the Lancet articles (weekly) were analyzed during the first 6 months in 2014. The COIR articles in 2004 were released bimonthly, and the 6 issues of the year were analyzed. The COIR articles in 2014 were released monthly, and only the first 6 issues were used (to compare with the same quantity of articles than in 2004). All articles from POSEIDO journal (quarterly) in 2014 were analyzed.

the same quantity of original research articles or review than the weekly Lancet journals, but the SCIENTI score of the Lancet is almost the double of the COIR score. This confirms again that the scores observed in the dental journals remain particularly low despite the political pressure and industrial need for internationalization, revealing the difficulties of cooperation in dental biomaterials research in a globalized world highly competitive for resources and scientific legitimacy. On the contrary, medical cooperation seems much more opened, the Lancet articles presenting often extensive multi-centric studies, with authors and teams coming from many continents and sometimes with shared leaderships in authorship. It reveals that medical sciences - at least at the high level encountered in the Lancet - needs structurally international cooperation and becomes de facto more open to international co-leadership than the research in oral and maxillofacial implantable biomaterials.

The examples presented and discussed above illustrate very concretely the current state of the international cooperation effort in dental biomaterials research, and the SCIENTI score is a very useful instrument to assess the situation in a field in general.

5. PERSPECTIVES IN HIGHER EDUCATION AND RESEARCH: IS THE CIEL A REALISTIC OBJECTIVE?

International cooperation in education and research is nowadays needed for successful research, innovation and discoveries, as a needed path for increasing resources and share new ideas in the globalized scientific and industrial world. This obvious paradigm shift is spreading in the medical field where this cooperation is developing at the highest research levels. However, despite the political and industrial pressure [18, 20], this movement of internationalization remains limited or at least superficial in many fields of dental research [30], particularly when considering the evaluation of molecular, cellular and pharmaceutical aspects of biomaterials in dentistry and oral and maxillofacial surgery. The various markers of internationalization (such as the FAST score on campus and the SCIENTI score of publications) and practical examples (such as the ISO database and the industrial market analysis) analyzed and reported in this article, highlight very clearly the current endeavors in the internationalization of education and research in the field.

This specific “social science” perspective used to analyze the evolution of the field allows pointing out the current limits of biomaterials research - and by extension regenerative medicine in the wide sense. These observations may explain why new major discoveries seem very rare in this field and

even very slow to spread practically, while the world has never been so quick and connected theoretically. These observations are, however, not uncommon, and several research groups were working in the last years in the development of the CIEL concept (Cooperation Internationalization Effort Literature). The CIEL is an endeavor to promote international multicentric projects and joint research plans in dental sciences relying on key academic centers worldwide working in a network, in order to improve the quality and relevance of the literature. It is very similar to the patterns of development that can be observed in Medicine.

Nowadays in dental implantable biomaterials research, the largest international research and education networks are mostly private entities, developed and funded by some major companies. Even if these networks are managed through Foundation and not-for-profit entities, they are clearly supporting a for-profit vision, as it is clearly perceptible in their activities and perceived by all stakeholders of the dental profession: for example ITI Foundation – International Team for Implantology – is the not-for-profit facade of Straumann (Basel, Switzerland, the world leader in dental implants) [36-38] and Osteology Foundation is the not-for-profit facade of Geistlich (Wolhusen, Switzerland, one world leader in bone substitutes). Most users of implantable materials are nowadays aware and complaining that the literature is too much controlled by some major companies and few academic centers, thus blocking or impairing the development of new ideas and products [14, 39]. There is clearly nowadays a competition between industrial and scientific interests. This monopolistic situation evolved through the development of many new industrial players, but also with the growth of open-access publications and new international publishers [40-43]: a huge quantity of new indexed scientific journals appeared and allowed the spreading of research works that were blocked by some classical specialized journals [43, 44]. The globalization of education and knowledge is unavoidable, and it allowed freeing new scientific forces that were previously blocked, pushing for this internationalization movement despite very conservative attitudes [43].

The development of intercultural competences played a significant role in these evolutions [14, 34, 35, 45, 46]. The CIEL concept implies to develop research and education groups through a network of national leaders of internationalization, independently from major industrial funding companies [15, 16]. If this approach is very common in medicine, where researchers are counting first of all on public grants for their heavy research, it is still very uncommon in the dental sciences, where companies are still very present. This concept is in reality perceptible everywhere nowadays [14], as can be observed in some publications, particularly

independent classifications [4, 6, 47, 48] and international works on implantable materials [9-13], and it is clearly a relevant and needed objective.

It is not clear what will be the future of internationalization in the field. The CIEL concept is in fact growing de facto, simply due to the uncontrollable nature of the globalization of the market of knowledge and implantable materials. If it is a realistic objective, it is also the source of threats, as globalization brings not only new opportunities but also disorders and sometimes chaos to the field [4, 6]. Intercultural differences are also the source of conflicts and misunderstandings [26], and the literature may finally become more and more re-centered on cultural areas and confusing. As a conclusion, an internationalization of higher education and research perspective is nowadays very much needed when considering the evaluation and understanding of the dental literature; the development of intercultural skills should become a priority to develop international cooperation, particularly in the very dynamic period of expansion of biomaterial research.

CONFLICT OF INTEREST

The author(s) confirm that this article content has no conflict of interest.

ACKNOWLEDGEMENTS

This work is part of the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France.

AUTHOR CONTRIBUTIONS

LW, MFC, DDE and HLW were leading the general organization and main financial support of this international project. All authors participated in the development of a consensual analytical process, in the collection of samples and data in their respective university and country, and in the elaboration of the manuscript.

REFERENCES

- [1] Albrektsson, T.; Sennerby, L.; Wennerberg, A. State of the art of oral implants. *Periodontology*, **2000**, *47*, 15-26.
- [2] Del Corso, M.; Vervelle, A.; Simonpieri, A.; Jimbo, R.; Inchingolo, F.; Sammartino, G.; Dohan Ehrenfest, D.M. Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 1: Periodontal and dentoalveolar surgery. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1207-1230.
- [3] Simonpieri, A.; Del Corso, M.; Vervelle, A.; Jimbo, R.; Inchingolo, F.; Sammartino, G.; Dohan Ehrenfest, D.M. Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 2: Bone graft, implant and reconstructive surgery. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1231-1256.
- [4] Dohan Ehrenfest, D.M.; Coelho, P.G.; Kang, B.S.; Sul, Y.T.; Albrektsson, T. Classification of osseointegrated implant surfaces:

- materials, chemistry and topography. *Trends Biotechnol.*, **2010**, *28*(4), 198-206.
- [5] Coelho, P.G.; Granjeiro, J.M.; Romanos, G.E.; Suzuki, M.; Silva, N.R.; Cardaropoli, G.; Thompson, V.P.; Lemons, J.E. Basic research methods and current trends of dental implant surfaces. *J. Biomed. Mater. Res. B Appl. Biomater.*, **2009**, *88*(2), 579-596.
- [6] Dohan Ehrenfest, D.M.; Rasmusson, L.; Albrektsson, T. Classification of platelet concentrates: from pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF). *Trends Biotechnol.*, **2009**, *27*(3), 158-167.
- [7] Dohan Ehrenfest, D.M.; Rutkowski, J.L. Evolution of the dental implant market: an African tale revisited. *J. Oral Implantol.*, **2012**, *38*(3), 201-202.
- [8] Dohan Ehrenfest, D.M.; Vazquez, L.; Park, Y.J.; Sammartino, G.; Bernard, J.P. Identification card and codification of the chemical and morphological characteristics of 14 dental implant surfaces. *J. Oral Implantol.*, **2011**, *37*(5), 525-542.
- [9] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: Description of the Implant Surface Identification Standard (ISIS) codification system. *POSEIDO*, **2014**, *2*(1), 7-22.
- [10] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 2: anodized and Titanium Plasma-Sprayed (TPS) surfaces (Group 1, metallurgy modification). *POSEIDO*, **2014**, *2*(1), 23-35.
- [11] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 3: sand-blasted/acid-etched (SLA type) and related surfaces (Group 2A, main subtractive process). *POSEIDO*, **2014**, *2*(1), 37-55.
- [12] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 4: Resorbable Blasting Media (RBM), Dual Acid-Etched (DAE), Subtractive Impregnated Micro/Nanotextured (SIMN) and related surfaces (Group 2B, other subtractive process). *POSEIDO*, **2014**, *2*(1), 57-79.
- [13] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 5: Chemically coated surfaces (Group 3, coating) and implant collar surfaces (Group 4, collar). *POSEIDO*, **2014**, *2*(1), 81-104.
- [14] Barao, V.A.; Shyamsunder, N.; Yuan, J.C.; Knoernschild, K.L.; Assuncao, W.G.; Sukotjo, C. Trends in funding, internationalization, and types of study for original articles published in five implant-related journals between 2005 and 2009. *Int. J. Oral Maxillofac. Implants*, **2012**, *27*(1), 69-76.
- [15] Sammartino, G.; Del Corso, M.; Wisniewska, L.M.; Bielecki, T.; Andia, I.; Pinto, N.R.; Zhang, C.Q.; Zou, D.R.; Dohan Ehrenfest, D.M. The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinary and international collaboration in tissue engineering and regenerative medicine. *POSEIDO*, **2014**, *2*(2), 105-115.
- [16] Dohan Ehrenfest, D.M.; Wisniewska, L.M.; Shibli, J.A.; Mirgazitov, M.Z.; Zou, D.R.; Pinto, N.R.; Bernard, J.P.; Sammartino, G.; Wang, H.L. Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research. *POSEIDO*, **2014**, *2*(3), 167-177.
- [17] Altbach, P.G.; Knight, J. The Internationalization of Higher Education: Motivations and Realities. *J. Studies Int. Educat.* **2007**, *11*(3-4), 290-305.
- [18] Kim, T. Internationalisation of Higher Education in South Korea: Reality, rhetoric, and disparity in academic culture and identities. *Austral. J. Education*, **2005**, *49*(1), 89-103.

- [19] Moon, R.J. Internationalisation without cultural diversity? Higher education in Korea. *Comparat. Education*, **2016**, 52(1), 91-108.
- [20] Byun, K.; Kim, M. Shifting Patterns of the Government's Policies for the Internationalization of Korean Higher Education. *J. Studies Int. Education*, **2011**, 15(5), 467-486.
- [21] Jon, J.E. Realizing Internationalization at Home in Korean Higher Education: Promoting Domestic Students' Interaction with International Students and Intercultural Competence. *J. Studies Int. Education*, **2013**, 17(4), 455-470.
- [22] Knight, J. Internationalization remodeled: definition, approaches, and rationales. *J. Studies Int. Education*, **2004**, 8(1), 5-31.
- [23] Deardorff, D.K.; de Wit, H.; Heyl, J.D.; Adams, T. The SAGE Handbook of International Higher Education. *SAGE Publications, Inc. ISBN: 9781412999212*, **2012**.
- [24] de Wit, H.; Hunter, F.; Howard, L.; Egron-Polak, E. Directorate-General for Internal Policies. Policy Department B: Structural and Cohesion Policies. Culture and Education. Internationalisation of Higher Education. *European Union*, **2015**.
- [25] Koehn, P.H.; Deardorff, D.K.; Bolognese, K.D. Enhancing International Research and Development-Project Activity on University Campuses: Insights From U.S. Senior International Officers. *J. Studies Int. Education*, **2011**, 15(4), 332-350.
- [26] Hofstede, G.; Hofstede, G.J.; Minkov, M. Cultures and organizations. Software of the mind. Intercultural cooperation and its importance for survival. *London. McGraw-Hill. ISBN 978-0-07-1664418-9*, **2010**.
- [27] Rostan, M.; Ceravolo, F.A. The Internationalisation of the Academy: Convergence and Divergence across Disciplines. *Europ. Rev.*, **2015**, 23(S1), S38-S54.
- [28] Wisniewska, L.M.; Jo, Y.W.; Kim, S.Y.; Amr, S.; Khoury, G.; Galindo-Moreno, P.; Sánchez-Fernández, E.; Carrillo-Badillo, A.M.; Renta-Davids, A.I.; Marenzi, G.; Sammartino, G.; Wang, H.L.; Dohan Ehrenfest, D.M.; Fernández-Cruz, M. The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score. *POSEIDO*, **2014**, 2(3), 179-194.
- [29] Wisniewska, L.M.; Jo, Y.W.; Kim, S.Y.; Amr, S.; Khoury, G.; Galindo-Moreno, P.; Sánchez-Fernández, E.; Carrillo-Badillo, A.M.; Renta-Davids, A.I.; Marenzi, G.; Sammartino, G.; Wang, H.L.; Dohan Ehrenfest, D.M.; Fernández-Cruz, M. The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. *POSEIDO*, **2014**, 2(3), 195-207.
- [30] Wisniewska, L.M.; Jo, Y.W.; Kim, S.Y.; Amr, S.; Khoury, G.; Galindo-Moreno, P.; Sánchez-Fernández, E.; Carrillo-Badillo, A.M.; Renta-Davids, A.I.; Marenzi, G.; Sammartino, G.; Wang, H.L.; Dohan Ehrenfest, D.M.; Fernández-Cruz, M. The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score. *POSEIDO*, **2014**, 2(3), 209-223.
- [31] Knight, J. Monitoring the Quality and Progress of Internationalization. *J. Studies Int. Education*, **2001**, 5(3), 228-243.
- [32] Olson, C.L.; Kroeger, K.R. Global Competency and Intercultural Sensitivity. *J. Studies Int. Education*, **2001**, 5(2), 116-137.
- [33] Deardorff, D.K. The SAGE Handbook of Intercultural Competence. *SAGE Publications, Inc. ISBN: 9781412960458*, **2009**.
- [34] Deardorff, D.K. Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization. *J. Studies Int. Education*, **2006**, 10(3), 241-266.
- [35] Wisniewska, L.M. Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals. *Hogskolen i Akershus, Erasmus Mundus*, **2011**.
- [36] Proceedings of the 4th International Team for Implantology (ITI) Consensus Conference, August 2008, Stuttgart, Germany. *Int. J. Oral Maxillofac. Implants*, **2009**, 24 Suppl, 7-278.
- [37] Lai, H.C.; Zhang, Z.Y.; Wang, F.; Zhuang, L.F.; Liu, X. Resonance frequency analysis of stability on ITI implants with osteotome sinus floor elevation technique without grafting: a 5-month prospective study. *Clin. Oral Implants Res.*, **2008**, 19(5), 469-475.
- [38] Lai, H.C.; Zhang, Z.Y.; Zhuang, L.F.; Wang, F.; Liu, X.; Pu, Y.P. Early loading of ITI implants supporting maxillary fixed full-arch prostheses. *Clin. Oral Implants Res.*, **2008**, 19(11), 1129-1134.
- [39] Dohan Ehrenfest, D.M.; Zhang, C.Q.; Pinto, N.R.; Bielecki, T. Merchants shall be expelled from the Temple: the PRGF((R)) (Plasma-Preparation Rich in Growth Factors)-Endoret((R)) case. *Muscles Ligaments Tendons J.*, **2014**, 4(4), 473-477.
- [40] Butler, D. US seeks to make science free for all. *Nature*, **2010**, 464(7290), 822-823.
- [41] Van Noorden, R. Europe joins UK open-access bid. *Nature*, **2012**, 487(7407), 285.
- [42] Van Noorden, R. Britain aims for broad open access. *Nature*, **2012**, 486(7403), 302-303.
- [43] Wolpert, A.J. For the sake of inquiry and knowledge--the inevitability of open access. *New Engl. J. Med.*, **2013**, 368(9), 785-787.
- [44] Frank, M. Open but not free--publishing in the 21st century. *New Engl. J. Med.*, **2013**, 368(9), 787-789.
- [45] Novak, K.F.; Whitehead, A.W.; Close, J.M.; Kaplan, A.L. Students' perceived importance of diversity exposure and training in dental education. *J. Dent. Educ.*, **2004**, 68(3), 355-360.
- [46] Hewlett, E.R.; Davidson, P.L.; Nakazono, T.T.; Baumeister, S.E.; Carreon, D.C.; Freed, J.R. Effect of school environment on dental students' perceptions of cultural competency curricula and preparedness to care for diverse populations. *J. Dent. Educ.*, **2007**, 71(6), 810-818.
- [47] Dohan Ehrenfest, D.M.; Bielecki, T.; Mishra, A.; Borzini, P.; Inchingolo, F.; Sammartino, G.; Rasmusson, L.; Evert, P.A. In search of a consensus terminology in the field of platelet concentrates for surgical use: platelet-rich plasma (PRP), platelet-rich fibrin (PRF), fibrin gel polymerization and leukocytes. *Curr. Pharm. Biotechnol.*, **2012**, 13(7), 1131-1137.
- [48] Dohan Ehrenfest, D.M.; Kang, B.S.; Sammartino, G.; Shibli, J.A.; Wang, H.L.; Zou, D.R.; Bernard, J.P. Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization. *POSEIDO*, **2013**, 1(1), 7-15.

Editorial

Molecular, Cellular and Pharmaceutical Aspects of Biomaterials in Dentistry and Oral and Maxillofacial Surgery. International Cooperation, Translational Research and Transdisciplinarity

David M. Dohan Ehrenfest^{1,2,3}, Lidia M. Wisniewska^{3,4,5,*}, Agata Cieslik-Bielecka^{6,*}, Hom-Lay Wang³ and Manuel Fernández-Cruz⁴

¹Department of Oral and Maxillofacial Surgery, The University of Michigan Health System, Ann Arbor, Michigan, USA; ²LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea; ³Department of Periodontics and Oral Medicine, The University of Michigan, School of Dentistry, Ann Arbor, Michigan, USA; ⁴Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain; ⁵Department of International Relations, Paris Sorbonne University, Paris, France; ⁶Department of Maxillofacial Surgery, Medical University of Silesia, Sosnowiec, Poland

The development of new biomaterials and associated biotechnologies is a major domain of research and education in modern dentistry and oral and maxillofacial surgery. The evolution of the properties, safety and efficiency of implantable materials has contributed largely to the improvement of many dental treatments, and to the proposal of new therapeutic strategies [1]. The most common dental materials are for example filling materials (such as composite resins), ceramic materials and the many different forms of cements. However, nowadays the most active research field is clearly related to dental implants, bone materials and regenerative medicine strategies for the reconstruction of the oral tissues [2, 3]. These biomaterials and related technologies could only develop through the cooperation between many clinical disciplines, with an extensive support of basic sciences and an intense international cooperation. This combination of endeavors allowed pushing always further the limits of the current therapeutic options for oral rehabilitations. Implantable biomaterials sciences and their applications in oral and maxillofacial surgery illustrate the essence of transdisciplinarity, translational research and international cooperation [4].

The multidisciplinary or transdisciplinary field of implant-supported oral rehabilitation alone is generating a considerable literature - probably the largest literature from all dental-related topics nowadays [1, 5]. As a clinical discipline, dental implantology is at the border between oral and maxillofacial surgery (particularly when major reconstructions are needed), periodontology (particularly for the management of peri-implant tissues) and prosthodontics (as the finality of the implant placement remains the construction of an esthetic and functional implant-supported prosthesis). In most academic environments, it is common to observe that these implantable materials are used by multiple clinical departments, all involved in research and education on the topic. As many disciplines are interested in these therapeutic strategies, often with slightly different perspectives, the scientific production related to these biomaterials is particularly intense, and sometimes confusing. This transdisciplinarity offered many perspectives to these treatments and how to improve them. The prosthodontics perspective participated in the improvement of material resistance and implant-supported treatment conception and planning. The periodontology perspectives offered adapted concepts in the management of peri-implant tissues, while the oral and maxillofacial surgery perspectives highlighted the widest possibilities of tissue reconstruction or regeneration.

This transdisciplinarity extends also far outside the limited dental field, to most medical disciplines, as biomaterials have often multiple potential applications in the Human body. Dental implants, bone substitutes, surgical adjuvants and other instruments, and the way to combine all of them into a successful therapeutic strategy, represent particularly the new Frontier in regenerative medicine [2, 3], with numerous applications in orthopedic, plastic surgery and other related medical disciplines. For example, the use of platelet concentrates for surgical use (Platelet-Rich Plasma PRP or Platelet-Rich Fibrin PRF families) developed widely in oral and maxillofacial surgery [2, 3, 6], and the current main technique (called L-PRF, Leukocyte- and Platelet-Rich Fibrin) offered also very interesting results for the treatment of skin ulcers and as a wound healing adjuvant in general [7]. In fact, the regeneration of small bone volumes, the improvement of soft tissue healing and the development of implantable materials with better biological and biomechanical properties have considerable impact in the improvement of treatment outcomes and applications in a wide array of medical sciences.

The field of dental implants and related biomaterials is also nowadays the heart of translational research in dentistry [1]. All the new biomaterials are thoroughly designed and tested by material scientists [5, 8], before they are finally tested *in vitro*, *in vivo* in animal models and finally in clinical settings [9]. Even after clinical validation of a biomaterial, it goes again under evaluation and analysis to understand and highlight the molecular, cellular and pharmaceutical aspects and mechanisms of its

success (or failure). The translational research movement is permanent, in both directions (basic to clinical sciences and vice versa), with implantable materials.

To illustrate this translational research nature, dental implants are perfect examples. Dental implants can be globally defined through 3 parameters: implant macrodesign (and correlation with its osteotomy chamber), implant surface characteristics and biomechanical strength of implant/abutment connection [5]. If implant/abutment connections are widely tested by mechanical engineers, implant macrodesign and surface implies a wide range of basic science researchers for its development (engineering of new surfaces, with different micro and sometimes nano structures and chemical modification), characterization (surface engineers to analyze the surface characteristics) and evaluation (cell biology for *in vitro* testing, animal study with mechanical testing and bone histology for *in vivo* testing) before it reaches the clinical field [5, 8]. This translational approach is unavoidable with most implantable materials, and consequently this field is generating the largest quantity of scientific articles [9].

One final aspect of this field is related to social sciences and appeared quite recently with the considerable development of this scientific field: the internationalization of higher education and research in this domain, its importance and its consequences [10, 11]. With the growth of the scientific field and its industrial development, implant dentistry became step by step a major discipline worldwide in oral and maxillofacial sciences, leading to the constitution of various national leaderships and centers of research and education [11, 12]. The international cooperation is an important step to develop and to spread new ideas and projects, to promote debate, contradiction and sometimes consensus [13], and finally to grow a shared literature with less misunderstandings, confusion and bias [8, 14]. This movement of globalization of knowledge can be observed in all aspects of Academia. Implantable materials and related sciences are facing the same movement and endeavors in this path to internationalization, with many specificities related to the important presence of for-profit entities – implant or biomaterials companies or education groups – in this field [11].

In this special issue, many timely aspects of the current research in implantable biomaterials were presented and discussed in extensive reviews by major authors of their respective field and from all continents.

This teamwork starts exactly by these very rarely discussed aspects of internationalization of higher education and research, to offer first a social science perspective on the field.

In the following articles, most major current aspects of biomaterials in dentistry and oral and maxillofacial surgery are introduced. Several articles are focusing on the molecular, cellular and pharmaceutical aspects of biomaterials used for bone grafting, particularly during sinus-lift procedures and during the management of post-extraction sockets. More specific aspects were investigated by other authors, such as calcium phosphate materials associated with antibiotic release, various forms of synthetic hydroxyapatite bone substitutes and the mechanisms associated with autologous grafts. The biological mechanisms of dental implants were also discussed in this issue, insisting particularly on the impact of implant surface topography on peri-implant tissues. One original article reviews specifically more dental aspects, particularly the molecular and pharmaceutical aspects of materials used for the prevention of tooth structure loss.

Finally, this special issue was first of all designed as a platform of debate and clarification on a very wide field, a field too wide to be reviewed extensively in one single issue. Therefore the articles gathered for this special issue highlight only a selection of key aspects of the current dental biomaterial sciences, both founding knowledge and innovative perspectives for the future of the field. Built with a wide diversity of authors, this collection of reviews gives considerable information and highlights some new perspectives for a better understanding of the main aspects of this transdisciplinary translational field in the era of internationalization of knowledge.

CONFLICT OF INTEREST

The author(s) confirm that this article content has no conflict of interest.

ACKNOWLEDGEMENTS

This special issue was supported by the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France.

REFERENCES

- [1] Albrektsson, T.; Sennerby, L.; Wennerberg, A. State of the art of oral implants. *Periodontol.*, **2000**, *2008*, *47*, 15-26.
- [2] Del Corso, M.; Vervelle, A.; Simonpieri, A.; Jimbo, R.; Inchingolo, F.; Sammartino, G.; Dohan Ehrenfest, D.M. Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 1: Periodontal and dentoalveolar surgery. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1207-1230.
- [3] Simonpieri, A.; Del Corso, M.; Vervelle, A.; Jimbo, R.; Inchingolo, F.; Sammartino, G.; Dohan Ehrenfest, D.M. Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 2: Bone graft, implant and reconstructive surgery. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1231-1256.
- [4] Dohan Ehrenfest, D.M.; Wang, H.L.; Bernard, J.P.; Sammartino, G. New biomaterials and regenerative medicine strategies in periodontology, oral surgery, esthetic and implant dentistry. *Biomed. Res. Int.*, **2015**, *2015*, 210792.

- [5] Dohan Ehrenfest, D.M.; Coelho, P.G.; Kang, B.S.; Sul, Y.T.; Albrektsson, T. Classification of osseointegrated implant surfaces: Materials, chemistry and topography. *Trends Biotechnol.*, **2010**, *28*(4), 198-206.
- [6] Dohan Ehrenfest, D.M.; Rasmusson, L.; Albrektsson, T. Classification of platelet concentrates: from pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF). *Trends Biotechnol.*, **2009**, *27*(3), 158-167.
- [7] Cieslik-Bielecka, A.; Choukroun, J.; Odin, G.; Dohan Ehrenfest, D.M. L-PRP/L-PRF in esthetic plastic surgery, regenerative medicine of the skin and chronic wounds. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1266-1277.
- [8] Dohan Ehrenfest, D.M.; Del Corso, M.; Kang, B.S.; Leclercq, P.; Mazor, Z.; Horowitz, R.A.; Russe, P.; Oh, H.K.; Zou, D.R.; Shibli, J.A.; Wang, H.L.; Bernard, J.P.; Sammartino, G. Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: Description of the Implant Surface Identification Standard (ISIS) codification system. *Poseido*, **2014**, *2*(1), 7-22.
- [9] Coelho, P.G.; Granjeiro, J.M.; Romanos, G.E.; Suzuki, M.; Silva, N.R.; Cardaropoli, G.; Thompson, V.P.; Lemons, J.E. Basic research methods and current trends of dental implant surfaces. *J. Biomed. Mater. Res. B Appl. Biomater.*, **2009**, *88*(2), 579-596.
- [10] Altbach, P.G.; Knight, J. The internationalization of higher education: Motivations and realities. *J. Studies Int. Educat.*, **2007**, *11*(3-4), 290-305.
- [11] Barao, V.A.; Shyamsunder, N.; Yuan, J.C.; Knoernschild, K.L.; Assuncao, W.G.; Sukotjo, C. Trends in funding, internationalization, and types of study for original articles published in five implant-related journals between 2005 and 2009. *Int. J. Oral Maxillofac. Implants*, **2012**, *27*(1), 69-76.
- [12] Wisniewska, L.M.; Jo, Y.W.; Kim, S.Y.; Amr, S.; Khoury, G.; Galindo-Moreno, P.; Sánchez-Fernández, E.; Carrillo-Badillo, A.M.; Renta-Davids, A.I.; Marenzi, G.; Sammartino, G.; Wang, H.L.; Dohan Ehrenfest, D.M.; Fernández-Cruz, M. The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score. *Poseido*, **2014**, *2*(3), 179-194.
- [13] Dohan Ehrenfest, D.M.; Wisniewska, L.M.; Shibli, J.A.; Mirgazitov, M.Z.; Zou, D.R.; Pinto, N.R.; Bernard, J.P.; Sammartino, G.; Wang, H.L. Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research. *Poseido*, **2014**, *2*(3), 167-177.
- [14] Dohan Ehrenfest, D.M.; Bielecki, T.; Mishra, A.; Borzini, P.; Inchingolo, F.; Sammartino, G.; Rasmusson, L.; Evert, P.A. In search of a consensus terminology in the field of platelet concentrates for surgical use: Platelet-rich plasma (PRP), platelet-rich fibrin (PRF), fibrin gel polymerization and leukocytes. *Curr. Pharm. Biotechnol.*, **2012**, *13*(7), 1131-1137.

Guest Editors: Current Pharmaceutical Biotechnology

Agata Cieslik-Bielecka

Department of Maxillofacial Surgery,
Medical University of Silesia, Sosnowiec,
Poland

E-mail: agatabielecka@poczta.onet.pl

Lidia M. Wisniewska

Department of Didactics and School Organization,
Faculty of Education Sciences, University of Granada,
Granada, Spain

E-mail: liliw@interia.pl

Research article

The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score

Lidia M. Wisniewska,^{1,2,3,*} Yeo-Won Jo,⁴ Sang-Yong Kim,³ Sarah Amr,⁵ Georges Khoury,⁶ Pablo Galindo-Moreno,⁷ Elena Sánchez-Fernández,⁷ Ana M. Carrillo-Badillo,⁷ Ana I. Renta-Davids,⁸ Gaetano Marenzi,⁹ Gilberto Sammartino,⁹ Hom-Lay Wang,¹⁰ David M. Dohan Ehrenfest,³ and Manuel Fernández-Cruz.¹

¹ Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain

² Department of International Relations, Paris Sorbonne University, Paris, France

³ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

⁴ Graduate School of Education, Chonnam National University, Gwangju, South Korea

⁵ Department of Periodontology, Faculty of Odontology, University Paris 5 Descartes, Paris, France

⁶ Department of Implantology, Faculty of Odontology, University Paris 7 Diderot, Paris, France

⁷ Oral Surgery and Implant Dentistry Department, School of Dentistry, University of Granada, Granada, Spain

⁸ Institute of Education Sciences, Rovira i Virgili University, Tarragona, Spain

⁹ Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples, Italy

¹⁰ Department of Periodontics and Oral Medicine, The University of Michigan, School of Dentistry, Ann Arbor, Michigan, USA

*Corresponding author: Lidia M. Wisniewska, liliw@interia.pl

Submitted on August 5th, 2014; accepted after major corrections on October 15th, 2014.

Abstract

Background and objectives. Internationalization is a major evolution in implant dentistry and biomaterial higher education and research. The aim of the present 3-part study was to apply the ISAIAS method (Intercultural Sensitivity Academic Index & Advanced Standards) in this highly specialized dental field, and to evaluate the impact of leaders of internationalization. In this first part, the ISAIAS method was applied to the general campus of 3 universities, to validate the method itself and to assess the internationalization efforts of the participant universities through the development of intercultural competences, particularly in the Asian and European contexts.

Materials and Methods. In each campus, a group of 20 Professors and 100 undergraduate students from 3 different Universities (respectively University of Granada, Spain; Paris-Sorbonne University, France; and Chonnam National University, South Korea) were observed through the ISAIAS FAST (Fast Assessment Screening Test) questionnaire and through intensive field study (mixed methodology, i.e. combination of qualitative and quantitative methods). A final ISAIAS FAST score (mean value) was calculated for each group, including the mean scores in the 4 dimensions of intercultural competences, and scores were integrated with field observation for interpretation.

Results. The scores observed in the 3 universities presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical from Universities with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the organizational culture of the institution.

Discussion and conclusions. The scores appeared coherent with the field observations in all aspects. The ISAIAS mixed methodology appeared as an easy and useful method to evaluate the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the internationalization efforts of these universities through the evaluation of the development of intercultural competences of the students and researchers/professors, but it requires to combine the FAST scores with an in-depth field study.

Keywords. Attitudes, culture, education, international cooperation, international educational exchange, leadership, universities.

1. Introduction

The process of internationalization of higher education and research is one of the strongest evolution of the Academic world worldwide of last decades [1], as the consequence of the general process of globalization of the economy of sciences and knowledge [2]. This process is however often complicated due to the very wide cultural differences between the various stakeholders of the Academic environment, teachers, researchers and students [3,4]. These national cultural differences of perception and action, and the different organizational cultures of each country and institution are often very strong barriers for a smooth and efficient international cooperation [5].

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) is an international scientific network of Academic Departments and Scientific societies and was developed as a consortium of Academic entities sharing the responsibilities of the global functioning of the network [6]. As a global interacademic experience, POSEIDO could have faced the stress and problems related to intercultural cooperation. However, the intercultural competences and experience of its members allowed to overcome all difficulties up to now among the 40 countries actually participating to this network, resulting in an intense collaborative activity, particularly in the field of biomaterial research [7-13]. It was hypothesized that the specific character of the local leaders of internationalization of the groups joining POSEIDO was at the origin of this smooth cooperation.

The POSEIDO community therefore funded the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards) in order to evaluate the degree of internationalization and intercultural sensitivity of the community members worldwide, and therefore develop new strategies and standards for the development of intercultural competences among members, partners and friends, in order to promote smoother and more efficient global cooperation in the field of implant dentistry and biomaterial research and education [14].

In the last years, many research projects have been developed to assess the intercultural competences in various professional environments [1,15]. In 2004, Deardorff et al. proposed the list of components of the intercultural competences [16], based on the studies of 29 American Universities involved actively in the process of internationalization of higher education. This study still serves today as the reference for the definition of what are the components of intercultural competences [1]. It was developed as a way to evaluate the impact of the internationalization efforts of the universities on the students.

Based on the concepts and key elements pointed out by Deardorff [17], a questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences had been developed, statistically tested and validated between the University of Granada and the Oslo and Akershus University College [18]. This questionnaire was then selected as a first instrument for the ISAIAS project for the screening assessment/evaluation of the internationalization process of a University through the development of intercultural competences among the Academic stakeholders. The questionnaire can be spelled in various parallel forms for students or for Academic professionals (researchers, teachers, professors, administrative staff). Using this questionnaire, the first method of evaluation developed by the ISAIAS global research group was the Fast Assessment Screening Test (FAST) Score.

In this series of articles, the ISAIAS FAST scores were calculated in 4 different Academic environments (France, Italy, Spain, South Korea) involved in **implant dentistry and biomaterial education and research** within the member Academic entities of the POSEIDO network, in order to estimate and understand the internationalization patterns of these universities, dental schools and implant and biomaterial research and education significant groups. This first study in 3 parts has been organized to compare an Asian model (the very specific Korean model in this case) with 3 different versions of the European environment, as the Asian/European interface could be a significant source of intercultural misunderstandings and anxiety in collaborations, and seemed therefore a very good example to develop and refine this method.

In this first article, the ISAIAS FAST method was put to the test at the scale of a whole campus, to evaluate its practical relevance. The questionnaire has been used for the general assessment of 3 different campus (1 Korean and 2 Europeans) with 3 very different cultural and well-identified backgrounds, history and strategy, in order to evaluate if the ISAIAS FAST score corresponds to the typical profile, easily observable and well documented of these 3 universities.

2. Materials and Methods

2.1. General methodology

The ISAIAS FAST questionnaire was proposed to 100 undergraduate and master students and 20 professors or researchers from various disciplines on the general campus of each participant university. The test sample is significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2012 and 2014 on the campus of the University of Granada (Granada, Spain), the Paris Sorbonne (Paris 4) University (Paris, France) and the Chonnam National University (Gwangju, South Korea). In this case study, it was decided to analyze two different old European universities (Granada and Paris), to be able to analyze and compare their different approaches to internationalization of higher education and research in the European context with a traditional Asian campus (Chonnam).

The process of data gathering followed the same procedure in Asian and European campuses (ethnographical case study). Mixed methodology was use, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. A mixed methods research design implies collecting, analyzing and mixing both quantitative and qualitative data obtained through difference sources and different methodologies. The combination of quantitative and qualitative approaches provides a better understanding of

research problems, is assuring the validity of research and captures different dimensions of the same phenomena. It is mandatory to understand the impact of national and organizational culture on internationalization processes and its impact on development of intercultural competences.

The qualitative methodology was based on field research: non controlled observation and direct, participative observation (participation in campus life, participation in cultural events, conferences), informal interview with academic staff (national and foreign), administrative staff (national and foreign), national students, international students and representative of students union, photographs, diary of the stay, universities websites and on-line forums about study in these universities. Review of the policy, research articles and reports on internationalization of higher education in these universities were also taken into account.

The quantitative methodology was using the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences. This questionnaire was previously developed, statistically tested and validated between the University of Granada and the Oslo and Akershus University College [18], based on the theory of development of intercultural competences, the concepts and the key parameters proposed by Deardorff. The previously validated questionnaire was slightly adapted to this specific study, and spelled in 2 slightly different forms adapted to students or to Academic professionals (researchers, teachers, professors), but both versions are strictly parallel and comparable. The analysis of the questionnaires allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people. Moreover, many of the responders of the questionnaires had an informal interview with the researcher, what permitted to validate the answers given in the questionnaire.

2.2. Description of the questionnaires

The questionnaires (opinion tool) were built in 2 slightly different forms. One was formulated for teachers and researchers to determine in which measure the participation in international research/educational projects has impacted the development of their intercultural competences. The second one was adapted for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or informal or personal meetings with foreign colleagues, etc.) - has impacted the development of their intercultural competences.

Each questionnaire was composed of 2 separated parts. The first part was gathering the main data of identification of the person filling this anonymous questionnaire, where the respondent was asked about information such as: sex, age, professional situation (undergraduate student, postgraduate student, technician/administrative staff, Professor/senior lecturer/researcher, other) and a series of general information related to his/her activity.

For teachers and researchers, the extended questions can be summarize as followed:

- How long have you been working with international research/education projects, and what kind of projects,
- Do you participate in international events related to international projects

(workshops, conferences), how many and what kind,

- Have international research/education projects required long stay abroad, how long and where; had you been abroad through university exchanges before starting international projects, how long and where; and would you like to go abroad for academic work, why and where,
- How often do you meet with your foreign partners concerning international research or education projects (presence meeting, online meeting, emails), and from which country are your main partners,
- From where were the foreigners you met on the campus and did the presence of foreign colleagues in the class/laboratory influence the value of the education,
- How do you feel with foreign partners, what is your biggest difficulty in the relationship with foreign partners, and how do you define intercultural competence.

For students, the extended questions can be summarize as:

- How long have you been studying at the University,
- Have you participated in any international events on the campus, and the kind of events (curricular or extracurricular),
- Have you ever been abroad through university exchange, where and how,
- Would you like to go abroad for study or work, why and where,
- From where were the foreigners you met on the campus and did the presence of foreign colleagues in the class influence the value of the education,
- Have the curricular and extracurricular activities offered on the campus given you the ability/skills to do your profession in culturally diverse environment,
- How do you feel with foreign colleagues, and what is your biggest difficulty in the relationship with foreign colleagues.

The questionnaire finally offered some free space to add reflections and comments of the person, in order to complete the experience.

The second part was the statistical part of the questionnaire with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under evaluation. The items based on the development theory of Deardorff and proposed for the ISAIAS FAST score were:

1. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has given me the opportunity to understand better other's (foreigners) world views.

2. It has helped me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).
3. It has improved my capacity for cultural self-assessment.
4. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has improved my capacity for adaptation to culturally different and new environments.
5. It has increased my interest in people from other cultures.
6. It has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).
7. It has improved my capacity to listen people from other cultures.
8. It has improved my capacity to observe people from other cultures.
9. It has improved my capacity to collect information (to listen and to observe) in an intercultural environment.
10. It has improved my ability to adapt to different forms of intercultural communication and different learning styles.
11. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to become more flexible with people from other culture.
12. It has helped me to improve my abilities to analyze, interpret and relate information brought in different cultural contexts (process information).
13. It has helped me to improve my abilities to analyze information related to different cultures.
14. It has helped me to improve my abilities to interpret information related to different cultures.
15. It has helped me to improve my abilities to relate information related to different cultures.
16. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to take part of an intercultural group where I had opportunity to respect ways of expressions of each member, becoming more tolerant.
17. It has helped me to understand better my own culture.
18. It has improved my understanding of culture of others'
19. It has increased my respect for other cultures.
20. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has increased my cultural empathy - The capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.
21. It has helped me to understand the impact of culture on the social and historical contexts.
22. It has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic- from others cultural perspectives).
23. It has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).

24. It has helped me to understand better the value of cultural diversity (mindfulness toward cultural diversity).
25. It has influenced prejudices and stereotypes.
26. It allowed discovery and increased my curiosity toward cultural diversity.
27. It has changed my point of view about the cultural community where I belong.
28. It has helped me to learn through interaction with foreigners.
29. My participation in international research/education project (or: the program proposed by the university (curricular and extracurricular activities)) has helped me to know more and understand more culture and traditions of foreign colleagues.
30. Intercultural competences are needed in my work.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Sorbonne campus and Spanish for the Granada campus), but a few questionnaires were also used in English when students or teachers/researchers were foreigners not perfectly comfortable with the local language.

2.3. Treatment of data and calculation of the ISAIAS FAST score

The theoretical framework for the analysis of the data collected on the campus was built taking into consideration the Hofstede's theory of intercultural dimensions [19], the Handy's theory of organizational culture [1], the Confucius's philosophy concepts (considering Asian campus particularly)[5,20], the theory of the development of intercultural competences [16,17], and the theories of internationalization of Knight and de Wit [1,3]. This theoretical background was needed, in order to synthesize for each campus a general situation of the internationalization efforts and of the impact of national and organizational culture, evaluated through the development of intercultural competences. Afterwards, the SWOT analysis was prepared in order to synthesize the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts on each campus. The results obtained from the questionnaire and the associated analyses finally served as a base of comparison between the different universities and their respective methods of implementation of the paradigm of internationalization of higher education and research.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They were regrouped in 4 groups, termed the 4 dimensions of the questionnaire (following and adapting the general components of intercultural competences proposed by Deardorff [16]):

1/ The first dimension was termed "Attitudes" and was composed of 7 items: 5, 6, 19, 24, 25, 26 and 30.

2/ The second dimension was termed "Knowledge and Comprehension" and was composed of 7 items: 1, 2, 17, 18, 21, 23 and 29.

3/ The third dimension was termed "Skills" and was composed of 8 items: 3, 7, 8, 9, 12, 13, 14 and 15.

4/ The fourth dimension was termed "Desire internal outcomes" and was composed of 8 items: 4, 10, 11, 16, 20, 22, 27, and 28.

The score of each dimension gave an important information on the development of each specific component of intercultural competences, and therefore in combination with first part of the questionnaire allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all answers composing a dimension were added, and the total was then divided by the number of items of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of people evaluated on each campus.

3. Results

Following the previously described mixed methodology, data have been collected on the campus. The answers for the questionnaires have been integrated in order to calculate for each participant university, the mean value of the global ISAIAS FAST score and of the scores of each dimension of intercultural competences. Results of the Professors and Researchers are presented in the **Table 1**, and results of the Students are presented in the **Table 2**.

The scores observed in the 3 universities presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical for Universities with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the organizational culture of the institution.

The scores observed in the University of Granada are the highest for students among the 3 universities, and the second highest for the Professors, highlighting the very strong policy and openness for internationalization of this University.

The scores observed in the Paris-Sorbonne University are the lowest in both groups between these 3 universities, highlighting the very traditional approach to globalization challenges of higher education and research.

The scores observed in the Chonnam National University are the highest among the Professors in these 3 universities, highlighting the general policy of the University and the frequent need for the Professors to get some diploma or research leave abroad during their career (mostly in the US). However, the score of the students on the general campus are much lower, illustrating the difficulties to internationalize this campus, particularly because of the cultural and language barrier.

The scores appeared coherent with the field observations in all aspects. Scores and field studies have been integrated in details in the discussion section.

Scores of Professors/Researchers on the general campus					
University Campus	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.55	2.75	2.74	2.68	2.682
Paris-Sorbonne University (France)	2.50	2.48	2.50	2.53	2.503
Chonnam National University (South Korea)	2.75	2.6	2.7	2.7	2.688

Table 1. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 3 different general campus.

Scores of Students on the general campus					
University Campus	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.7	2.55	2.58	2.6	2.606
Paris-Sorbonne University (France)	2.28	2.30	2.35	2.25	2.295
Chonnam National University (South Korea)	2.42	2.32	2.45	2.21	2.348

Table 2. Intercultural dimensions and total ISAIAS FAST scores of a group of Students from 3 different general campus.

4. Discussion

4.1. General Hypotheses and objectives of the ISAIAS project

The basic hypotheses of the ISAIAS project are that the national and organizational cultures have an impact on the development of intercultural competences, that the internationalization of education and research implies the development of intercultural competences, and that we can point out differences in internationalization of higher education and research in the various universities (particularly in European and Asian context in this case study). From these hypotheses, it is expected to develop instruments to evaluate the level of internationalization through the development of intercultural competences and define new standards for a smooth and efficient international collaboration, particularly within a specialized consortium such as POSEIDO.

The general objectives of the ISAIAS project are multiple, and the fast screening assessment proposed by the FAST score is only a preliminary approach of evaluation. The FAST score allows first to observe which components of intercultural competences (based on the Deardorff's theory) participants of the internationalization of education and research process are developing in the various universities. In combination with qualitative evaluation in the mixed methodology, the second objective of this work is to observe how the national and organizational cultures of the campus (including the teaching-learning methodology) and indirectly the profile of each individual (particularly the gender) influence the development of intercultural competences. The impact of recent research on internationalization of higher education on the current strategies of development of intercultural competences in the various tested universities shall also be evaluated and integrated in the global analysis. Finally, the SWOT analysis is required to find out the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts, and the differences and similarities in internationalization of higher education and research, in the various universities. The answers to all these questions can be synthesized through the general analysis of the collected data during the screening assessment of the campus following our methodology.

As a first result of this case study in European and Asian contexts, the FAST score of each entity was corresponding quite well with the qualitative evaluation of each campus, and therefore the instrument appeared suitable for a screening assessment of various academic environments through the POSEIDO network. All these aspects were discussed in details in the following chapters.

4.2. Internationalization endeavors in Europe and Asia

In the age of globalization, the internationalization of higher education and research is listed as one of the principal objectives of all academic institutions in the World [1,3]. The European universities started to be involved strongly in since 1998 with the Bologna and Lisbon processes and Copenhagen frameworks, working in common Hellenic-Roman civilization background. At the same time, Asian campuses started to introduce the western paradigm of internationalization of higher education, and they contextualized it into their own environment. The Asian countries have been internationalizing their universities, using Asian's meetings of collaboration, and within the background of Confucian civilization.

Since 2008, in order to strengthen collaboration between Asia and Europe, numbers of Conferences in the framework of the Asia - Europe Meetings (ASEM officially established in 1996) were held yearly. Nowadays the ASEM meetings include 48 members: South East

Asian countries, European Commission, ASEAN Secretariat, Australia, New Zealand and Russia. The Meetings focus on further interactions in the Educational, Professional, Cultural and Social Pillar, through common work on “Quality Assurance and Recognition”, “Engaging Business and Industry in Education”, “Balanced Mobility” and “Lifelong Learning including Technical and Vocational Education and Training”.

Use of English language on the big scale (especially in Asian environment) became one of the most visible changes in higher education landscape. The significant, quick increase of number of international students in European and in Asian contest has been taking place. Formation of new global leaders is the principal objective of the Asian university. These initiatives are strengthened by the “Atlantic Trust” (2009) - collaboration between the American, British universities and Asian universities for development of a global civil society, which will bind universities and countries together through common values and principals, and through English language.

However, the linguistic skills and many international students on the campus are not enough to build fruitful collaboration. Intercultural competences (ICC) have widely been recognized as an essential for peaceful coexistence in a diverse world. Numerous policy papers and recommendations of international organizations, such as The White Paper on Intercultural Dialogue (Council of Europe, 2008) have also expressed this need very clearly. In order to educate intercultural competent professionals, universities choose different approaches to internationalization, different rationales and strategies [1,3]. Various elements of internationalization of higher education were developed, for example: internationalization of curriculum, academic mobility of students and staff, international research/educational projects, etc. However, it is difficult to mention any innovation in this matter. Some countries like the United States, Canada, Australia, Norway (between others) focus on more active approaches to internationalization called “internationalization at home” [1,20] in order to give intercultural development also to 90% of the student population which does not have possibility to study abroad.

Huge resources are involved in internationalization efforts. How to evaluate its results? The statistics related with mobility and international conventions are not enough. Looking at the ICC development among campus population, as a result of internationalization effort is perceived as an adequate approach [1].

4.3. Understanding the dimensions of intercultural competences

In this study, the definition of intercultural competences proposed by Deardorff was used, as an ability to communicate effectively and appropriately in intercultural situations based on one’s intercultural attitudes, knowledge, skills and reflection abilities. The 4 dimensions of intercultural competences can be defined as followed:

- **Attitudes.** Deardorff considers the positive attitude toward intercultural situations as a basis for intercultural competence. Valuing cultural diversity, tolerating ambiguities, general openness are key elements of this dimension.
- **Knowledge and comprehension.** Intercultural knowledge (about our own culture and culture of others) permits us to acquire specific skills to be able to enter into conversation and interaction. Understanding of others worldview, understanding of the impact the culture has on behavior and communication are key elements of this dimension.

- **Skills.** The ability to listen, to observe and to interpret, to relate cultural elements, to evaluate are the key points of this dimension.
- **Desire Internal Outcomes.** It is understood as a reflection on intercultural interactions. The results of the development of attitudes, knowledge and skills related to different cultures impact strongly the ability to change perspective and to take a relative position toward of own cultural references. It leads to flexibility and adaptation to new intercultural situations.

4.4. About the University of Granada: score and observations

The University of Granada (Universidad de Granada, UGR) was founded in 1531 by Charles I, King of Spain. It is one of the biggest (third position considering number of students) national autonomous Spanish universities (80,000 students). As the only university of the city, the UGR brings huge trans-disciplinarity organized in Faculties and Schools. According to the last Shanghai Ranking, the UGR is in the range between 300 and 400, and its position among Spanish Universities is the 7th. The UGR is the most popular European destination of Erasmus students (the UGR was awarded Erasmus Gold Star in 2007 for his long time active involvement in this program), Maghreb and South American citizens.

The strategy of internationalization is one of the most important objectives of the UGR and it has been strongly developing since many years. Mission and vision of the university as well as many of the policy papers of the different entities promote international dimension at each level of the institution. Social media (Facebook, Twitter, etc.) are strongly used in international marketing. The internationalization efforts are managed by the Vice-Rector's Office for International Relations and Development Co-operation at all levels of the campus through annual strategic plans, which try to support economically all kinds of initiatives of internationalization which had not been covered by European and national funding. These efforts put the UGR in the Europe's top-ranking international universities. Every year, the UGR has in mobility over 4000 students, what makes it the first destination of Erasmus in Europe. Other programs are also very active (LLP/Erasmus, UGR Exchange Program and Erasmus Mundus, Tempus, Alfa, PCI, PEACE, etc) among students, academic and administrative staff. Most of the subjects at the UGR are taught in Spanish, and the UGR is logically very active in priority in Spanish speaking countries.

To improve its prestige and international visibility, the UGR is very present and active in numerous international networks and associations. In 2010, the UGR took over the presidency of two important networks: the European Coimbra Group of Universities and the South-American Association for Postgraduate Studies (AUIP), which is a UNESCO-recognized non-governmental international organization, whose aim is to promote postgraduate and doctoral studies in Latin-America. In fact, the UGR is one of the European institutions that receive the most external financing for the mobility and exchange of students, teaching staff and administration and services staff with non-European countries.

All these characteristics have been observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. Students at UGR have developed the most positive attitudes to internationalization and the highest scores in all dimensions of intercultural competences among the 3 participant universities, as a logical result of the general positive ambiance to internationalization promoted by the policy of the University and the large number of international students on the campus and mobilities. The scores of the Professors were a little bit higher, despite the frequent difficulties to interact in English,

as they have been encouraged to the participation in international research projects. Moreover, research and educational collaborations have been very active with South-American countries, which often share the same language. Despite these positive results, the scores also revealed that the process remained still moderate, as the scores were far under the threshold of 3. This marked also the practical limits in the internationalization of the campus, related to the organizational culture of the university and national dimensions, despite the real and perceptible enthusiasm [2].

4.5. About the University Paris Sorbonne: score and observations

The University of Paris (historically known as Sorbonne) has a very long history starting in the 12th century, and is now organized in 13 public universities with a specific number (between I to XIII) and name. Each university is characterized by a specific range of schools and specialties. There is often a thematic line in each university. For example, Paris 4 (Paris-Sorbonne) is specialized in Human Sciences, Literature, Language and Arts. Paris 5 (Descartes) is more scientific and medical, including particularly a School of Medicine, a School of Dentistry and a School of Pharmaceutical Sciences. In order to be more competitive in the current education and research globalized world, these universities have been regrouping in the last years. The process was triggered to optimize management and the use of resources, to improve trans-disciplinarity and to increase world visibility. Each new grouping of universities is supposed to form a kind of multidisciplinary collegiate university.

The strategy of internationalization is different between the various Paris universities, and is still under permanent evolution at this time. However, it remains in general quite traditional. Traditionally, education in the French university is only done in French and is therefore attracting in priority students from the French speaking countries. Even with this practical limitation of language, Paris Sorbonne University is very attractive for foreigners, due to its historical reputation of excellence in many fields and the attraction of Paris as a major western city. A large part of the internationalization efforts is placed in program of exchanges such as Erasmus, and almost all professors and teachers are French nationals, the national regulations of concours and recruitment of the faculty members being still very restricted. It is also considered that all foreign students have to adapt to the local mentality and patterns, and many aspects of the Anglo-Saxon approach of internationalization of higher education and research are not perceived positively or even conceptualized. International collaboration in the research dimension takes place mostly on the basis of personal relations between academics or at the level of faculty, and its level of institutionalization is different in each Parisian University. The multi-disciplinarity is strongly encouraged and the internationalization is expected to play a stimulating effect in this process. At this moment of the development of its international policy, the reciprocity has been chosen as a main approach to internationalization of higher education and research.

All these characteristics were very clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score. Both Professors and Students groups showed the lowest scores among the 3 universities, reflecting a lower enthusiasm for the internationalization process. This illustrated some traditional approach towards internationalization and the very French-centered aspects of the Paris-Sorbonne University described previously. The French strongly traditional organizational culture of this university was perceived as its heritage and strengths.

4.6. About the Chonnam National University: score and observations

Chonnam National University (CNU) was founded in 1952 in Honam region in Gwangju city (South Korea). The university emerged from the ashes of the Korean War, regrouping a few preexisting colleges, with the support of local citizens who wished to develop competent, qualified people. Gwangju (means “province of light”) has been always a very agricultural and cultural place. In the social perception, the CNU reminds as a place where democratic movements in 1980 started, as one of the best and the oldest university in the province, and as the 5th in the national ranking. It is also a quite large multidisciplinary university with more than 35,000 students enrolled each year.

Theoretically, the policy of the CNU is following the national educational policy framework where decentralization, innovation and internationalization of education and research have a very important role. The CNU’s mission is officially to promote a community producing creative knowledge and leading future generations, and to become a first-class university with global competence. Its vision and mission clearly refer to a regional as well as international dimension (“CNU to Asia, CNU to the World”). However, it is important to highlight, that these elements of western paradigm of education related with globalization, are submerged in a strong, traditional environment of Korean Academia.

The policy of internationalization of higher education and research in CNU had been following all steps encountered in general in the Korean Academia. It started in the 1950th - 1960th with the government initiatives of sending the Koreans to take advanced education in developed countries (many of the CNU’s professors did their PhD in the US). This idea of studying abroad remains strong in Korea, but in the last years the Korean government promoted the western concepts of internationalization in order to make the Korean Universities attractive for foreign students. The process of Internationalization of CNU is therefore first of all a political answer for the Korean Ministry requirements and to support the economical needs of the university (need to increase the incomes). Following Korean very hierarchic organizational culture, internationalization at CNU takes mostly the form of a global program strategy. The CNU’s Office of International Affairs is responsible for the management of most of the actions related to the internationalization efforts. Majority of them are focused on mobility of students and researchers and maintenance of international partnership with sister universities and partners.

The internationalization of curricula is very limited. Almost of the classes are done in Korean language (even in English Education). However, the university urges faculty members to have their classes in English. Each department has to meet their English class quota. The large majority of foreign students is of Asian origin, and just a very few of them are African (with Korean government scholarships) and Europeans on short period exchanges. The number of foreign professors is about 57, but almost all of them are with Korean origin. Therefore there is a strong wish to follow modern Anglo-Saxon patterns of internationalization, but this strategy remains still on the conceptual level and quite far from the daily cultural reality.

All these characteristics were very clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score. The scores observed in the CNU were the highest among the Professors in these 3 universities, highlighting the general policy of the University (the wish to produce “global leaders”, as it was repeated frequently) and the frequent need for the Professors to get some diploma or research leave abroad during their career (mostly in the US). However, the field study also revealed that the relative enthusiasm for internationalization appeared more as a consequence of the policy

and expectations of the University and Ministry (which are expected to be obeyed in this very collectivist and hierarchic Confucian Society) [21] than a real practical endeavor [5]. The score of the students on the general campus were much lower, illustrating the difficulties to internationalize this campus, even if the enthusiasm was perceptible and the University was doing efforts to promote internationalization at home by inviting foreign students and scholars [20]. The number of foreign students remained limited (mostly from Asian neighbor countries) and cultural and language barriers remained very strong.

5. Conclusion

In this first article, the results of the ISAIAS FAST scores were calculated in the general campus of 3 universities (University of Granada, Paris-Sorbonne University and Chonnam National University) and corresponded to the qualitative data gathered on the campuses, and to the general profiles of internationalization of these institutions. The next step is the evaluation of the FAST scores of more specialized groups of stakeholders in the dental and biomaterial research and education groups, in order to evaluate and understand how the local leaderships are impacting the level of internationalization of education and research in this specialized fields.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This work is part of the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France. The authors want also to thank all the students, academic and administrative staffs who accepted to spend time answering to the questions with sincerity and patience.

Author Contributions

LW, MFC, DDE and HLW were leading the general organization and main financial support of this international project. All authors participated to the development of a consensual analytical process, to the collection of samples and data in their respective university and country, and to the elaboration of the manuscript.

References

- [1] Deardorff DK, de Wit H, Heyl JD, Adams T. *The SAGE Handbook of International Higher Education*. SAGE Publications, Inc. ISBN: 9781412999212. 2012.
- [2] Altbach PG, Knight J. *The Internationalization of Higher Education: Motivations and Realities*. *Journal of Studies in International Education*. 2007;11(3-4):290-305.
- [3] Knight J. *Internationalization Remodeled: Definition, Approaches, and Rationales*. *Journal of Studies in International Education*. 2004;8(1):5-31.
- [4] Olson CL, Kroeger KR. *Global Competency and Intercultural Sensitivity*. *Journal of Studies in International Education*. 2001;5(2):116-37.
- [5] Kim T. *Internationalisation of Higher Education in South Korea: Reality, Rhetoric, and Disparity in Academic Culture and Identities*. *Australian Journal of Education*. 2005;49(1):89-103.

- [6] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing*. **POSEIDO**. 2013;1(1):1-5.
- [7] Dohan Ehrenfest DM, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO*. **POSEIDO**. 2013;1(1):17-27.
- [8] Dohan Ehrenfest DM, Kang BS, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization*. **POSEIDO**. 2013;1(1):7-15.
- [9] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system*. **POSEIDO**. 2014;2(1):7-22.
- [10] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 2: anodized and Titanium Plasma-Sprayed (TPS) surfaces (Group 1, metallurgy modification)*. **POSEIDO**. 2014;2(1):23-35.
- [11] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 3: sand-blasted/acid-etched (SLA type) and related surfaces (Group 2A, main subtractive process)*. **POSEIDO**. 2014;2(1):37-55.
- [12] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 4: Resorbable Blasting Media (RBM), Dual Acid-Etched (DAE), Subtractive Impregnated Micro/Nanotextured (SIMN) and related surfaces (Group 2B, other subtractive process)*. **POSEIDO**. 2014;2(1):57-79.
- [13] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 5: chemically coated surfaces (Group 3, coating) and implant collar surfaces (Group 4, collar)*. **POSEIDO**. 2014;2(1):81-104.
- [14] Koehn PH, Dearthoff DK, Bolognese KD. *Enhancing International Research and Development-Project Activity on University Campuses: Insights From U.S. Senior International Officers*. **Journal of Studies in International Education**. 2011;15(4):332-50.
- [15] Knight J. *Monitoring the Quality and Progress of Internationalization*. **Journal of Studies in International Education**. 2001;5(3):228-43.
- [16] Dearthoff DK. *Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization*. **Journal of Studies in International Education**. 2006;10(3):241-66.
- [17] Dearthoff DK. *The SAGE Handbook of Intercultural Competence*. **SAGE Publications, Inc. ISBN: 9781412960458**. 2009.
- [18] Wisniewska LM. *Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals*. **Høgskolen i Akershus, Erasmus Mundus**. 2011.
- [19] Hofstede G, Hofstede GJ, Minkov M. *Cultures and organizations. Software of the mind. Intercultural Cooperation and Its Importance for Survival*. **London. McGraw-Hill. ISBN 978-0-07-1664418-9**. 2010.
- [20] Jon JE. *Realizing Internationalization at Home in Korean Higher Education: Promoting Domestic Students' Interaction with International Students and Intercultural Competence*. **Journal of Studies in International Education**. 2013;17(4):455-70.
- [21] Byun K, Kim M. *Shifting Patterns of the Government's Policies for the Internationalization of Korean Higher Education*. **Journal of Studies in International Education**. 2011;15(5):467-86.

This article can be cited as:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 1: general comparison of campus strategies in European and Korean universities using the ISAIAS FAST score*. **POSEIDO**. 2014;2(3):179-94.

Research article

The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score

Lidia M. Wisniewska,^{1,2,3,*} Yeo-Won Jo,⁴ Sang-Yong Kim,³ Sarah Amr,⁵ Georges Khoury,⁶ Pablo Galindo-Moreno,⁷ Elena Sánchez-Fernández,⁷ Ana M. Carrillo-Badillo,⁷ Ana I. Renta-Davids,⁸ Gaetano Marenzi,⁹ Gilberto Sammartino,⁹ Hom-Lay Wang,¹⁰ David M. Dohan Ehrenfest,³ and Manuel Fernández-Cruz.¹

¹ Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain

² Department of International Relations, Paris Sorbonne University, Paris, France

³ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

⁴ Graduate School of Education, Chonnam National University, Gwangju, South Korea

⁵ Department of Periodontology, Faculty of Odontology, University Paris 5 Descartes, Paris, France

⁶ Department of Implantology, Faculty of Odontology, University Paris 7 Diderot, Paris, France

⁷ Oral Surgery and Implant Dentistry Department, School of Dentistry, University of Granada, Granada, Spain

⁸ Institute of Education Sciences, Rovira i Virgili University, Tarragona, Spain

⁹ Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples, Italy

¹⁰ Department of Periodontics and Oral Medicine, The University of Michigan, School of Dentistry, Ann Arbor, Michigan, USA

*Corresponding author: Lidia M. Wisniewska, liliw@interia.pl

Submitted on August 5th, 2014; accepted after major corrections on October 15th, 2014.

Abstract

Background and objectives. Internationalization is a major evolution in implant dentistry and biomaterial higher education and research. The aim of the present 3-part study was to apply the ISAIAS method (Intercultural Sensitivity Academic Index & Advanced Standards) in this highly specialized dental field, and to evaluate the impact of leaders of internationalization. In this second part, the ISAIAS method was applied globally to the dental schools of 4 participant universities, to highlight the impact of their internationalization efforts in this specialized education environment in these Asian and European contexts.

Materials and Methods. In each campus, a group of 60 undergraduate dental students from 4 different dental schools (from respectively University of Granada, Spain; University Federico 2 of Naples, Italy; Paris University, France; and Chonnam National University, South Korea) were observed through the ISAIAS FAST (Fast Assessment Screening Test) questionnaire and through intensive field study (mixed methodology, i.e. combination of qualitative and quantitative methods). A final ISAIAS FAST score (mean value) was calculated for each group, including the mean scores in the 4 dimensions of intercultural

competences, and scores were integrated with field observation for interpretation and validation. Results were correlated with previous results, which had been obtained on the general campus of the participant universities.

Results. The scores observed in the 4 dental schools presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical from schools with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the local organizational culture.

Discussion and conclusions. In the second step of this 3-part study, the ISAIAS FAST mixed methodology has been applied to a very specialized academic environment, the dental schools, and allowed highlighting the similarities and the major specificities (Strengths, Weaknesses, Opportunities and Threats) of the internationalization efforts of these specialized dental entities in the more general environment of the University. The final step of this 3-part study requires the evaluation of the FAST scores of more specialized groups of stakeholders in the dental implant and biomaterial research and education groups, in order to evaluate and understand how the local leaderships are impacting the level of internationalization of education and research in this specialized fields.

Keywords. Attitudes, culture, dental school, education, international cooperation, international educational exchange, leadership.

1. Introduction

The massive internationalization of higher education and research is a relatively recent major evolution and need of the Academic world [1], as a natural consequence of the globalization of the economy of sciences and knowledge [2]. In the field of dental education and research, the internationalization process has followed a very specific path related to the nature of the dental profession itself. Dental schools are indeed mostly designed to produce future dental clinicians, and this profession is traditionally quite protected in most countries. Like most medical specialties, the recognition of diploma is often limited between countries, and there is a strong limitation for clinical exercise for clinicians moving between countries. This frequent situation limited in many countries and during many years the development of international education in this specialized field, and the schools of dentistry were often outside of this general movement of internationalization of campuses. This situation evolved only recently and very slowly with the development of diploma recognition in European countries and through specific international agreements (for example France and Quebec). In fact, in most cases, the major part of the internationalization of the dental schools can be found in the post-graduate programs and in the research activities. Therefore the dental schools are interesting indirect markers of the internationalization of a University and of the general mentalities, as they may reflect the general evolution of a campus and of researchers, more than the evolution of the Graduate School itself.

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) is an international scientific Consortium of Academic Departments and Scientific societies [3]. The Consortium is mostly gathering dental schools, and is oriented to dental sciences, biomaterials and implant dentistry education and research, even if it also offers a trans-disciplinary approach in many topics (biomaterials, orthopedics, cancer, etc) [4-6]. As a global inter-academic experience, the POSEIDO community is facing permanently the wide cultural differences between the various stakeholders of the Academic environment. The POSEIDO community therefore funded the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards), in order to evaluate the degree of

internationalization and intercultural sensitivity of the community members worldwide, and to develop new strategies and standards to promote smoother and more efficient global collaborations in the field of implant dentistry and biomaterial research and education [7,8].

As it was shown in the first article of this series, the first project of the ISAIAS program was the development of a simple tool of evaluation of the level of internationalization of a university, school or department through the assessment of the intercultural competences of its academic stakeholders [9]. It was termed the ISAIAS Fast Assessment Screening Test (FAST) Score. This score is calculated through the use of a questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences, based on the concepts and key parameters isolated by Deardorff [1,10,11]. This questionnaire was previously developed, statistically tested and validated between the University of Granada and the Oslo and Akershus University College [12].

In this series of articles, the ISAIAS FAST scores were calculated in 4 different Academic environments (France, Italy, Korea, Spain) involved in implant dentistry and biomaterial education and research within the member Academic entities of the POSEIDO network, to evaluate and understand the internationalization patterns of these Universities, dental schools and implant and biomaterial research and education significant groups. The Universities serving as examples in this first study were selected to highlight the differences between a specific Asian model (the Korean model in this case)[13] with 3 different versions of the European environment. In the first article of this series, the ISAIAS FAST methodology of assessment of intercultural competences at the scale of a campus was described, following the concepts and list of components of the intercultural competences developed by Deardorff [10].

In this second article, the ISAIAS FAST method was used for the first time in a limited specialized environment, at the scale of the dental schools participating to this study. The first objectives were to evaluate the level of development of the intercultural competences of the dental students during their dental studies, and how the local strategies of internationalization of higher education and research may have influenced this result. The questionnaire was used for the assessment of 4 different dental schools (1 Korean, 3 Europeans) with 4 different cultural and well-identified backgrounds, history and strategy. Therefore, a secondary objective was to check if in this specialized dental environment, the ISAIAS FAST score corresponds to the typical profile, easily observable and well documented of these 4 universities.

2. Materials and Methods

2.1. General methodology

The ISAIAS FAST questionnaire was proposed to 60 undergraduate and master students in the dental school of each university. The test sample is significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2012 and 2014 at the School of Dentistry, University of Granada (UGR, Granada, Spain), the Faculty of Odontology, University Paris 5 Descartes (P5, Paris, France), the School of Dentistry, Chonnam National University (CNU, Gwangju, South Korea) and the Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples (Unina, Naples, Italy). Dental students were always in the last years of their studies, and were therefore almost dental professionals already. In this case study, it was decided to analyze

three very different European universities (Granada, Naples and Paris), to be able to compare 3 different approaches of the European implementation of internationalization of higher education and research with a very typical Asian campus (Chonnam).

It is important to point out that “undergraduate” has always to be understood (in this study) as dental students under formation to become a general dentist. In Korea, the new dental students have already finished their bachelor degree prior to apply and to enter in a dental school, and are therefore considered as postgraduate students following the local terminology. In France, Italy and Spain, dental students without their dentist diploma are considered as undergraduate students, and postgraduate students are only those working for a specialization diploma. This specificity of terminology has however almost no practical impact.

The methodology used in this study was the same as the one described in the first article of this series (see article 1 for details), using a mixed methodology, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. The quantitative methodology was using the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences. The analysis of the questionnaires allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people.

2.2. Description of the questionnaires

The exact description of the questionnaires can be found in the first part of this series of 3 articles, as they were exactly the same (see article 1 for details). The key points were recalled below.

The questionnaire was formulated for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or informal or personal meetings with foreign colleagues, etc.) - had impacted the development of their intercultural competences.

The first part of each questionnaire was gathering the main data of identification of the person filling this anonymous questionnaire, to place the answers in an adequate perspective. The second part was the statistical part with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under observation.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Paris campus and Spanish for the Granada campus), except in Italy where the students were able to answer the questionnaires directly in English. In Korea, Spain and France, a few questionnaires were also used in English when students were foreigners not perfectly comfortable with the local language.

2.3. Treatment of data and calculation of the ISAIAS FAST score

The treatment of data used in this study was the same as the one described in the first part of this series of 3 articles (see article 1 for details). The key points were recalled below.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They were regrouped in 4 groups, termed the 4 dimensions (D) of the questionnaire (following and adapting the general components of intercultural competences proposed by Deardorff): “Attitudes” (D1), “Knowledge and Comprehension” (D2), “Skills” (D3) and “Desire internal outcomes” (D4).

The score of each dimension gave important information on the development of each specific component of intercultural competences, and therefore allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all questions composing a dimension were added and the total was then divided by the number of questions of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of students evaluated in each dental school.

Finally, these statistical results were completed, analyzed and compared using the qualitative data gathered during the investigation. It was voluntarily avoided to draw a direct statistical comparison between the tested groups, as it would be meaningless. The scores have to be compared while taking especially into consideration the national and organizational culture and other qualitative data that influence the understanding and interpretation of each score.

3. Results

Following the previously described mixed methodology, data have been collected in the dental schools. The answers to the questionnaires were integrated in order to calculate for each participant school, the mean value of the global ISAIAS FAST score and of the scores of each dimension of intercultural competences. Results obtained in the groups of the undergraduate students are presented in the **Table**.

The scores observed in the 3 universities presented different patterns, but relatively mild scores (always between 2 and 3), what appeared typical from dental schools with moderate internationalization policies, i.e. a wish for internationalization which may not be fully fulfilled because of the local organizational culture.

The scores observed for the students in the School of Dentistry at the University of Granada were a little bit higher than on the general campus, and among the 2 highest scores (with CNU) in the 4 participant dental schools. It appeared as a marker of the particularly strong policy and enthusiasm for internationalization of this university.

The scores observed for the students in the Faculty of Odontology at the University of Paris were significantly lower than on the general campus of Paris-Sorbonne, and also the lowest among the participating dental schools, highlighting a significant isolation of this

group of future dental professionals from the internationalization efforts, particularly in comparison with students from the general campus.

The scores observed for the students in the Department of Oral Surgery at University Federico II of Naples were a little bit lower than in the UGR and CNU, but still in the same range, and reflected this intermediate situation of relative enthusiasm for internationalization within the limitations of the local organizational culture. The score of the general campus could not be evaluated extensively in this work.

The scores observed for the students in the School of Dentistry at Chonnam National University were much higher than on the general campus and were among the 2 highest scores (with UGR) in the 4 participant dental schools. This result was often associated with the social status of the future dental professionals in Korea, which were often a bit older and more interested in international experiences than the other categories of students.

The scores appeared coherent with the field observations in all aspects. Scores and field studies were integrated in details in the discussion section.

Scores of Undergraduate Dental Students in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.76	2.48	2.65	2.56	2.612
Paris University (France)	2.27	2.088	2.187	2.03	2.141
University Federico 2 of Naples (Italy)	2.6	2.4	2.4	2.5	2.473
Chonnam National University (South Korea)	2.8	2.6	2.75	2.35	2.62

Table. Intercultural dimensions and total ISAIAS FAST scores of a group of dental students from 4 different Dental Schools.

4. Discussion

4.1. General specificities of the dental community

In this study, all dental students from the 4 participant universities shared a very strong common point: all of them were studying dentistry. The methods of teaching, the practical perceptions and the clinical sensibility (in terms of esthetic and functional considerations for example) may be different between countries, but all dentists have a lot in common: most techniques and materials, daily life problems of a practice, relationships with pain and patient complaints for example. There is a joke about dentists that we found in most countries: it is better to not have several dentists in a family, because when they meet, they cannot impeach themselves to speak only about teeth. This is a population which appears, at first look, easier to internationalize, as the professional similarities are very strong worldwide, even if the social environment of the profession is not the same everywhere. Finally, dentists are in general a highly educated population, as there is often many selective examinations to enter in the dental schools, leading to a quite high socio-economic population able (and wishing) to travel more and therefore to meet other cultures.

Therefore, even if dental schools may not appear very internationalized, due to the limited recognition of the clinical diplomas between countries, the population of dental students is in general more curious, opened and connected to the international community than other categories of students on the campus. This could be observed in 2 universities that were analyzed in the first part of this series of 3 articles (Granada and Chonnam), where the scores of dentists were higher than the scores of the other general students on the campus. However, surprisingly, the contrary situation was observed in Paris University. As a quite homogeneous profession and profile, whatever the nationality, we could expect that all dental students taken into consideration in this study could have the same kind of high scores. However, we observed very different patterns depending on the school, and it can be interpreted as the impact of the national and organizational culture of each country and university on the dental students [14,15]. The exact profile of the groups of students of each school must be investigated and understood in the context of their respective university and country.

4.2. About the School of Dentistry at the University of Granada

The history and policies of the University of Granada general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

Dentistry is a relative new independent discipline in Spain. The oldest dental schools in Spain were founded recently, in 1986, as a consequence of the integration of Spain in the European Community. Previously, dental curriculum was supported in Schools of Stomatology, where MD degree was demanded to apply in. University of Granada implemented Dentistry curriculum as the first School of Dentistry in Spain, simultaneously to University Complutense in Madrid and University of Barcelona. The number of students selected per year is inferior to 80. The selection of students is very restricted, and limited through “numerus clausus” procedure, selecting traditionally one of the best groups of students, because it is quite demanded by them. Research activity is intense in this Dental School, occupying the first position in the National ranking in the last 5 years. The dental studies in Spain are a minimum of 5 years. In Spanish public Universities, the fees are not expensive (some minor administrative fees) and based on a strong entrance concourse

selection only. The first two years are dedicated mainly to Basic Sciences related to Medicine and Health. The 3rd, 4th and 5th years are specific dedicated to Dentistry, mostly dedicated to clinical work.

School of Dentistry at the University of Granada, offers a limited number of positions to foreign pre-graduate students, approximately 5 % of the total applications. These positions are restricted and only can be applied for international students. These students traditionally proceed from North Africa or South America. The dental curriculum is offered exclusively in Spanish, although professors can choose to develop it in English. However in the most advances years, mainly 3rd, 4th and 5th, an intense program of exchange is offered to the students. Considering undergraduate students, besides to the Erasmus program (with prestigious European Universities), special programs are running with some countries from East Europe, Balkan countries, Mexico, South America, and others are under development with North American Universities. Regarding postgraduate students, the School has established strong relationships with foreign Universities, mainly with Spanish speaking countries, to receive students from these countries, to develop research collaboration and to exchange postgraduate students for clinical or PhD programs.

In spite of the language limitation, professors are quite demanded to establish new collaborations with foreign Universities, and some of these professors begin to develop sabbatical years in foreign contexts, something new in the strategic demanded policies of the University of Granada. In addition, the number of Granadian students leaving Spain to develop international postgraduate studies, are increasing spectacularly in the last years, mainly to North American Universities. The School of Dentistry is therefore trying to follow the strong internationalization policy of the UGR in all aspects, and this appears to promote the development of a new generation of leaders of internationalization.

All these characteristics were observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. The scores observed for the dental students were among the highest scores observed in the participant dental schools, and the field observation confirmed the significant enthusiasm for international relations developed in the UGR through the many programs of exchanges. Besides this very positive attitude and policy, the national and organizational culture may explained why the scores remained far below 3 [2], and that student exchange (limited in dentistry) appeared to not be enough to promote a deeper intensive development of intercultural competences.

4.3. About the Faculty of Odontology at the University of Paris

The history and policies of the University of Paris general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

The 2 Paris Dental schools were historically the 2 largest dental schools in France, recruiting a total of more than 200 students per undergraduate year. The dental studies in France are a minimum of 6 years. They are free (except some minor administrative fees) and based on a strong entrance concourse selection only. The first year is a national very selective medical concourse with a strict “numerus clausus”. The second and third years are specific to dentistry, but without clinical activity. The 4th and 5th years are mostly dedicated to clinical work. The 6th year is dedicated to clinical work, clinical experience outside of the school and preparation of the thesis for the Doctorate in Dental Surgery (DDS). The 2 Paris dental schools are affiliated to 2 different universities: the Faculty of Odontology of Paris 5 René Descartes University, and the Faculty of Odontology of Paris 7 Denis Diderot University. The

2 universities have very similar curriculum and management, and many efforts have been done in the last years to merge them; following the movement of groupings in Paris Universities, the final merging of the 2 schools within one major Paris Dental School is now just a question of time.

The French national diploma of Doctor in Dental Surgery is very selective and restricted (national *concours* with a *numerus clausus*). Moreover, as the education in the French university is almost only done in French, it is therefore attracting in priority students from the French speaking countries. Therefore, the recruitment of foreign students - including Europeans - that may be interested to join these dental schools is very limited (mostly those living in France since a significant time), even if the University and city themselves are very attractive. Non-European foreign students who want to work in the European Union in general try to get a European diploma through schools in countries with more open regulations. Moreover, the national regulations of *concours* and recruitment of the faculty members being still very restricted, almost all professors and teachers are French nationals, and a majority followed all their curriculum in the school where they are teaching now.

Most of the internationalization efforts are placed in program of exchanges such as Erasmus. French students are going in priority in other North countries (North America or Nordic countries), and foreigners coming are mostly Europeans. The number of exchanges remains however very limited in comparison to the wide number of nationalities that can be found in a US campus for example. It is also considered that all foreign students have to adapt to the local mentality and patterns, and many aspects of the Anglo-Saxon approach of internationalization of higher education and research are not even considered.

All these characteristics were clearly observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. The scores in the Paris dental school were clearly the lowest among the 4 participant dental schools. The scores were also clearly lower than in the general campus of Paris-Sorbonne University. It appeared as an anomaly, as dental students finishing their studies in France are supposed to be future professionals with a relatively high socio-economic level, as it was observed in the dental schools in other countries. This result could be explained by the characteristics of the Sorbonne general campus, oriented to Humanities (particularly the teaching of languages), presenting a more important population of international students, and therefore showing higher scores of intercultural development. The collection of the questionnaires in the School of Dentistry at Paris University was clearly the most difficult from all the groups. The concept of intercultural competences was sometimes not understood. This result mostly highlighted the significant isolation of this group of future dental professionals from the international communities. This homogeneous score confirmed the field observations.

4.4. About the Department of Oral Surgery at University Federico II of Naples

The University of Naples “Federico II” was established in 1224 by Frederick II Hohenstaufen, King of Sicily and Holy Roman Emperor. It is the first publicly funded university in Europe. Nowadays the University offers courses and research in most academic disciplines and enroll a considerable number of students (more than 96,000) per year. The University, formerly organised in Faculties, has revised its organizational structure in order to address the complexity of the interdisciplinary relationships of the academic disciplines. The *Ateneo* is currently composed of 4 huge Schools/Faculties, each of which operates as

semi-independent body for the teaching and research management. The Department of Oral Surgery is therefore a Dental Section of the Faculty of Medicine. Internationalization is one of the important lines of development in the policy of the Federico II University, as this University wants to be recognized as a global institution. To improve its visibility, reputation and attractiveness for international students and other international and national stakeholders, the University is mostly developing international cooperation by promoting and supporting interactions with other universities and research centres throughout the world (through partnerships and conventions). Moreover, the Bologna process supporting international mobilities has been fully implemented, and Unina is exchanging significant numbers of students each year (through Erasmus program as well as other academic exchange programs).

The dental studies in Italy are a minimum of 6 years. They are free and based on a strong entrance concourse selection only. The course consists of the preparation with basic knowledge in the disciplines of biology and general medicine as well as general education, in the first 2 years. The 3th and 4th years are specific to dentistry with some clinical activity; the 5th and the 6th years are dedicated to clinical work. At the end of the course students can subscribe to specialization schools such as Orthodontics or Oral Surgery, or Master and Postgraduate Courses to deepen the preparation in all areas of dentistry.

The Italian national diploma of Doctor in Dentistry is very selective and requires to pass the national concourse of the first dental year. Each year there are some reserved seats for non european students, in order to assure a limited number of foreigners students. Traditionally, Italian universities courses are Italian language based only and is therefore mainly attracting Italian speaking students. Moreover, the national regulations of concourses and recruitment of the faculty members being still very restricting, almost all professors and teachers are Italian-born citizens and the majority of them followed their curriculum in the school where they currently teach. Most of the internationalization efforts are placed in programs of exchanges such as Erasmus. The internationalization is essentially the result of the capacities/contacts of each individual and group, and is therefore very dependent on the presence of strong personalities serving as leaders of internationalization. Only few departments support actively this opportunity after postgraduate activity with the development of international meetings. In the Dental School of “Federico II”, the access to many international journals is provided, but it is important to notice that there is no global and massive strategy of internationalization as developed in Anglo-Saxon Universities.

All these characteristics were clearly observed during the collection of data and were highlighted by the components of the ISAIAS FAST score. With an intermediate score, this group of students appeared quite motivated for internationalization, with an easy-going attitude and a wish to travel and exchange. But the group appeared also understanding very well the limitation of their environment in this process of internationalization. This very homogeneous and mild score confirmed the field observations.

4.5. About the School of Dentistry at Chonnam National University

The history and policies of the Chonnam National University general campus were already investigated and described in the first part of this series of 3 articles, and were taken into consideration when analyzing the functioning and results of the school of dentistry.

The CNU School of Dentistry is one of the 11 dental schools in Korea, recruiting 70 students every year. The school is perceived as the best in Honam area of Korea, and most of local general practitioners refer patients to the CNU dental hospital. As CNU dental school is

a graduate school, students have various academic backgrounds and practical abilities before entering the school. Students are tested by a national exam for dental school admission. The dental studies in the CNU Dental School are paid and are a minimum of 4 years. Students study basic dental sciences during the first year. From the second year, students study clinical knowledge with clinical training. In the last year of study, students actively experience clinical practice in the CNU dental hospital. In the Korean environment, CNU School of Dentistry is well known and appreciated to offer students one of the best environments to experience clinical work including orthodontic and surgical cases before they graduate.

Foreign students are very rare in the dental school, as there is a national admission exam for dental school in Korean and all classes of these studies are done in Korean. However, the CNU dental school is trying to promote its internationalization through various centralized strategies, particularly at the post-graduate and research level. There are some basic research graduate students from abroad (mostly from the Asian area), who are not dental students. Some graduated foreign dentists come also to this school for clinical training. CNU Professors make efforts to have lectures and voluntary service in other countries (particularly in some Asian countries), in order to give a positive publicity to the CNU dental school. Also, an international symposium is periodically held in the school so that professors and students have interaction with some renowned foreign Scholars. Moreover, there used to be a foreign professor (not ethnically Korean) in CNU dental school, what was never seen in any other Korean dental schools. Finally, each year, students are sent in foreign universities for field study, and in rare cases, PhD students are sent abroad to prepare a double degree. Therefore, from a Korean customs standpoint, CNU could be considered as an active dental school to promote internationalization, to fulfill the requirements of internationalization promoted by the Korean Ministry. However, the cultural and language barriers remain major obstacles for the development of more initiatives. Despite these efforts, CNU remains completely centered on a strict collectivist and hierarchic Confucian Korean organizational culture, what blocks the development of personal initiative of real autonomous leaders of internationalization.

All these characteristics have been clearly observed during the collection of data and were clearly highlighted by the components of the ISAIAS FAST score. This group of students showed the highest total score among the participant universities, as a natural consequence of the general hierarchic policy of CNU and the Korean Ministry towards internationalization [13,16]. This group also showed higher scores than other students on the general campus, what appeared as a marker of the socio-economic status of the future dental professionals. In Korean society, the possibility to travel abroad and to be connected to foreigners is perceived very positively in a social hierarchy, and therefore dental students have even more reasons and opportunities to develop their intercultural competences, even if the dental school itself does not offer so many opportunities. Even with this relatively positive result, the field observations confirmed the significant difficulties of communication of the students. The national and organizational culture of CNU (hierarchic Confucian culture, very marked in Korea) can explain why the scores remained far below 3, despite the positive attitude of the dental students [13,17]. More efforts and new strategies will be needed to promote a deeper and more efficient development of intercultural competences.

5. Conclusion

In this second article, the ISAIAS FAST mixed methodology has been applied to a very specialized academic environment, the dental schools. The FAST scores were calculated in groups of dental students of these 4 universities, correlated with field observations, and the results corresponded to the general profiles of internationalization of these institutions. This second step of the study allowed highlighting the similarities and the major specificities of these specialized dental entities in the more general environment of the University. The final step of this 3-part study was the evaluation of the FAST scores of more specialized groups of stakeholders in the dental implant and biomaterial research and education groups, in order to evaluate and understand how the local leaderships are impacting the level of internationalization of education and research in this specialized fields, and how to improve the interactions of these entities with international partners.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This work is part of the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France. The authors want also to thank all the students, academic and administrative staffs who accepted to spend time answering to the questions with sincerity and patience.

Author Contributions

LW, MFC, DDE and HLW were leading the general organization and main financial support of this international project. All authors participated to the development of a consensual analytical process, to the collection of samples and data in their respective university and country, and to the elaboration of the manuscript.

References

- [1] Deardorff DK, de Wit H, Heyl JD, Adams T. *The SAGE Handbook of International Higher Education*. SAGE Publications, Inc. ISBN: 9781412999212. 2012.
- [2] Altbach PG, Knight J. *The Internationalization of Higher Education: Motivations and Realities*. *Journal of Studies in International Education*. 2007;11(3-4):290-305.
- [3] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing*. *POSEIDO*. 2013;1(1):1-5.
- [4] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system*. *POSEIDO*. 2014;2(1):7-22.
- [5] Dohan Ehrenfest DM, Kang BS, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization*. *POSEIDO*. 2013;1(1):7-15.
- [6] Dohan Ehrenfest DM, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO*. *POSEIDO*. 2013;1(1):17-27.

- [7] Koehn PH, Deardorff DK, Bolognese KD. *Enhancing International Research and Development-Project Activity on University Campuses: Insights From U.S. Senior International Officers*. **Journal of Studies in International Education**. 2011;15(4):332-50.
- [8] Olson CL, Kroeger KR. *Global Competency and Intercultural Sensitivity*. **Journal of Studies in International Education**. 2001;5(2):116-37.
- [9] Knight J. *Monitoring the Quality and Progress of Internationalization*. **Journal of Studies in International Education**. 2001;5(3):228-43.
- [10] Deardorff DK. *Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization*. **Journal of Studies in International Education**. 2006;10(3):241-66.
- [11] Deardorff DK. *The SAGE Handbook of Intercultural Competence*. **SAGE Publications, Inc. ISBN: 9781412960458**. 2009.
- [12] Wisniewska LM. *Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals*. **Høgskolen i Akershus, Erasmus Mundus**. 2011.
- [13] Kim T. *Internationalisation of Higher Education in South Korea: Reality, Rhetoric, and Disparity in Academic Culture and Identities*. **Australian Journal of Education**. 2005;49(1):89-103.
- [14] Hofstede G, Hofstede GJ, Minkov M. *Cultures and organizations. Software of the mind. Intercultural Cooperation and Its Importance for Survival*. **London. McGraw-Hill. ISBN 978-0-07-1664418-9**. 2010.
- [15] Knight J. *Internationalization Remodeled: Definition, Approaches, and Rationales*. **Journal of Studies in International Education**. 2004;8(1):5-31.
- [16] Byun K, Kim M. *Shifting Patterns of the Government's Policies for the Internationalization of Korean Higher Education*. **Journal of Studies in International Education**. 2011;15(5):467-86.
- [17] Jon JE. *Realizing Internationalization at Home in Korean Higher Education: Promoting Domestic Students' Interaction with International Students and Intercultural Competence*. **Journal of Studies in International Education**. 2013;17(4):455-70.

This article can be cited as:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 2: comparison of dental school strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score*. **POSEIDO**. 2014;2(3):195-207.

Research article

The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score

Lidia M. Wisniewska,^{1,2,3,*} Yeo-Won Jo,⁴ Sang-Yong Kim,³ Sarah Amr,⁵ Georges Khoury,⁶ Pablo Galindo-Moreno,⁷ Elena Sánchez-Fernández,⁷ Ana M. Carrillo-Badillo,⁷ Ana I. Renta-Davids,⁸ Gaetano Marenzi,⁹ Gilberto Sammartino,⁹ Hom-Lay Wang,¹⁰ David M. Dohan Ehrenfest,³ and Manuel Fernández-Cruz.¹

¹ Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain

² Department of International Relations, Paris Sorbonne University, Paris, France

³ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

⁴ Graduate School of Education, Chonnam National University, Gwangju, South Korea

⁵ Department of Periodontology, Faculty of Odontology, University Paris 5 Descartes, Paris, France

⁶ Department of Implantology, Faculty of Odontology, University Paris 7 Diderot, Paris, France

⁷ Oral Surgery and Implant Dentistry Department, School of Dentistry, University of Granada, Granada, Spain

⁸ Institute of Education Sciences, Rovira i Virgili University, Tarragona, Spain

⁹ Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples, Italy

¹⁰ Department of Periodontics and Oral Medicine, The University of Michigan, School of Dentistry, Ann Arbor, Michigan, USA

*Corresponding author: Lidia M. Wisniewska, liliw@interia.pl

Submitted on August 5th, 2014; accepted after major corrections on October 15th, 2014.

Abstract

Background and objectives. Internationalization is a major evolution in implant dentistry and biomaterial education and research. The aim of the present 3-part study was to apply the ISAIAS method (Intercultural Sensitivity Academic Index & Advanced Standards) in this highly specialized dental field, and to evaluate the impact of leaders of internationalization. In this third part, the ISAIAS method was applied to the dental implant and biomaterial groups of 4 participant universities, to highlight the impact of their internationalization efforts and leaders in these Asian and European contexts.

Materials and Methods. A group of 20 teachers/researchers and 20 postgraduate students related to the dental implant and biomaterial research and education groups of 4 different dental schools (from respectively University of Granada, Spain; University Federico 2 of Naples, Italy; Paris University, France; and Chonnam National University, South Korea) were observed through the ISAIAS FAST (Fast Assessment Screening Test) questionnaire and through intensive field study (mixed methodology, i.e. combination of qualitative and quantitative methods). A final ISAIAS FAST score (mean value) was calculated for each group, including the mean scores in the 4 dimensions of intercultural competences, and

scores were integrated with field observation for interpretation. Results were correlated with previous results obtained on the general campus and dental schools of the participant universities, and to the profiles of the local leaders of internationalization in the field.

Results. The scores observed in the 4 academic environments were very different between the groups, and revealing very different patterns. Scores in Granada University were the highest from all groups for the teachers/researchers group, but revealed the wish for more development of international dimension at the post-graduate level. Scores in Paris University and Naples University were intermediate and revealed a neat positive impact of local leadership when available. The scores observed in South Korea appeared quite high, revealing a wish for internationalization.

Discussion and conclusions. The presence of leaders of internationalization is clearly an important factor of improvement of the intercultural competences of teachers/researchers and postgraduate students in the field of implant dentistry and biomaterial education and research. The impact of these motivated individuals and its intensity are, however, different depending on the academic environment. The ISAIAS mixed methodology is a very useful method to evaluate the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts of a group or school, but it requires to combine the FAST scores with an in-depth field study, in order to determine the exact situations and how to improve the performance of the entities and their interactions with international partners in the field of implant dentistry and biomaterial education and research.

Keywords. Attitudes, culture, dental implants, education, international cooperation, international educational exchange, leadership.

1. Introduction

The strong internationalization of higher education and research is a major evolution and need of the Academic world [1], as a natural consequence of the globalization of the economy of sciences and knowledge [2]. As it was discussed in the previous parts of this series of articles, in the field of dental education and research, the internationalization process has followed a very specific path related to the nature of the dental profession itself, which is very regulated in most countries. However, even if the undergraduate programs remain very national in many countries, the process of internationalization is impacting dental schools more and more, particularly through international postgraduate programs and through research collaborations [3]. Like in all other specialties, the process of globalized interactions is often complicated by the significant cultural differences of perception and action and the different organizational cultures of each country and institution [4,5].

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) was developed as a consortium of Academic entities and an international scientific network of Academic Departments and Scientific Societies [6]. The organization regroups a majority of dental school departments, but it is also including Departments of orthopedics, immunology, plastic surgery, veterinary sciences, biotechnology and biomaterials, in order to promote trans-disciplinarity through various forums of discussion and debates [7,8]. This network is an interesting example of globalized inter-academic cooperation in the dental education and research world. Even if it could have faced the traditional problems of intercultural cooperation, the collaboration between entities remained smooth and efficient [9]. It was advocated that the intercultural competences and experience of the POSEIDO key members allowed to overcome most intercultural difficulties up to now [5]. The hypothesis is that the specific experience and personality of the local

leaders of internationalization of the groups joining POSEIDO were at the origin of this smooth cooperation [10], with the development of an efficient collaborative activity, particularly in the field of biomaterial research.

The next steps of the POSEIDO project are to develop deeper links between all partners of the consortium, particularly building commonly funded research and post-graduate education large projects at a world scale, particularly in the field of implant dentistry and biomaterial research [3]. This will necessarily require even more diplomacy and intercultural competences from all stakeholders [2], and the POSEIDO community and Foundation decided to fund a global program of evaluation and development of the intercultural skills of its actual and future members [11], in order to avoid any major critical situations in the future steps of the project development. The ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards) was designed as an evaluation, education and conflict prevention global initiative, to promote smoother and more efficient global cooperation, particularly in the field of implant dentistry and biomaterial research and education [1].

The ISAIAS Fast Assessment Screening Test (FAST) Score was developed as a simple tool of evaluation of the level of internationalization of a university, school or department. This score is calculated through the use of a questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences of the academic stakeholders, based on the concepts and key parameters isolated by Deardorff [12,13]. In this series of articles, the ISAIAS FAST scores were calculated in 4 different Academic environments (France, Italy, Korea, Spain) involved in implant dentistry and biomaterial education and research within the member Academic entities of the POSEIDO network, to evaluate and understand the internationalization patterns of these Universities, dental schools and implant and biomaterial research and education significant groups.

In the first and second articles of this series, the ISAIAS FAST methodology of assessment of intercultural competences at the scale of a campus was described, following the concepts and list of components of the intercultural competences proposed by Deardorff [12], and then evaluated in the specialized environment of the respective dental school of the participant universities.

In this third article, the ISAIAS FAST method was used specifically on the groups of teachers, researchers and students that could be considered as a core of implant and biomaterial research and education in these 4 different dental schools, including some individuals with international reputation that could be considered as leaders of internationalization in their respective context. The first objectives were to evaluate, how local strategies of internationalization of higher education and research may have influenced the development of the intercultural competences of the postgraduate students and teachers/researchers of these specific groups. The final objective of this work was to integrate these data with the scores and observations of the general campus and dental schools, in order to highlight the impact of leaders of internationalization in the highly specialized academic fields of implant dentistry and biomaterial education and research.

2. Materials and Methods

2.1. General methodology

In the dental school of each participant university, the ISAIAS FAST questionnaire was proposed to 20 postgraduate students and 20 professors/teachers or researchers of these 4 different dental schools, including some individuals with international reputation that could be considered as leaders of internationalization in their respective environment. The test sample was significant, but cannot be considered as fully representative; the sample of this study case was intentional. Data were collected between 2012 and 2014 at the School of Dentistry, University of Granada (UGR, Granada, Spain), the Faculty of Odontology, University Paris 5 & Paris 7 (Paris, France), the School of Dentistry, Chonnam National University (CNU, Gwangju, South Korea) and the Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples (Unina, Naples, Italy). In each School, there was at least a significant implant and biomaterials research and education group with some leaders involved in the international POSEIDO network. In this case study, it was decided to analyze three very different European universities (Granada, Naples and Paris), to be able to compare 3 different approaches of the European implementation of internationalization of higher education and research with a very typical Asian campus (Chonnam).

It is important to point out that “postgraduate” has always to be understood (in this study) as general dentists following a supplementary specialization diploma, what placed them in direct contact with active leaders in implant dentistry and biomaterial education and research. In Korea, the new dental students have already finished their bachelor degree prior to apply and to enter in a dental school, and are therefore considered as postgraduate students following the local terminology. In France, Italy and Spain, dental students without their dentist diploma are considered as undergraduate students, and postgraduate students are only those working for a specialization diploma. This specificity of terminology has however almost no practical impact.

The methodology used in this study was the same as the one described in the first article of this series (see article 1 for details), using a mixed methodology, i.e. a combination of qualitative and quantitative methods and methodological and data triangulation. The quantitative methodology was using the ISAIAS FAST questionnaire of assessment of the internationalization efforts of a university campus through the development of intercultural competences. The analysis of the questionnaires allowed to calculate the Fast Assessment Screening Test (FAST) Score of an individual or a group of people.

2.2. Description of the questionnaires

The exact description of the questionnaires can be found in the first part of this series of 3 articles, as they were exactly the same (see article 1 for details). The key points were recalled below.

The questionnaires were built in 2 slightly different forms. One was formulated for teachers and researchers to determine in which measure the participation in international research/educational projects has impacted the development of their intercultural competences. The second was formulated for students to determine in which measure the internationalization efforts and program offered by their University - during the curriculum (obligatory courses and activities) and through extracurricular activities (all nonobligatory activities related to the campus life, such as conferences, sports, student union activities or

informal or personal meetings with foreign colleagues, etc.) - has impacted the development of their intercultural competences.

The first part of each questionnaire was gathering the main data of identification of the person filling this anonymous questionnaire, to place the answers in an adequate perspective. The second part of the questionnaire was the statistical part with a series of 30 very accurate statements the reader had to agree or disagree, in order to evaluate accurately the profile of the person and to calculate his/her ISAIAS FAST score. For each question, the person filling the questionnaire had to choose the option which best fitted his opinion between 4 options, each option being associated to a score between 1 and 4: Strongly disagree (1), Disagree (2), Agree (3), Strongly agree (4). This is a classical multiple-choice format using an unipolar Likert scale from 1 to 4. The final analysis and synthesis of these scores allowed to calculate the score of each person and finally, after integration of all data, the ISAIAS FAST score of the whole group under observation.

Finally, the questionnaires were translated in the language of the population to analyze (in Korean for the Chonnam campus, French for the Sorbonne campus and Spanish for the Granada campus), except in Italy where the students were able to answer the questionnaires directly in English. In Korea, Spain and France, a few questionnaires were also used in English when students or teachers/researchers were foreigners not perfectly comfortable with the local language.

2.3. Treatment of data and calculation of the ISAIAS FAST score

The treatment of data used in this study was the same as the one described in the first part of this series of 3 articles (see article 1 for details). The key points were recalled below.

The questions of the questionnaire were deeply interconnected and built following a network of reasoning that allowed to detect anomalies in the answers. They were regrouped in 4 groups, termed the 4 dimensions (D) of the questionnaire (following and adapting the general components of intercultural competences proposed by Deardorff): “Attitudes” (D1), “Knowledge and Comprehension” (D2), “Skills” (D3) and “Desire internal outcomes” (D4).

The score of each dimension gave important information on the development of each specific component of intercultural competences, and therefore allowed to draw a specific profile of each individual (or group of people), independently from its global FAST score. Furthermore, many informal interviews with the responders have been done.

When considering each questionnaire separately, in order to calculate the scores of each dimension, the scores of all questions composing a dimension were added, and the total was then divided by the number of questions of the dimension. To calculate the ISAIAS FAST score of each individual, the scores of all questions were added and the total was divided by 30 (total number of questions). The score of each dimension and the total FAST score were therefore always between 1 and 4.

In this study, all data were integrated through Statistical Package for the Social Sciences (SPSS, IBM, Armonk, NY, USA) program, in order to get a mean value of the scores of each dimension and of the final ISAIAS FAST score, of each group of students and professors/researchers evaluated in each dental school.

Finally, these statistical results were completed, analyzed and compared using the qualitative data gathered during the investigation. It was voluntarily avoided to draw a direct statistical comparison between the tested groups, as it would be meaningless. The scores have to be compared while taking especially into consideration the national and

organizational culture and other qualitative data that influence the understanding and interpretation of each score.

3. Results

Following the previously described mixed methodology, data have been collected in the dental schools. The answers to the questionnaires were integrated in order to calculate for each tested group, the mean value of the global ISAIAS FAST score and of the scores of each dimension of intercultural competences. Results of the Professors/teachers and researchers were presented in the **Table 1**, and results of the postgraduate students were presented in the **Table 2**.

In each group, some strong personalities serving as leaders of internationalization have been identified and selected to serve as reference points of the dental implant groups. All of them were confirmed with the highest FAST scores (above 3.8) and therefore could serve as leaders of the groups of postgraduate students and reference points for the index of teachers/researchers.

The scores observed in School of Dentistry at the University of Granada were very high for the group of teachers/researchers, the highest among all the groups tested in this 3-part study. On the contrary, the scores of the post-graduate students - even if still quite high - were the lowest observed in the University of Granada in this 3-part study, marking a form of frustration and many unfulfilled expectations.

The scores observed in the Faculty of Odontology at the University of Paris were globally quite low for the group of teachers/researchers (below 2). On the other hand, the scores of the post-graduate students were the highest found in all Paris groups tested in this 3-part study, highlighting clearly the impact of local leaders of internationalization.

The scores observed in the Department of Oral Surgery at University Federico II of Naples were globally almost the same between the group of teachers/researchers and the group of postgraduate students, and a bit higher than the scores observed with undergraduate students, showing the impact of local leaders of internationalization, within the limits of their context.

The scores observed in the School of Dentistry at Chonnam National University were globally quite high, higher than all other groups observed in CNU, reflecting the effects of local leaders of internationalization. Teachers/researchers of CNU had the second highest scores after those of UGR, and post-graduate students had the highest scores among all post-graduate groups observed in this study. The field study highlighted that this positive result did not follow the reality of the situation, and reflected more the wish and enthusiasm for internationalization than the real local activity.

Scores and field studies were integrated in details in the discussion section.

Scores of Professors/Researchers in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.97	3.07	3.25	3.02	3.086
Paris University (France)	2.08	1.84	1.99	1.85	1.938
University Federico 2 of Naples (Italy)	2.85	2.16	2.60	2.70	2.582
Chonnam National University (South Korea)	2.9	2.7	2.8	2.7	2.773

Table 1. Intercultural dimensions and total ISAIAS FAST scores of a group of Professors and Researchers from 4 different Dental Schools.

Scores of Postgraduate Students in the Dental School					
University (Dental School)	Dimension (D) scores				Total FAST score
	1D. Attitudes	2D. Knowledge and Comprehension	3D. Skills	4D. Desire internal outcomes	
University of Granada (Spain)	2.464	2.16	2.45	2.53	2.406
Paris University (France)	2.77	2.25	2.81	2.53	2.595
University Federico 2 of Naples (Italy)	2.70	2.30	2.60	2.50	2.526
Chonnam National University (South Korea)	2.80	2.60	2.78	2.62	2.7

Table 2. Intercultural dimensions and total ISAIAS FAST scores of a group of Postgraduate Students connected to some implant and biomaterials leaders of internationalization in 4 different Dental Schools.

4. Discussion

4.1. General observations

The FAST scores and field observations in the 4 universities revealed very different situations and problematic. Even if the scores themselves appeared quite logical for the researchers, they shall not be considered without a deep observation and description of each national and academic environment. The FAST questionnaire was in many situations a support to evaluate deeper the reality of a situation that could only be understood by the campus field study. The combination of the scores of the questionnaires (quantitative analysis) and of the field study (qualitative analysis) has been sufficient to illustrate clearly the Strengths, Weaknesses, Opportunities and Threats of the internationalization efforts, and the differences and similarities in internationalization of higher education and research, in the tested dental implant/biomaterial groups from these 4 universities. The detailed analysis was done by school and described in its global perspective in the following chapters.

4.2. About the Implant/biomaterial Group at the University of Granada

Official programs in Implant Dentistry and Biomaterial at Spanish Universities are quite limited. Even if Implant Dentistry is the theme of the most important international meetings worldwide, it remains taught in Spanish Dental Schools in Surgery, Periodontics or Prosthodontics Programs, and not in specific programs based exclusively about implants. There is no official postgraduate program in Implant Dentistry, although there is a large proposal of unofficial programs offered by private entities, with a tremendous deregulation about teaching and research in Implantology and its associated techniques and procedures, as well as in biomaterial usage.

Traditionally, Dental schools have had a very limited activity in implant dentistry and biomaterials in the last 30 years, and it started to develop only in the last years. There are few active groups in Spain with some reputation in this field, normally associated to Periodontics or Oral Surgery Departments. They are focused mainly in clinical approaches and scarce clinical research, although there is currently a trend to basic research related to biomaterials and cell biology. The number of indexed international publications from Spanish authors has been also increasing in Implant Dentistry, and the visibility of some Spanish researchers in the key international meetings on the topic is increasing slowly.

Spanish dental implant groups are not following a pre-established strategy of internationalization, as the major institutions in North Europe and USA do. Traditionally the potency of the Spanish language has been a hidden enemy for this internationalization. Few professors in the middle age are able to speak fluently English, due to the educational policies followed in the 70s and 80s, what became an important limitation. University Complutense of Madrid leads the international visibility of Spanish Periodontics and Implant Dentistry abroad Spain. Other young Academic groups (like at the University of Granada) are developing different strategies based on the formation of their new elements in prestigious Programs in American Universities, promoting legal agreements between programs and their leaders, and generating a fruitful didactic and research collaboration between Institutions. However, only a small number of foreign students come to Spain to receive specific formation in Implant Dentistry, and the international relationship used to happen by emigration of young and capable pearls. Mechanisms to promote the return of these young specialists have to be developed in order to reverse the trend of the internationalization in Spain, related to Implant Dentistry and Biomaterials.

The results observed in this study somehow highlighted the problematic of the situation in Granada. The group of teachers/researchers showed a very high FAST score and high values in all dimensions of intercultural competences (the highest among all groups from this 3-part study). This revealed the effect of the strong policies of the University of Granada to promote internationalization as a main vector for its development and international visibility. Even if this group of professors experienced difficulties to communicate in English, the very strong ties and development of the dental school with other Latin countries (particularly in South America), may explain a part of this very high score. The recent efforts of the new generation of teachers/researchers towards North American Universities also explain a part of this positive result, as a form of significant enthusiasm promoted at the scale of the dental implant groups themselves.

However, the scores felt down significantly in the postgraduate group tested in this study (this was a lowest score of all the groups tested in the University of Granada). This result was clearly associated with unfulfilled expectations, with a frustration to not have more openings and more internationalization opportunities during their postgraduate studies. This group perceived the language as a much bigger difficulty than the group of teachers/researchers (young postgraduate students wished and expected to communicate in English, while teachers/researchers appeared satisfied to communicate in Spanish). As this group of postgraduate students was at the Frontier between the promoting internationalization policies of the University of Granada and the practical difficulties to fulfill concretely this internationalization, their answers to this test appeared more negative. This study therefore confirmed the paradox of the internationalization in Granada University observable in the field [14], between strong policies and practical limitations, and the need to develop more concrete opportunities to be able to compete with the North American model of massive internationalization of Higher Education.

4.3. About the Implant/biomaterial Group at Chonnam National University

In local clinics in Korea, the demand for dental implant grew intensively from the 90s. However, education in dental implants only started around 10 years ago for dental school students. Most general practitioners learnt dental implant surgery through seminars. Many dentists also went abroad for learning implant dentistry. The situation evolved very quickly in the last 10 years, simultaneously to the growth of the implant dentistry and biomaterial industry in Korea, and large quantities of seminars or courses for teaching implant dentistry are now organized in the country, becoming one of the most active center on the topic in Asia. Actually, Korea is in the top countries by number of implants per inhabitant, close to the statistics of Switzerland.

As dental implant is now a general treatment option in Korea, dental schools are trying to teach implant treatment to students as well as general practitioners. In CNU dental hospital, a special clinic for dental implant patients exists, and periodontics, maxillofacial and oral surgery, and prosthodontics groups are actively treating these patients in this special clinic. All these groups are involved in some way in dental implant and biomaterial education in the school. In the third year of CNU dental school, the subjects named “dental implantology”, “dental implant materials”, and “implant surgery” are listed on the curriculum, and students experience implant surgery and prosthodontics on the models. CNU Dental School was among the first schools to prepare such curriculum in Korea.

In Korea, a specialist system in dentistry started about 10 years ago, but no specialist in dental implant exists: periodontists or oral surgeons do most dental implant surgeries. To pass this specialist board, a certain number of cases must be done during the training in the dental hospital. These postgraduate students and their leaders constitute therefore the main dental implant and biomaterial groups and activities for education of the school. For implant and biomaterial research, CNU received several major national grants, such as the Brain Korea 21 (BK21), the NRF (National Research Foundation of Korea) Medical Research Center (MRC) for Biomineralization disorders and others, to promote this activity in the school. The development of bone regenerative biomaterials and strategies to improve peri-implant tissues has been an important objective of these groups (as a complement to the development of the dental implant industry), promoted at the level of the Ministry. However, the results of these efforts remain quite embryonic at this time. CNU implant and biomaterial groups have a good reputation in South Korea, but are not so visible internationally. As it is frequent in Korean universities, the cultural and language limitations seemed to impact significantly this endeavor.

International interaction is welcome at CNU dental school, as it is in the general policies of the university to promote internationalization of higher education and research to create “global leaders” [15]. Practically speaking, the actual internationalization is not so much animated and there is no real global strategy. The reason of this situation is that the CNU dental implant groups have a lot of patients, cases, materials and well-organized implant surgery procedures to manage, and an efficient internationalization strategy is not perceived as an immediate significant need. This is the paradox of Korean society where there is a wish for internationalization pushed by the authorities (which are expected to be obeyed, as it is a very collectivist Confucianist and pragmatic society with strong power distance)[4], in a very hierarchic and closed Academic environment that refrains this endeavor [15]. The CNU dental groups like to develop links with foreign schools to have global reputation, and the School even recruited a famous foreign professor for research and publication activity. Periodically they open a symposium to promote global relationships. It is also common to see dentists from China and Mongolia coming to CNU to learn dental implant surgery. As Korea has one of the most advanced implant dentistry industry in Asia, many Asian dentists are interested to have experience in Korea, and CNU dental school participates to this effort. Because of the specific cultural environment, this interaction remains, however, very limited in comparison to what could be developed (observations of foreigners), and the development of internationalization of these groups remains much lower than what can be observed in North American Universities.

The results observed in this study highlighted the problematic of the situation in CNU. The FAST scores of the teachers/researchers and post-graduate students were quite high (the postgraduate group had the highest score among the 4 dental schools), proving a real wish to internationalization, engraved in their thinking by the strong hierarchic pressure of the University and Ministry policy (the need to create “global leaders”). Moreover, many Professors/researchers in CNU have spent some years abroad (often in the US) for their PhD or research leave, and were therefore quite opened to the concept of internationalization. On the other hand, the field study highlighted the relative weakness of this internationalization, mostly due to the practical organizational culture of the university and the limitations imposed by the hierarchic organization of the school [16,17]. This kind of discrepancy between the wish to internationalization and the concrete result can be found in the Asian countries with a strong collectivist Confucianist organization [4]. The FAST score of CNU revealed therefore the real potential of the dental implant group, more than its current

practical reality, and is an invitation to push for a more efficient organization in order to improve the international impact of the CNU dental implant groups.

4.4. About the Implant/biomaterial Group at the University of Paris

Even if the field of biomaterials and implantable material research is now a major center of interest worldwide, it is difficult to point out in Paris University a real strategy or a strong well-identified group of research and teaching in this field with a worldwide fame and recognition. Some research groups have a good reputation in some aspects of dental materials (composites, ceramics particularly) and oral biology, but the research in implantable biomaterials and implant dentistry remains limited in both Paris dental schools.

In France, due to historical reasons and the administrative organizational culture, the concept of post-graduate diploma and specialization in periodontology and implant dentistry (as it is found in Anglo-Saxon countries for example) does not exist. However many diplomas have been developed to teach the basic clinical techniques and knowledge in periodontology and/or implant dentistry, mostly in the form of University Diplomas (DU) or as a part of the new Diploma of Specialization in Oral Surgery. In all cases, independently from these major diplomas, most dentists learn implant dentistry through companionship, private courses and their own experience. Dental schools can also deliver various kinds of certificates or attestations. Paris 7 Diderot dental school has a significant tradition of clinical teachings in implant dentistry and related applied biomaterial research, and it is probably the most active dental school in France on this topic; for the Academic year 2014-2015, 5 active clinical University Diplomas covering different aspects of periodontology and implant dentistry can be observed.

Dental Implant Groups at Paris University do not have a global and coherent strategy of internationalization, in the way it is defined in major Anglo-Saxon Universities. These groups are developing links with foreign schools, mostly in the French speaking area (particularly in Africa and the Middle-East), and the university diplomas are in theory opened to all foreigners (with the obligation to speak and understand French). These university diplomas can only receive a very small number of participants (4 to 10 for example) and therefore the quantity of foreigners is very small. Moreover, these groups have limited research and publication activity in English (while they are much more active in French publications and meetings), what is also reducing the opportunities of internationalization. On the other hand, the few students following some leaders of the dental implant groups of Paris University have the opportunity to develop their intercultural skills through the international experience (contacts, international meetings, access to international journal and motivation to read them) associated to their leaders.

The results observed in this study highlighted the problematic of the situation in Paris University. The mean scores of the teachers/researchers were the lowest from the 4 universities, below the medium level (2). However, 2 very different patterns of responders could be observed (through the questionnaire and field research). Some Professors had very opened attitude toward international activities in Academia and these mostly reflected positive outcomes of international collaboration in the questionnaire (higher FAST score), while others (particularly the youngest responders) appeared refractory to internationalization basic understanding and concepts. This result confirmed the field observations gathered during the study and the knowledge about the dimensions of the French national culture (high power distance, high individualism and high uncertainty

avoidance)[4], where many young teachers/researchers, paradoxically, were very French-centered, what did not correspond to the attitudes of the more experienced professors.

On the other hand, the group of postgraduate students showed a much higher FAST score (second, just a bit lower than the Korean one), with a very positive attitude, even with the difficulties in knowledge and comprehension. The score of this group was the highest from all French groups tested in this 3-part study, and it can be directly connected to the leadership of a few strong personalities in the dental implant/biomaterial groups promoting this positive behavior. Therefore, Paris dental schools are good examples of closed systems that are able to open considerably as soon as an adequate leader of internationalization is activated.

4.5. About the Implant/biomaterial Group at University Federico II of Naples

The University of Naples “Federico II” has a significant tradition of clinical teaching in implant dentistry and related applied biomaterial research; there are several research groups on this topic that have significant reputation recognized nationally and internationally. The activity in implant dentistry started about 30 years ago and the results have been presented initially at national congress and private courses. The first international articles were published about 10 years ago. The barrier of the language has been being clearly a significant limitation, even if the situation has been improving slowly in the recent years.

In Italy, Universities can deliver various kinds of certificates or attestations in implant dentistry, but only the post-graduate Diploma of Specialization in Oral Surgery (which is a more general specialization) has a significant legal value. Followers can occasionally attend lectures on specific subject given by foreign teachers invited by the academic director of the diploma. However, the University does not support other significant post-graduate activities and the economical resources remain scarce, as they come only from the very limited subscription fees of the followers. The circumstances described above may explain how, in this highly competitive scientific field, no strong or large group of research has been developed. Professors organizing these diplomas have a key role in the internationalization of the Napolitan University in the field of implant dentistry and related applied biomaterials, but they have often to develop everything by themselves.

Dental Implant Groups at Naples University do not have a global coherent strategy of internationalization as it is defined in major Anglo-Saxon Universities. In recent time, Conventions have been set up with other Mediterranean Universities to promote cultural exchanges. The university diploma, even though opened to foreign students, is not a real vector of internationalization, as the proposed postgraduate activities remain very Italian-centered in the actual globalized and competitive post-graduate education offer. Only few students following some leaders of the dental implant groups of Naples University have the opportunity to develop their intercultural skills through the international experience (contacts, international meetings, access to international journal and motivation to read them) associated to their leaders.

The results observed in this study highlighted the problematic of the situation in the University of Naples. The FAST scores of both teachers/researchers and postgraduate students were positive and very similar. Correlated to the field study, the results showed a visible wish for internationalization within the practical limitations related to the organizational culture of the school. Teachers/researchers and postgraduate students showed higher scores in development of different aspects of intercultural competences in comparison

to the undergraduate students of this dental school. This positive result was mostly related to the impact of active leaders of internationalization in their close environment. However, this impact appeared limited by the practice: very limited mobility, rare foreign colleagues, etc. The absence of global strategy and difficulties of investment from the dental school to promote a more global activity and leadership for the specialized dental implant groups could be seen among reasons. Italy is a society with a high individualism, quite high uncertainty avoidance level and middle pragmatism [4], what can explain easily this very stable attitude, positive but limited. It is a model that needs a better organization of the school to promote a stronger leadership in the field (opinions).

5. Conclusion

Dental Implant/Biomaterial Groups had different ISAIAS FAST scores between the different universities, however, there was a convergence towards higher scores at the postgraduate level and between teachers/researchers. The groups in direct contact with the main identified leaders of internationalization of each dental implant group had in general the highest possibility for development of intercultural competences. However, field studies clearly showed that the Academic environment (organizational culture) and the absence of global strategy was often a limitation for the efforts of these leaders of internationalization.

This convergence may explain why the cooperation within the POSEIDO network is going smoothly, as all key members are active leaders of international academic collaborations with strong intercultural sensitivity. Those are major characteristics for the development of international, interdisciplinary projects in education and research and for the general improvement of the internationalization process of a campus in specialized fields such as implant dentistry and biomaterial research.

As a final conclusion for this series of articles, the ISAIAS FAST questionnaire and the score are interesting instruments of observation, but it should be never forgotten, that the calculation of a score value is not the real objective. First of all because this questionnaire allowed to go in direct contact and discussion with the groups of academic stakeholders and to perform elegantly a field evaluation of internationalization, where concrete information can be obtained. If the final scores and the field observation appeared to be well connected in this study, it is the sign that the questionnaire was well thought and the field study properly managed, but the score alone does not mean anything without a deep evaluation and understanding of the context in which it was calculated. It is a methodology proposed to see closer the dimensions of internationalization of a campus, overcoming limitations of evaluation through mobility statistics. The ISAIAS protocol is first of all a bridge of intercultural communication, and a first step to understand and improve the interfaces between groups of Academic entities.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This work is part of the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project

was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France. The authors want also to thank all the students, academic and administrative staffs who accepted to spend time answering to the questions with sincerity and patience.

Author Contributions

LW, MFC, DDE and HLW were leading the general organization and main financial support of this international project. All authors participated to the development of a consensual analytical process, to the collection of samples and data in their respective university and country, and to the elaboration of the manuscript.

References

- [1] Deardorff DK, de Wit H, Heyl JD, Adams T. *The SAGE Handbook of International Higher Education*. SAGE Publications, Inc. ISBN: 9781412999212. 2012.
- [2] Knight J. *Internationalization Remodeled: Definition, Approaches, and Rationales*. *Journal of Studies in International Education*. 2004;8(1):5-31.
- [3] Koehn PH, Deardorff DK, Bolognese KD. *Enhancing International Research and Development-Project Activity on University Campuses: Insights From U.S. Senior International Officers*. *Journal of Studies in International Education*. 2011;15(4):332-50.
- [4] Hofstede G, Hofstede GJ, Minkov M. *Cultures and organizations. Software of the mind. Intercultural Cooperation and Its Importance for Survival*. London. McGraw-Hill. ISBN 978-0-07-1664418-9. 2010.
- [5] Olson CL, Kroeger KR. *Global Competency and Intercultural Sensitivity*. *Journal of Studies in International Education*. 2001;5(2):116-37.
- [6] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing*. *POSEIDO*. 2013;1(1):1-5.
- [7] Dohan Ehrenfest DM, Kang BS, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization*. *POSEIDO*. 2013;1(1):7-15.
- [8] Dohan Ehrenfest DM, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO*. *POSEIDO*. 2013;1(1):17-27.
- [9] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system*. *POSEIDO*. 2014;2(1):7-22.
- [10] Deardorff DK. *The SAGE Handbook of Intercultural Competence*. SAGE Publications, Inc. ISBN: 9781412960458. 2009.
- [11] Knight J. *Monitoring the Quality and Progress of Internationalization*. *Journal of Studies in International Education*. 2001;5(3):228-43.
- [12] Deardorff DK. *Identification and Assessment of Intercultural Competence as a Student Outcome of Internationalization*. *Journal of Studies in International Education*. 2006;10(3):241-66.
- [13] Wisniewska LM. *Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals*. *Høgskolen i Akershus, Erasmus Mundus*. 2011.
- [14] Altbach PG, Knight J. *The Internationalization of Higher Education: Motivations and Realities*. *Journal of Studies in International Education*. 2007;11(3-4):290-305.
- [15] Kim T. *Internationalisation of Higher Education in South Korea: Reality, Rhetoric, and Disparity in Academic Culture and Identities*. *Australian Journal of Education*. 2005;49(1):89-103.
- [16] Byun K, Kim M. *Shifting Patterns of the Government's Policies for the Internationalization of Korean Higher Education*. *Journal of Studies in International Education*. 2011;15(5):467-86.
- [17] Jon JE. *Realizing Internationalization at Home in Korean Higher Education: Promoting Domestic Students' Interaction with International Students and Intercultural Competence*. *Journal of Studies in International Education*. 2013;17(4):455-70.

This article can be cited as:

Wisniewska LM, Jo YW, Kim SY, Amr S, Khoury G, Galindo-Moreno P, Sánchez-Fernández E, Carrillo-Badillo AM, Renta-Davids AI, Marenzi G, Sammartino G, Wang HL, Dohan Ehrenfest DM, Fernández-Cruz M. *The impact of leaders of internationalization in highly specialized academic fields: case study in implant dentistry and biomaterial education and research. Part 3: comparison of dental implant group strategies in French, Italian, Spanish and Korean universities using the ISAIAS FAST score.* **POSEIDO.** 2014;2(3):209-23.

Special Review: Editorial of the POSEIDO ISAIAS

Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research

David M. Dohan Ehrenfest,¹ Lidia M. Wisniewska,^{1,2,3,*} Jamil Awad Shibli,⁴
Marsel Z. Mirgazizov,⁵ De-Rong Zou,⁶ Nelson R. Pinto,^{7,8} Jean-Pierre Bernard,⁹
Gilberto Sammartino,¹⁰ and Hom-Lay Wang.¹¹

¹ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

² Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain

³ Department of International Relations, Paris Sorbonne University, Paris, France

⁴ Department of Periodontology and Oral Implantology, Dental Research Division, University of Guarulhos, Guarulhos, Sao Paulo, Brazil

⁵ Fund of Development of High Stomatologic Technologies of Russia (Biocompatible materials and implants), Moscow, Russia

⁶ Department of Stomatology, Shanghai Sixth People's Hospital, Shanghai Jiao Tong University, Shanghai, China

⁷ Graduate School of Periodontics and Implant Dentistry, University of the Andes (UANDES), Santiago, Chile

⁸ Department of Oral Health Sciences, Katholieke Universiteit Leuven (KUL) & Periodontology, University Hospitals Leuven, Leuven, Belgium

⁹ Department of Stomatology, Oral Surgery, Implantology and Dental and Maxillofacial Radiology, School of Dental Medicine, University of Geneva, Geneva, Switzerland

¹⁰ Department of Oral Surgery, Faculty of Medicine, University Federico II, Naples, Italy

¹¹ Department of Periodontics and Oral Medicine, School of Dentistry, University of Michigan, Ann Arbor, Michigan, USA

*Corresponding author: Lidia M. Wisniewska, liliw@interia.pl

Submitted on August 5th, 2014; accepted after minor corrections on August 15th, 2014.

Abstract

Internationalization of Higher Education and Research is a major evolution of the Academic environment, and it is also impacting in a specific way the dental disciplines. It is originally a concept to promote cooperation and peace between cultures and Nations, through the development of an efficient intercultural Academic interface. This introductory article reviewed the origin, causes and consequences of this process in the global scientific cooperation, and discussed how the current models of internationalization have generated independent blocks around centers of influence. These centers are entering in a scheme of global competition for influence, far from the initial honest concept of cooperation. This article also introduces the paradigm of “intelligent internationalization”, as a flexible and versatile method to create and maintain an interface between institutions, cultures and countries. This model is the basis of the POSEIDO Consortium (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) and is founded on the concept of network of leaders of internationalization. To monitor and strengthen this effort, the POSEIDO Consortium is developing an Academic toolbox termed ISAIAS (Intercultural Sensitivity Academic Index & Advanced Standards), as an initiative to promote deeper cooperation and to develop long-term common efforts in Higher Education and Research.

Keywords. Attitudes, culture, education, international cooperation, international educational exchange, leadership.

1. Internationalization: the Theory and the Practice

The process of internationalization of higher education and research is a natural consequence of the current globalization of the economy and policies, et vice versa [1,2]. Science and knowledge are an important part of this globalized economy, both as a financial resource for Academic institutions and a vector of development and influence. Therefore, this evolution is unavoidable, needed and promoted in most countries in different ways. However, this evolution is also affecting very strongly the functioning and customs of the Academic environment and stakeholders, as all of them – Students, Academic and Administrative staffs – have to face this new globalized reality [3].

It is often considered that Universities are the last Bastions of the Culture. It is an elegant way to recall that even if the Academic environment is not always conservative in its content, it remains for many historical and structural reasons quite conservative in the form, whatever the country. The internationalization of each university raised many specific issues, particularly in the way each institution (and country) wishes to develop its intercultural interface to exchange students, faculty and collaborate on the daily basis in higher education and research programs. Moreover, the national cultural differences of perception and action, and the different organizational cultures of each country and institution [4] are impacting considerably the capacity to build and maintain an efficient international interface for cooperation. All these intrinsic characteristics of the Academic stronghold are often deadly obstacles to long-term trustful and efficient global collaboration.

Despite these difficulties, governments are strongly promoting the development of the international collaboration, mostly through many national programs supported by financial incentives [5]. Education and Research are powerful instruments in the current globalized economical competition, to train efficient professionals and to promote discovery and innovation, as well as a powerful source of financial resources and an instrument of international influence. Therefore, the concept of internationalization of higher education and research is often considered as a priority by the economic and political policymakers [5], also as an important way to become or remain a center of influence.

However, these efforts may be in fact very superficial [6]. When the last Stronghold of Culture goes global, concepts have to evolve and adapt to the national reality to survive. Many universities perceive internationalization as a simplified administrative concept, mostly teaching and communicating in English, bringing more foreign students to study on their campus and finally to send more of their own students abroad. Universities often evaluate the outcome of their efforts only as a simple number of foreign students visiting their campus, and students traveling abroad. The development of an international Faculty is also a promoted method, but it remains very specific to Anglo-Saxon Universities. Actually, the modern paradigm of internationalization of higher education is often perceived as an Anglo-Saxon model, and it may explain why it is not perceived positively and has not been accepted in many countries. It may explain why each culture wants to implement this concept in its own way [5].

In theory, the purpose of internationalization is first of all to create an interface of exchanges between countries and between cultures, and not only to import students or Faculty. It is not a blind verbiage; it is a concept to promote a sincere understanding and long-term peace and cooperation between countries and cultures, even if they decide to have

their own path of development. If the interface does not really develop and function smoothly, and turns unbalanced, the process of internationalization becomes in the best case a simple commercial activity (the trade of education and knowledge), in the worst case a blind effort to fulfill an administrative obligation towards a national policy [5,6]. If the imbalance increases to a critical level, it can become a source of conflicts and distrust, leading to the break of the interface with deep long-term damages.

In Dentistry, internationalization takes a specific form related to the clinical nature of the profession, and the specific need of recognition of the diplomas to practice (registration to a national Board or Order particularly). Schools of Dentistry are therefore quite isolated due to the administrative nature of the diploma they deliver. The undergraduate dental Education remains very strongly national in most cases. In general, internationalization concerns mostly the postgraduate education (i.e. specialization training) and the research levels. The current tendency is to regroup the Universities by countries sharing full or partial agreements on practice diplomas, for example the European countries, the countries of the British Commonwealth, the countries of the former Soviet block, France and other French speaking countries, etc... History and language have created and have been maintaining these cultural blocks of influence. The interface between these blocks is in fact quite limited, and the transmission and penetration of ideas and concepts between these Academic blocks are much slower than what we can imagine and strongly impacted by the national and organizational cultures. A simple example: the use of L-PRF (Leukocyte- and Platelet-Rich Fibrin) has been developing for more than 10 years in Europe and many other countries worldwide as an open-access inexpensive useful method, while it only starts to be introduced recently in the US Academic environment [7].

In Theory, Theory and Practice are the same; in Practice, they are different. Internationalization of Higher Education and Research is an excellent example of this sentence. In theory, internationalization should create bridges between cultures and people at a global scale and should be promoting a delicate and sincere interface. In practice, the national interests and organizational cultures are allowing often only a very superficial interface between nations and cultures, and finally create and consolidate blocks of influence entering frequently in competition. Even the most internationalized universities have difficulties to maintain long-term and stable international partnerships. The cultural interface is often too superficial and temporary. Deep cooperation is often broken by intercultural misunderstandings and conflicts of interest, while superficial cooperation dissolves like a dream after a few primary objectives have been reached. Even with the greatest sincerity between people, the stabilization of the interface is simply difficult in most Academic and cultural environments. The current policy models may have reached their limits.

2. International Scientific Cooperation or Competition of Influences?

When considering international Scientific cooperation in Health Sciences, the U.S. model is an interesting example, as this effort is particularly strong and integrated in a global policy of development by the U.S. government and most of the U.S. universities.

The most organized global initiative in this sense is probably the development of the Fogarty International Center [8], a branch of the U.S. National Institute of Health (NIH, the national medical research agency and a part of the U.S. Department of Health). This Center was established in 1968 to promote and support scientific research and training

internationally to reduce disparities in global health. In its official mission and vision, the Fogarty International Center is “dedicated to advancing the mission of the National Institutes of Health (NIH) by supporting and facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions in the U.S. and abroad, and training the next generation of scientists to address global health needs. The Fogarty International Center's vision is a world in which the frontiers of health research extend across the globe and advances in science are implemented to reduce the burden of disease, promote health, and extend longevity for all people.” The Center is based and functioning on generous ideals, but is also an important instrument of political and economic influence. Many countries have developed historically similar initiatives of scientific cooperation to extend their influence (for example France very active in all French speaking countries, Japan very active in the Asia-Pacific area, England in the Commonwealth, Russia in many former soviet satellite countries or even Cuba bringing a significant medical assistance in many developing countries, etc.). Many other countries are now actively supporting and extending worldwide this kind of cooperation for the very same reasons (for example South Korea and China).

The national efforts for scientific cooperation are obviously positive initiatives, even if they can be sometimes perceived as a form of Scientific Imperialism. The main issue with this form of cooperation, it is that it creates and freezes blocks around some national centers of gravity controlling the source and the functioning of cooperation. These blocks of influence often perceive themselves in strong competition, what can sometimes lead to tensions and always to an absence of real sincere cooperation between blocks.

If we take a look at the situation in the fields of Periodontology, Oral Surgery, Esthetic and Implant Dentistry (the POSEID disciplines), this notion of blocks of influence is very strong. If we take only the field of dental implants as example, the U.S. scientific societies such as AO (Academy of Osseointegration), American Academy of Implant Dentistry (AAID) or ICOI (International Congress of Oral Implantologists) are controlling their specific environment and developing a worldwide Community of Affiliates or Chapters, particularly through the powerful lever of their respective indexed journals and research Foundations. The same can be observed for the EAO (European Association for Osseointegration). These powerful groups are all trying to be international and extend their influence worldwide – on the same principles than the national institutions discussed previously.

However, even if they are the most visible groups internationally, these important societies only represent a very minor fraction of the global Community of the field. These societies are operating with specific cultural models and organizational cultures: perceived as a foreign body, they remain isolated from most major national blocks and have often a very weak penetration of the national professional communities worldwide. Paradoxically, the largest societies worldwide may be the national entities with a strong implantation and focus on their national community and culture, such as the Japanese Society of Oral Implantology (the largest society in the world with more than 12,000 members)[9], the German DGI (Deutsche Gesellschaft für Implantologie, the largest dental implant specialist society in Europe with 8,000 members), and many other major national societies such as the Korean KAOMI (Korean Academy of Oral & Maxillofacial Implantology), Brazilian ABROSS (Academia Brasileira de Osseointegração), the Russian RADI (Russian Association of Dental Implantology), the Spanish SEI (Sociedad Española de Implantes), the Italian SICOI (Societa Italiana di Chirurgia Orale ed Implantologia), the Chinese SSA (Shanghai Stomatology Association), and so many others. It is a frequent mistake to misperceive the real importance of the national scientific societies. The development of a global Community without the trust

of strong respected local partners may be perceived as a culturally arrogant approach, both counter productive and doomed to failure.

This observation reveals that many scientific societies perceive themselves as competitors and remain firmly independent from others to avoid conflicts between areas of influence. Groups are often hesitating to share or unable to cooperate, perceiving the others as a risk and not as an opportunity. As a consequence, these blocks of national interests and influence remain quite separated. All relations are based on equilibrium of forces between stakeholders. Maintaining this equilibrium requires a real understanding of intercultural cooperation, and how to develop an interface fulfilling the needs of all partners within their own cultural environment without creating tensions between partners. The current Theory of international scientific cooperation finally turned into global rivalry between centers of education and research and their respective areas of influence. It is very visible in the POSEID disciplines, but in fact, it can be observed more widely in most domains of international scientific cooperation.

3. The POSEIDO Consortium, an example of “intelligent Internationalization”

3.1. To cooperate or not to cooperate, that is the question...

If we consider again the many scientific societies creating national or international communities in the POSEID disciplines, it appears obvious that, in theory, many of these partners should be able to cooperate into a common project. Together, they would be more efficient in the development and spreading of knowledge to improve global health – what is actually an important mission of all national medical institutions. A careful analysis of the national situations demonstrates easily that the national and organizational cultures of each scientific society are so specific that these groups are often not competitors in reality [4]. Most societies are working through different models and channels. The local success of a scientific society is mostly related to the way this entity grew in a specific organizational culture. Therefore, they all have interest to cooperate to become global by putting their efforts together [4]. The relations of forces between groups, however, often compromise this ideal objective. Each group is feeling the need to search for guaranties, control and leadership within the global community. The absence of real understanding of intercultural cooperation is a deadly obstacle in this situation also.

This observation is not specific to national scientific societies; it applies also very strongly in the Academic environment. An interesting example can be found in open-access publishing. Many major universities (such as Harvard, Princeton, etc), major funding bodies (such as the Wellcome Trust in the UK, the Howard Hughes Medical Institute and the National Institutes of Health (NIH) in the US, and the National Health and Medical Research Council (NHMRC) in Australia) and national institutions are now promoting open-access publishing – making it even sometimes mandatory for the funded researchers [10]. Open-access publishing can now be considered as a national policy in several Western Countries, particularly Australia, the USA [11], the UK [12] and Europe in general [13]. The concept is always the same: if a research is funded by an institution (particularly a public one), it must be accessible to everyone; the funded researchers shall not give their copyrights to publishing private companies and must make their research works open-access. However, the open-access model is not free [14], and requires the payment of substantial publication fees, creating therefore another financial barrier in publishing, what can be particularly impactful

in clinical disciplines such as implant dentistry, where many breakthroughs are coming from non-funded private practitioners.

The concept of open-access publishing is therefore very attractive and evolving very quickly nowadays. It is an obvious and vital platform for Academic stakeholders. However, we can observe that - outside of POSEIDO - almost no global Consortium of Universities was formed and started to develop and self-manage their own platform, without the control of a private publishing company. Paradoxically, we can find a few indexed dental journals managed directly by a University (and sometimes an Academic Department) through an in-school micro-publisher: many old examples actually exist, very often in unexpected places, for example Croatia (Acta Stomatologica Croatica, operating from Zagreb since 1966 and indexed in Pubmed since the Communist times!), Iran (Trauma Monthly, since 20 years) and many others. This reveals that journals can be created and managed directly in a University when there is a strong local leadership deciding to remain independent from private companies. By contrast, it also highlights the difficulty for Academic Departments to share and collaborate firmly together on a global publication platform, both at the national and international level. There is maybe a lack of trust and wish to share responsibility, the perception that a fair and honest cooperation would be technically impossible between Academic Departments worldwide, that conflicts of influence and financial interests are unavoidably spoiling such projects, and that difficulties of intercultural relations can not be seriously overcome when considering a more global approach. Therefore, academic stakeholders seem to prefer to rely on a neutral private publisher to serve as a common global platform to process their proceedings. This choice is financially heavy and deprives them from a big part of their Academic editorial freedom.

In the previously cited examples, when journals are developed within an Academic Department, they are mostly the fruits of a strong local leadership. The inconvenient of this strategy is that such platform never becomes really global. But these examples highlighted very clearly what can make an international cooperation possible: leaderships, and the gathering of strong national leaderships wishing to work together and to cooperate openly and sincerely despite the cultural differences. This observation served as a founding concept of the POSEIDO Community.

3.2. POSEIDO and the leaders of “intelligent internationalization”

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Organization) is an international scientific network of academic departments and scientific societies. It was developed as a consortium of academic entities sharing the responsibilities of the global functioning of the network, through the development of independent partner hubs and editorial offices in each geographic area [15]. The network regroups mostly dental school departments, but it is also a platform for transdisciplinarity and translational research including departments of orthopedic and plastic surgery, cell biology, veterinary sciences, biotechnology and biomaterials. The network has already gathered significant entities in 40 different countries and several major scientific societies such as the previously cited Brazilian ABROSS, the Russian RADI, the Spanish SEI, the Italian SICOI or the Chinese SSA, giving to this cooperative initiative a quite unique global dissemination.

The Consortium functions like a cooperative platform between leaders of internationalization, i.e. experienced colleagues with a national and/or international reputation and serving as global relays and interfaces in their respective countries. The POSEIDO open-access journal is managed by a group of Editors, what will become a board of

several Editors in Chief at the end of the global development. The first POSEIDO journal is not a mass-publication platform, it is mostly a journal focusing on major specific studies and trying to develop a international collaborative work, as it can be observed in the last issues about the characterization of implant surfaces [16,17] or the comparison of various centrifuges for platelet concentrates [18]. The first issues of early 2014 [17,19] were downloaded already more than 15,000 times making this relatively small open-access journal one of the most downloaded (and hopefully read) in the profession.

The POSEIDO Consortium is founded on a flexible and versatile concept of “intelligent internationalization”. The classical approach to internationalization is a centralized policy funded and promoted by national institutions – and therefore considered too often as an instrument of Scientific Imperialism. On the contrary, the approach of “intelligent internationalization” implies that friends and local leaderships gather around a common global project and share its management for their own respective national area. It is the cooperative approach between centers of influence. The traditional process of internationalization is generally centrifuge – what can lead naturally to conflicts between centers of influences and difficulties in sincere global cooperation. “Intelligent internationalization” is more centripetal: partners are gathering around a project, but keep their area of influence. Intelligent internationalization is in fact the natural instrument of the current multipolar world, where no one can claim global leadership alone. It is a different model to offer the possibility of cooperation between centers of influence.

Following this model of “intelligent internationalization”, the members of POSEIDO are not together because they have to follow their respective academic national policies or because they want to gain influence on their international partners. All the partner entities remain completely autonomous. They volunteer to be together simply because they wish to be part of a global experience where they will be treated as equal. Such platform requires to back up the process with considerable intercultural competences and to gather a Community of strong national personalities monitoring the interface: the role of the leaders of internationalization appeared therefore crucial since the beginning of the project. However, despite the efforts of these leaders, it appeared also important to develop a toolbox of academic instruments to monitor and deepen the intercultural interface, and to support the development of global long-term inter-academic projects.

4. The toolbox of the ISAIAS Prophecy

4.1. The ISAIAS forum, a center of international cooperation

The founding concept of the POSEIDO network was to create and develop an international Consortium for Higher Education and Research in the interconnected fields of periodontology, oral surgery, esthetic and implant dentistry, and related sciences. As a global inter-academic experience, POSEIDO is constantly facing the challenges of intercultural cooperation [4]. The process of “intelligent internationalization” through the gathering of experienced national leaders of internationalization allowed to overcome most difficulties of collaboration among the many entities from 40 countries actually participating to this network. This resulted in an intense and smooth collaborative activity, particularly in the field of biomaterial research [17,19]. The experience and personality of the leaders joining the POSEIDO network played a significant role in the first successes of this cooperative platform. However, reinventing a model of intercultural interface between so many members is a difficult task that requires some adequate instruments to fulfill long-term objectives.

One major objective of the POSEIDO network is to develop efficient and stable long-term collaborations between all partners of the Consortium. The platform could allow to build commonly funded research and post-graduate education projects at a world scale, particularly in the field of implant dentistry and biomaterial research. The development of such wide initiatives requires necessarily diplomacy and intercultural competences from all stakeholders [4,20]. With this long-term vision in mind, the POSEIDO Community and Foundation decided to fund a global program of evaluation of internationalization patterns and of development of the intercultural sensitivity and skills of its actual and future community members worldwide: the ISAIAS program (Intercultural Sensitivity Academic Index & Advanced Standards). This project was designed as an evaluation, education and conflict prevention global initiative, to promote smoother and more efficient global cooperation.

The ISAIAS project functions as an international informal working group about the internationalization of higher education and research in general, and its impact in dentistry in particular. This group is developing new concepts, methods and instruments of evaluation of the internationalization of an academic environment (University, campus, laboratory) and its impact on the perceptions and behaviors of all academic stakeholders (particularly students, teachers and researchers). It serves also as a think tank to develop new strategies and standards to maintain the intercultural equilibrium of the Consortium and to promote the development of intercultural competences among members [20]. Practically, it is a general toolbox to highlight the SWOT (Strength, Weakness, Opportunities and Threats) of the members of the network, and to make partners aware of the kind of problems that may appear in the various projects.

Behind the numbers and indexes that can be calculated within this project, the ISAIAS office is first of all a group of colleagues in charge of monitoring our members and Communities, to prevent conflicts and find satisfactory solutions for everyone, based on the respective cultural background of each partner. The first function of this group is to observe and advice, serving as a kind of Intelligence Service for the Consortium. As a second and future objective, the ISAIAS forum was designed to become step by step a decentralized Center of international cooperation.

The ISAIAS logo (**Figure**) is representing 6 smiling faces in different colors, connected on and through the lines of a cloud. There is here a small reference to the Olympic flag; like for the Olympic flag, the colors should not be specifically associated with a population or geographic area. The 6 round faces refer symbolically to the main world geographic areas, even if the number of POSEIDO editorial offices and SIRECs (Scientific International Research and Education Centers) and their exact perimeters are voluntarily kept flexible and adapted to the growth of the Consortium worldwide. The cloud and the smile are referring to an expected Harmony through this partnership. They also illustrate the notion of network, and the decentralized nature of this International Consortium, with all partners equal. Finally, the thin cloud line connection between the faces recalls also the fragility of this intercultural channel between partners, and the need to make efforts to maintain it. The line is fragile, but historically, sincere links between partners are the only interfaces working efficiently. The whole logo represents somehow this vision of “intelligent internationalization” of higher education and research through networking of leaderships, as an equilibrated and harmonious Community. The symbolism of this model of cooperation appears more adapted to our current extremely multipolar world than a superficial process of internationalization.



Figure. The ISAIAS logo is representing 6 smiling faces in different colors, referring symbolically to the main world geographic areas. The cloud slim connection between the faces and their smiles are referring to an expected Harmony through a decentralized networking partnership, with all partners equal. The thin cloud line connection recalls also the fragility of this intercultural channel between partners, and the needed efforts to protect it. The whole logo illustrates quite well the concept of “intelligent internationalization” of higher education and research through networking of leaderships, as an equilibrated and harmonious multipolar Community.

4.2. About the choice of ISAIAS as acronym

The acronym ISAIAS is easy to remember as it recalls the name of an important Prophet of the Bible (using the orthography used in Latin, Spanish and many other languages), who is actually shared between the 3 major monotheist religions. There were obviously no religious considerations in the choice of this acronym, as it would go completely against the good sense rules of neutrality in the development of intercultural cooperation, even if this is perceived as an historical and not conflicting character for most stakeholders.

The idea was first of all to have a general acronym easy to remember for the whole project funded by the POSEIDO Foundation, but the members supporting this project also considered that the name of this historical character was suiting very well the function of this project. Indeed, the Prophet Isaias was important in the religious traditions mostly for the accuracy of his predictions and for his announcement of the coming of a World of Peace among the Nations. In this sense, this acronym reflects the idea that the ISAIAS scores, developed as various indices and standards of internationalization through the development intercultural competences, are a way to predict the level and evolution of a process of internationalization of higher education. It also recalls that efforts in terms of development of intercultural sensitivity within the Academia remain the key for smoother and more efficient interactions and collaborations between researchers, teachers, administrative staff and finally populations, even if they remain culturally very different and with the wish to remain so. Somehow, the instruments that will be developed with the ISAIAS project are expected to promote understanding and cooperation in the respect of cultural diversity within a research and education network, what is the most adequate approach in the current globalized but more and more multipolar World. Culture is the software of the mind [4]; the ISAIAS project

has been funded to develop a software for efficient inter-academic education and research cooperation, particularly within a specialized community like POSEIDO.

5. Perspectives

The development of the POSEIDO global scientific Community through cooperation and partnership is a considerable endeavor that requires to reinvent and to reformulate some concepts of the current paradigm of internationalization of higher education and research. The notion of “intelligent internationalization” through the channel of leaders of internationalization is one of the POSEIDO founding concepts and is well illustrated by the symbolism of the logo of the ISAIAS project and forum. The ISAIAS initiative is serving as an instrument for understanding and developing the POSEIDO intercultural experience, to improve the interfaces in internationalization, and also to offer predictive advices for the protection of the thin and fluctuating intercultural interface. This ISAIAS “Prophecy” recalls us that beyond the institutions and the culture, there are People, and this is this challenging path that we have decided to follow using this flexible and versatile interface.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This work is part of the ISAIAS Program (Intercultural Sensitivity Academic Index & Advanced Standards) for the development and promotion of new strategies and standards in the internationalization of higher education and research (particularly in the field of implant dentistry and biomaterials), and it was supported by the POSEIDO Foundation (Geneva, Switzerland). This project was also partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France.

References

- [1] Deardorff DK, de Wit H, Heyl JD, Adams T. *The SAGE Handbook of International Higher Education*. SAGE Publications, Inc. ISBN: 9781412999212. 2012.
- [2] Altbach PG, Knight J. *The Internationalization of Higher Education: Motivations and Realities*. **Journal of Studies in International Education**. 2007;11(3-4):290-305.
- [3] Knight J. *Internationalization Remodeled: Definition, Approaches, and Rationales*. **Journal of Studies in International Education**. 2004;8(1):5-31.
- [4] Hofstede G, Hofstede GJ, Minkov M. *Cultures and organizations. Software of the mind. Intercultural Cooperation and Its Importance for Survival*. London. McGraw-Hill. ISBN 978-0-07-1664418-9. 2010.
- [5] Byun K, Kim M. *Shifting Patterns of the Government's Policies for the Internationalization of Korean Higher Education*. **Journal of Studies in International Education**. 2011;15(5):467-86.
- [6] Kim T. *Internationalisation of Higher Education in South Korea: Reality, Rhetoric, and Disparity in Academic Culture and Identities*. **Australian Journal of Education**. 2005;49(1):89-103.
- [7] Dohan Ehrenfest DM, Rasmusson L, Albrektsson T. *Classification of platelet concentrates: from pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF)*. **Trends Biotechnol**. 2009;27(3):158-67.
- [8] Kirby T. *Profile: NIH's Fogarty International Center*. **Lancet**. 2014;384(9938):121.
- [9] Kawazoe T. *Introduction of Japanese Society of Oral Implantology*. **Int J Oral Sci**. 2009;1(1):13-5.
- [10] Wolpert AJ. *For the sake of inquiry and knowledge--the inevitability of open access*. **N Engl J Med**. 2013;368(9):785-7.
- [11] Butler D. *US seeks to make science free for all*. **Nature**. 2010;464(7290):822-3.
- [12] Van Noorden R. *Britain aims for broad open access*. **Nature**. 2012;486(7403):302-3.
- [13] Van Noorden R. *Europe joins UK open-access bid*. **Nature**. 2012;487(7407):285.

- [14] Frank M. *Open but not free--publishing in the 21st century*. **N Engl J Med**. 2013;368(9):787-9.
- [15] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing*. **POSEIDO**. 2013;1(1):1-5.
- [16] Dohan Ehrenfest DM, Kang BS, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to implant surfaces and design from the POSEIDO: a standard for surface characterization*. **POSEIDO**. 2013;1(1):7-15.
- [17] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system*. **POSEIDO**. 2014;2(1):7-22.
- [18] Pinto NR, Pereda A, Jiménez P, Del Corso M, Kang BS, Wang HL, Quiryren M, Dohan Ehrenfest DM. *The impact of the centrifuge characteristics and centrifugation protocols on the cells, growth factors and fibrin architecture of a Leukocyte- and Platelet-Rich Fibrin (L-PRF) clot and membrane. Part 2: macroscopic, photonic microscopy and Scanning Electron Microscopy analysis of 4 kinds of L-PRF clots and membranes*. **POSEIDO**. 2014;2(2):141-54.
- [19] Sammartino G, Del Corso M, Wisniewska LM, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine*. **POSEIDO**. 2014;2(2):105-15.
- [20] Dearsdorff DK. *The SAGE Handbook of Intercultural Competence*. **SAGE Publications, Inc. ISBN: 9781412960458**. 2009.

This article can be cited as:

Dohan Ehrenfest DM, Wisniewska LM, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. *Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research*. **POSEIDO**. 2014;2(3):167-77.

Special Review: Editorial of the POSEIDO PACT

The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine

Gilberto Sammartino,^{1,*} Marco Del Corso,² Lidia M. Wisniewska,^{3,4} Tomasz Bielecki,⁵ Isabel Andia,⁶ Nelson R. Pinto,⁷ Chang-Qing Zhang,⁸ De-Rong Zou,⁹ and David M. Dohan Ehrenfest.⁴

¹ Department of Oral Surgery, Faculty of Medicine, University Federico II of Naples, Italy

² Private Practice, Turin, Italy

³ Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain; and Department of International Relations, Paris Sorbonne University, Paris, France

⁴ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

⁵ Department and Clinic of Orthopaedics, Medical University of Silesia, Sosnowiec, Poland

⁶ Regenerative Technologies Laboratory, Cruces University Hospital, BioCruces Health Research Institute, Barakaldo, Spain

⁷ Department of Surgical and Prosthetic Implantology, Faculty of Odontology, University of the Andes (UANDES), Santiago, Chile

⁸ Department of Orthopaedic Surgery, Shanghai Sixth People's Hospital, Shanghai Jiao Tong University, Shanghai, China

⁹ Department of Stomatology, Shanghai Sixth People's Hospital, Shanghai Jiao Tong University, China

*Corresponding author: Gilberto Sammartino, gilberto.sammartino@unina.it

Submitted June 6th, 2014; accepted after minor corrections on June 19th, 2014.

Abstract

The PACT (Platelet & Advanced Cell therapies) Forum Civitatis of the POSEIDO was created to offer a multidisciplinary platform of research, publication, debates and eventually consensus for researchers in the fields of Tissue Engineering and Regenerative Medicine (TERM). In this review, the issues, endeavors and perspectives of this considerable research field are discussed and illustrated, particularly (but not only) through the example of the history, failures and success of probably the oldest method developed in regenerative medicine, the topical use of autologous platelet concentrates (commonly known as Platelet-Rich Plasma – PRP or Platelet-Rich Fibrin – PRF). The History of this domain illustrates very well that the greatest enemy of knowledge is not ignorance; it is the illusion of knowledge. Fighting against illusions in Sciences is a very complex and tricky task, requiring continuing efforts and time. This PACT for a transdisciplinary, translational and international approach in regenerative medicine is an important step in this endeavor.

Keywords. Blood platelet, fibrin, growth factors, regenerative medicine, tissue engineering.

1. A multidisciplinary PACT, this is the right TERM

Tissue Engineering and Regenerative Medicine (TERM) is a very active field of research for many medical disciplines [1]. The general concept of this domain is to combine cells, scaffold, biological mediators (the 3 main components of a tissue) or any other

materials and biotechnologies to replace, reconstruct or regenerate a living tissue or organ and to restore a normal function. Dental and orofacial applications are numerous [2,3], starting from dental pulp regeneration, preimplant bone regeneration to extended maxillofacial reconstruction. However the TERM concerns all medical specialties and is a major basic science domain also. As a domain of research in Life sciences, it is one of the best illustrations of the need for medical transdisciplinarity and translational research.

Medical transdisciplinarity is in the essence of the TERM, because the development and results obtained in one medical field (e.g. orthopedic surgery) have often a direct impact in many others (e.g. oral and maxillofacial surgery)[4]: for example bone materials, titanium screws and regenerative strategies developed for lower limb reconstruction can often be applied to oral smaller-sized regeneration (the contrary is maybe even more true). In the field of platelet concentrates for surgical use (commonly known as Platelet-Rich Plasma – PRP or Platelet-Rich Fibrin – PRF), the same (or similar) preparations can be used in general surgery [5], ophthalmological surgery [6], plastic surgery [7], orthopedics [8], sports medicine [9] or in oral and maxillofacial surgery [10,11]. The concepts of regenerative medicine have to be tailored and adjusted to each specialty, but any good publication in one medical domain concerns also the applications in the others.

Translational research is also the founding stone of the TERM, because applied tissue engineering implies the cooperation between basic researchers (material engineers, biologists, etc) and clinicians from all domains. For example, the development of new surfaces for implantable materials [12] requires engineers (very specialized such as surface specialists, metallurgists, etc), cell biologists for in vitro testing, sometimes veterinarians for animal investigations of applications, and finally a crowd of clinicians in Humans. When this translational cooperation is not respected, serious confusions can appear. For example, as it was advocated by several authors [12,13], a large part of the literature testing various implant surfaces is significantly biased, as the tested surfaces were simply not characterized properly (or not characterized at all): if a tested product is not clearly define, the results are logically difficult to interpret. If we consider the expertise of surface engineers and the powerful instruments of evaluation available since years, it is surprising to observe such situation. In a series of 5 articles published recently [13-17], it was shown the detailed surface characteristics of 62 implant surfaces available on the market, and all of them presented very different chemistry and topography, while it was the first time - for most products - that these data were so clearly shown and spelled. This example in a very research-intensive field illustrates very well that the notion of translational approach and communication between basic scientists and applied scientists is very needed but still far from being optimal.

In fact, the integration of transdisciplinary (transversal) and translational (vertical) research is the founding need of the TERM. Shall we define this domain as a holistic discipline covering a large range of scientific domains (requiring therefore polyvalent researchers), or as a hub discipline connecting many specialists? Whatever the philosophical approach, this field is extremely multidisciplinary in its essence, and it requires for the team leaders to be able to navigate between the disciplines, vertically and transversally, to change permanently the standpoint to find new solutions to new problems.

This is on this conceptual basis that the PACT (Platelet & Advanced Cell Therapies) Forum Civitatis (**Figure**) of the POSEIDO Academic network [18] was designed, to support a multidisciplinary platform of research, publication, debates and eventually consensus for researchers from all disciplines working in this the field of tissue engineering and regeneration. The first objective of this multidisciplinary PACT, it is to support a more

holistic insight and original standpoints to get the right approach of the TERM. In this first PACT issue of the POSEIDO journal, a series of articles will illustrate very well this need.



Figure. The logo of the PACT (Platelet & Advanced Cell Therapies) Forum, representing the 3 components of a tissue in 3 colors (cells, matrix, mediators) and the lightning of Life, organized like a big P sealing this PACT.

2. A PACT for translational research and transdisciplinarity: the PRP case

Despite the strong interest and fashion for the TERM, the significant investments of the industry and public funding bodies since many years and the considerable literature, the direct clinical applications and results in this domain are still relatively limited and their impact quite modest. Many materials are working quite well, but it is finally more an Evolution than a Revolution. If we follow the developments in the last 10 years, it is an emerging field, and there is a risk that it may remain it for many more years.

The biggest issue in the development of this domain, it is frequently the lack of real conceptual and practical transdisciplinary and translational approach in the research groups. Research groups are often too specialized (in dentistry or other disciplines), and they are lacking the capacity or even the wish to integrate themselves in a more global multidisciplinary ensemble, even for treating complex topics that they do not have the full competence to even consider. In this sense, the literature about platelet concentrates for surgical use (PRP/PRF)[19] is a perfect example, as it is also probably the oldest method of regenerative medicine ever developed.

Platelet concentrates are autologous blood extracts prepared through centrifugation of a blood sample of the patient [19]. Whatever the method used, the objective of this technology is the same: to gather and collect the platelets (particularly rich in growth factors), the fibrinogen (later activated into a protective fibrin matrix supporting the healing process) and in some cases the cell content (particularly some populations of leukocytes), and to inject or place this preparation into a wounded or surgical site to improve healing and promote tissue regeneration. Historically, the use of this family of blood extracts started in

the 60-70's with the publications of Matras about fibrin glues [20]; it was tested in that time to cover and promote the healing of skin wounds and ulcers. This first approach of tissue regeneration is probably one of the oldest and founding methods of regenerative medicine. It was then mostly based on the concept of regeneration through the use of an autologous scaffold, the fibrin matrix being also the first matrix appearing in a wound after coagulation during a natural healing process [21,22]. Fibrin glues are still important surgical adjuvants nowadays.

In the following years, the combination of fibrin with platelets became more frequent, as a logical evolution of this technology, to reinforce the fibrin scaffold but also to use the expected healing properties of the platelets. Therefore, the history of this family of products continues with many tested applications of fibrin-platelet mixtures, tested with some success in neurosurgery [23], ophthalmology [24], general surgery [25] and plastic surgery [26], even if these technologies were not widely spread. These products illustrated one of the first forms of regenerative medicine strategies applied to many different medical fields, and they highlighted – more than 40 years ago – the obvious need for medical transdisciplinarity.

The real craze for these technologies developed brutally in the last 15 years, when the concept of “growth factors” was spelled and promoted [27]: the early concepts of regenerative medicine (through a coherent fibrin scaffold reinforced with platelet aggregates) were substituted – in the heads of too many researchers – by a pharmacological concept, where a few selected growth factors were expected to regenerate tissues [28]. The Industry started to offer and promote many different and often expensive kits for the production of platelet concentrates. Many different techniques were regrouped by mistake under the general acronym PRP (Platelet-Rich Plasma)[19]. These technologies were tested in all medical fields even if the most frequent applications can be found in the literature in ophthalmological surgery [6], plastic surgery [7], orthopedics [8], sports medicine [9] and particularly in oral and maxillofacial surgery [10,11]. As an innovative approach of regenerative medicine, all disciplines were again concerned by these technologies [4]. Expectations were very high, as much as the disappointment was a few years later. With a majority of the tested applications of PRP, results were mixed and controversial, and cost-effectiveness was weak. The literature remains very chaotic and difficult to sort and interpret [28]. The most logical explanation for this situation is that, despite the number of disciplines interested by the PRP technologies, very little transdisciplinarity could be really observed.

In many aspects, the domain of platelet concentrates is the nightmare of specialist researchers. To be able to apprehend correctly the complexity of blood extracts, serious competences in hematology, immunology, cell biology and endocrinology are needed (at least)[29], as much as the medical and research knowledge of the clinical domains where these products are combined with specialized treatments into a regenerative medicine strategy. Unfortunately, most articles published by dental or orthopedic groups do not integrate a real multidisciplinary team, and the basic knowledge associated with the production of platelet concentrates was often neglected [19]. The most famous example was the confusion in the terminology, where all products were gathered under the acronym “PRP”, while each protocol in fact leads to a very different combination of cells, matrix and factors [19].

It required 10 years and many scientific debates before a more scientific vision of these materials was reformulated by a transdisciplinary and translational research team [19,28,30]: blood is a very complex circulating tissue, PRP and PRF are blood extracts, PRP and PRF are therefore living tissue grafts and not a pharmacological preparation. This aphorism is true in most cases, but it was particularly demonstrated with the L-PRF

(Leukocyte- and Platelet-Rich Fibrin) clots and membranes, as this material presents a very specific tissue architecture combining fibrin, platelets, circulating cells and all blood components [31]. It contains all the complexity of the blood tissue itself [32] and was often described as an “optimized blood clot”.

To improve the terminology, platelet concentrates were regrouped in 4 big families based on their cell content and fibrin architecture [19]: Pure Platelet-Rich Plasma (P-PRP), Leukocyte- and Platelet-Rich Plasma (L-PRP), Pure Platelet-Rich Fibrin (P-PRF), Leukocyte- and Platelet-Rich Fibrin (L-PRF). This major classification is widely cited and serves already as guidelines of the POSEIDO community in this field [33]. Thanks to this transdisciplinary and translational approach, the perception of the topic by the scientific community is slowly evolving, even if confusions are still very frequent: there is no Magic of “growth factors”, platelet concentrates are in fact very complex autologous tissue grafts and must be very well characterized before they are tested.

Unfortunately, the absence of holistic approach of the topic marked the literature on platelet concentrates with major confusion and illusion of knowledge, the most terrible legacy in Sciences. During many years – and still now – the exact cell content and fibrin architecture of tested platelet concentrates were not clearly characterized, and the most basic information about tested PRP/PRF was missing in most articles; as a consequence, a significant part of the literature on the topic is very difficult to interpret and was called sometimes a “blind library of knowledge” [19,33].

This need for a deep transdisciplinarity and translational approach in the field of platelet concentrates is still extremely strong, as it is very clearly demonstrated by the articles composing this first PACT issue of the POSEIDO Journal. In fact, in many aspects, it is still just starting and this issue is bringing some major breakthrough in the understanding of the field.

3. A PACT against the Merchants to better serve the People and the Industry

Another main issue impacting negatively the development of the field, it may be the huge expectations from funding bodies and the industry in this domain. As tissue engineering and regenerative medicine became much more than just a domain of research – it is almost a Craze – huge resources were invested in a quite short period, stimulating a large literature in all aspects and a need to bring some outcomes from it. This pressure – academic, industrial, mediatic – is a supplementary burden, and it is often pushing scientists to stay even more strictly in one path, and blocking them mentally and financially to take more innovative and risky paths or to go for real debates on the issues encountered in the field.

The field of platelet concentrates is again an excellent illustration of how the commercial and the peer pressure can destroy an outstanding innovative domain. While various platelet gels were tested quietly and with success since many years – a long history started with the work of Matras more than 45 years ago [20] – the “Craze for Growth Factors” launched in 1998 [27] triggered a massive investment from companies and funding bodies into the field of the PRP-type products. In a few years, many expensive kits and devices were marketed and promoted, and the number of publications on this matter exploded. But with this sudden commercial pressure, scientific communities did not get the possibility to develop the proper concepts and understanding of these techniques. As previously explained, a large part of the literature is incomplete and almost unusable in this field [19].

The worst consequence was probably the impact of this commercial pressure on the community of users. The PRP fashion was initially very strong (commercially and scientifically) in the domain of oral and maxillofacial surgery, and PRP products were very strongly advertised in all dental meetings. These techniques were in most cases expensive, cumbersome and time-consuming, and the commercial pressure promoting these technologies was in general much higher than the real clinical benefits the practitioners could observe in their patients in their daily practice. The benefit/cost ratio appeared very weak for most users, and the decline of these technologies was very quick. When walking through a dental meeting nowadays, it is easy to observe that PRP technology has almost completely disappeared from the domain. In many countries and communities, platelet concentrate technologies became a source of jokes about the craze for growth factors, or at least a topic considered as not significant. The chaotic literature and the commercial pressure for these products almost discredited these technologies in oral and maxillofacial surgery [34].

In oral surgery, the main platelet concentrate still used, and strongly developing since a few years, is the L-PRF family (Leukocyte- and Platelet-Rich Fibrin)[19]. This method appeared very simple, inexpensive and user-friendly, while promoting obvious clinical results justifying very clearly its use [10]. The irony of the situation is that this method was developed by a group of clinicians – not by Academic teams nor by the Industry – and was designed as an open-access method, even if some CE/FDA cleared and optimized materials are now available (Intra-Spin L-PRF, Intra-Lock, Boca-Raton, FL, USA)[33]. It is expected that it will be the main method of platelet concentrates that will survive in the oral and maxillofacial field, and most probably become also a common gold standard to use in many oral surgical procedures.

However, the relative failure of the early PRP technologies in the oral and maxillofacial field had and still has a very negative impact in the development of other more efficient techniques such as L-PRF. Researchers on L-PRF spent a considerable time in the last 14 years just to repeat and clarify that PRF and PRP are 2 different families of products [19], even if it is obvious when simply observing the products: PRP are liquid solutions that can be softly gelified like fibrin glues, while PRF families only exist as strong fibrin/platelets clots and membranes. It affected also the possibility of publications about these techniques, as the confusion between PRP and PRF was and still remains strong for reviewers and specialists. After the craze for growth factors and the commercial pressure, the suspicion and disinterest towards these technologies was so strong, that it affected even open-access cost-effective technologies that were providing obvious very efficient results. When the discredit touches a field, it concerns the whole field and for a long period. The short-term commercial vision promoted by “Merchants” finally provoked its contrary effects on the long-term [34]. Clarity, non-commercial works and cooperation are vital to serve adequately the patients, the research community and the Industry.

A second good example is implant surface design. In theory, the development of new nanomodified surfaces – with specific nanodesign, chemical modification or simply with new micropatterns - was claimed by all specialists to be the future of the field [35,36], to improve even more the quality of osseointegration of the bone implantable materials. Practically speaking, despite the huge literature and investments of the funding bodies and companies, most companies are still using some very basic and quite old surface treatments, as it was clearly shown recently in the ISIS (Implant Surface Identification Standard) project of the POSEIDO network [13]: a majority of variations of the SLA-type surfaces (Sand-blasted, Large-grit, Acid-etched)[15] or RBM-type surfaces (Resorbable Blasting Media)[16], and a few other minor types (anodized, titanium-plasma sprayed and various forms of coatings

with calcium phosphates)[14,17]. Most companies refuse to use experimental approaches promoted in the literature [37], as the implementation of a new scientific fashion in this domain lead historically several times into significant industrial disappointments [38]. In a field where more than 95% of success can be reached by trained surgeons, companies have understood that it is more worthy – and less risky – to use efficient classical surface treatments and to invest in clinical education and surgeon training, than to believe in the miracles of tissue engineering. Some real innovations and improvements are still possible and some families of products such as the SIMN (Subtractive Impregnated Micro/Nanotextured)[16] surfaces are opening huge opportunities in surface-led tissue engineering [39]; however the commercial and academic pressure in this field in the last 15 years has already damaged significantly this topic. The early craze and excess in this field will impact negatively future major developments during several years: it is clearly negative for patients, scientists and also for the Industry, all stakeholders missing real existing opportunities [39] because of short-term illusions.

What happened to the fields of PRPs or implant surfaces may happen to many other branches of tissue engineering and regenerative medicine. The threat is always that results do not meet the expectations quickly enough; in the absence of concrete major results despite the quantity of money invested in the domain by various funding bodies (particularly companies) and sometimes the users, a domain loses its interest before arriving to maturation. As a paradoxical counterproductive effect, an excessive commercial, mediatic or academic pressure to obtain short-term benefits is often the source of commercial confusions and damaging the long-term potential of a whole domain, finally impacting negatively patients, users, scientists and the Industry itself. These examples shall always be kept in mind by researchers and industrials in the field. Like a financial speculative bubble, when a bubble of investment explodes, confusions and failures have global and lasting consequences for all stakeholders.

Platelet concentrates are still very useful technologies if they are selected and used adequately [7]; L-PRF has now a considerable impact worldwide in oral surgery [10,11], and this inexpensive user-friendly method is clearly serving the patient and clinician interests. The potential of these blood extracts is still considerable for the industry [4], as it concerns all medical domains, particularly orthopedics and sports medicine [40]. The concept of the PACT is not to keep the Industry out of the Community. However a serious Industry needs long-term vision to get long-term stability and benefits - and not short-term minor commercial gains - and to be really efficient and productive for the Communities of Scientists and Patients. This need for clear, honest, transparent, open-minded, non commercial approach [34] is the heart of the PACT Forum, and is serving the long-term interests of all stakeholders. In a fashionable research domain such as tissue engineering and regenerative medicine, care must be taken permanently to keep Merchant behaviors out of the scientific Temple. It is our PACT.

4. A PACT against the illusion of knowledge

The interferences of the funding bodies and the Merchant behaviors are often hiding a last threat, much deeper and more insidious: our certitudes, our beliefs. And platelet concentrates and regenerative medicine are very good examples of domains with people “believing in it or not” – a kind of faith, far from what the scientific open, curious and permanently inquiring mind should be.

Daniel J. Boorstin, a modern American historian who served also as Librarian of U.S. Congress, wrote that the history of Western science confirms the aphorism that the great menace to progress is not ignorance but the illusion of knowledge. The “aphorism” in question was formulated frequently in philosophical history, starting by Socrates in the Antique times. Boorstin spelled this idea repetitively and in many different forms in his books, but we voluntarily selected this version, referring explicitly to the Western science.

Indeed, even if the need for transdisciplinarity and translational approach appears obvious for most scholars, there is another need, which is very often neglected, or misunderstood: this is the need for international – we could even write intercultural – cooperation in this domain. The fact that some countries may appear more developed in sciences - in theory - is often for them the main blockage to consider another standpoint. In Science, certitudes are the worst enemies of Progress, and the Philosophers of Science always insist that the only absolute Truth, it is that there is no absolute Truth. In Science, the perception, understanding and interpretation of a scientific domain (and of the related industry for example) are strongly impacted by cultural parameters (including the perception of social needs and the relationships with the industry). This is often a limit in cooperation. But it can also be a chance, as it opens the possibility to see a problem from different standpoints, and find surprising solutions. More generally, the aphorism repeated so frequently by Boorstin recalls us that a real Scientist shall avoid to be stuck on certitudes and trapped by protective self-fulfilling illusions.

In this first PACT issue of the POSEIDO journal, a series of articles were selected. These articles have one particularity: they demonstrate that the majority of the literature in the field of platelet concentrates for surgical use presents major flaws. In daily practice, investigators observed considerable clinical differences between various platelet concentrate procedures, but the real biological mechanisms remained largely unclear up to now [41]; these articles provide a quite unique insight of the complexity of the problem. These articles are both translational and transdisciplinary, as they required the cooperation between engineers, biologists, hematologists, dental and orthopedic specialists. Even if these articles are not directly about clinical results, they are directly tied with the observations of clinicians using these materials.

The first article highlights for the first time the huge diversity of cells present in a small volume of Leukocyte- and Platelet-Rich Plasma (L-PRP) solution. It confirms the major flaw in all articles that did not consider the impact of the cell content on the biology of the platelet concentrates (as the majority of PRPs are in fact L-PRP)[42]; it confirms even more clearly that PRPs are not pharmaceutical preparations, but a real autologous tissue graft.

The following series of 3 articles highlights for the first time the impact of the centrifuge characteristics on the cell content and organization of a PRF clot, using the well-identified standard L-PRF protocol as the reference point [31]. This study demonstrates that the centrifuge type and vibrations have a considerable impact on the production of PRP/PRF. It reveals this major missing parameter and potential flaw in most publications on platelet concentrates, as many authors are using many different centrifuges without investigating the effect of their devices on their preparations. Finally, the evaluation of the biological signature (in terms of growth factors)[41] of different PRF clots obtained with slightly different protocols reveals the considerable impact of tiny protocol changes on the biological patterns of these materials. This issue is both a destructive stone for the literature in the field and a founding stone for a better research in this topic.

5. Perspectives

The PACT Forum logo (**Figure**) is made of 3 circles representing the traditional 3 components of a tissue: cells, matrix and mediators. The same concept is the basis of the tissue engineering perspective, where researchers always try to combine cells, scaffolds and bioactive molecules. The lightning symbol represents the combination of these 3 components placed into action. It can be seen as the blood support and the integration into the living tissues *in vivo*, or as the artificial methods to give life to the engineered tissues *in vitro*. Behind this general symbolism, the notion of scientific PACT itself is very important, when considering the general situation of this field. In this sense, the PACT represents also the need to seal this agreement within our community. It is a PACT to debate and to cooperate freely with an open mind and a long-term vision, a PACT to promote new approach and innovative standpoints, and a PACT to invent new perspectives and solutions to the problems the domain is facing, through trans-disciplinarity, translational research and international cooperation. It is also a PACT of transparency and clarity for the future of the field, far from commercial pressures and keeping Merchant behaviors out of our Temple. This is the PACT offered to the POSEIDO community, and on this PACT we hope to build our Future. There is no better symbol for all these expectations than the Lightning, the power of the innovative idea of the imaginative mind, which suddenly changes the Darkness into Light.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This work for the definition of international standards in implantable materials, tissue engineering and regenerative medicine is supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government- MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France.

References

- [1] Horch RE, Kneser U, Polykandriotis E, Schmidt VJ, Sun J, Arkudas A. *Tissue engineering and regenerative medicine -where do we stand?* **J Cell Mol Med.** 2012;16(6):1157-65.
- [2] Mao JJ, Giannobile WV, Helms JA, Hollister SJ, Krebsbach PH, Longaker MT, Shi S. *Craniofacial tissue engineering by stem cells.* **J Dent Res.** 2006;85(11):966-79.
- [3] Ramseier CA, Rasperini G, Batia S, Giannobile WV. *Advanced reconstructive technologies for periodontal tissue repair.* **Periodontol 2000.** 2012;59(1):185-202.
- [4] Bielecki T, Dohan Ehrenfest DM. *Platelet-rich plasma (PRP) and Platelet-Rich Fibrin (PRF): surgical adjuvants, preparations for in situ regenerative medicine and tools for tissue engineering.* **Curr Pharm Biotechnol.** 2012;13(7):1121-30.
- [5] Everts PA, Hoogbergen MM, Weber TA, Devilee RJ, van Monfort G, de Hingh IH. *Is the use of autologous platelet-rich plasma gels in gynecologic, cardiac, and general, reconstructive surgery beneficial?* **Curr Pharm Biotechnol.** 2012;13(7):1163-72.
- [6] Alio JL, Arnalich-Montiel F, Rodriguez AE. *The role of "eye platelet rich plasma" (E-PRP) for wound healing in ophthalmology.* **Curr Pharm Biotechnol.** 2012;13(7):1257-65.
- [7] Cieslik-Bielecka A, Choukroun J, Odin G, Dohan Ehrenfest DM. *L-PRP/L-PRF in esthetic plastic surgery, regenerative medicine of the skin and chronic wounds.* **Curr Pharm Biotechnol.** 2012;13(7):1266-77.
- [8] Yuan T, Guo SC, Han P, Zhang CQ, Zeng BF. *Applications of leukocyte- and platelet-rich plasma (L-PRP) in trauma surgery.* **Curr Pharm Biotechnol.** 2012;13(7):1173-84.
- [9] Mishra A, Harmon K, Woodall J, Vieira A. *Sports medicine applications of platelet rich plasma.* **Curr Pharm Biotechnol.** 2012;13(7):1185-95.

- [10] Del Corso M, Vervelle A, Simonpieri A, Jimbo R, Inchingolo F, Sammartino G, Dohan Ehrenfest DM. *Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 1: Periodontal and dentoalveolar surgery.* **Curr Pharm Biotechnol.** 2012;13(7):1207-30.
- [11] Simonpieri A, Del Corso M, Vervelle A, Jimbo R, Inchingolo F, Sammartino G, Dohan Ehrenfest DM. *Current knowledge and perspectives for the use of platelet-rich plasma (PRP) and platelet-rich fibrin (PRF) in oral and maxillofacial surgery part 2: Bone graft, implant and reconstructive surgery.* **Curr Pharm Biotechnol.** 2012;13(7):1231-56.
- [12] Dohan Ehrenfest DM, Coelho PG, Kang BS, Sul YT, Albrektsson T. *Classification of osseointegrated implant surfaces: materials, chemistry and topography.* **Trends Biotechnol.** 2010;28(4):198-206.
- [13] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system.* **POSEIDO.** 2014;2(1):7-22.
- [14] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 2: anodized and Titanium Plasma-Sprayed (TPS) surfaces (Group 1, metallurgy modification).* **POSEIDO.** 2014;2(1):23-35.
- [15] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 3: sand-blasted/acid-etched (SLA type) and related surfaces (Group 2A, main subtractive process).* **POSEIDO.** 2014;2(1):37-55.
- [16] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 4: Resorbable Blasting Media (RBM), Dual Acid-Etched (DAE), Subtractive Impregnated Micro/Nanotextured (SIMN) and related surfaces (Group 2B, other subtractive process).* **POSEIDO.** 2014;2(1):57-79.
- [17] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 5: chemically coated surfaces (Group 3, coating) and implant collar surfaces (Group 4, collar).* **POSEIDO.** 2014;2(1):81-104.
- [18] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing.* **POSEIDO.** 2013;1(1):1-5.
- [19] Dohan Ehrenfest DM, Rasmusson L, Albrektsson T. *Classification of platelet concentrates: from pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF).* **Trends Biotechnol.** 2009;27(3):158-67.
- [20] Matras H. *Die Wirkungen verschiedener Fibrinpräparate auf Kontinuität-störungen der Rattenhaut.* **Osterr Z Stomatol.** 1970;67(9):338-59.
- [21] Clark RA. *Fibrin and wound healing.* **Ann N Y Acad Sci.** 2001;936(355-67).
- [22] Gible JW, Ness PM. *Fibrin glue: the perfect operative sealant?* **Transfusion.** 1990;30(8):741-7.
- [23] Silverberg GD, Harbury CB, Rubenstein E. *A physiological sealant for cerebrospinal fluid leaks.* **J Neurosurg.** 1977;46(2):215-9.
- [24] Rosenthal AR, Harbury C, Egbert PR, Rubenstein E. *Use of a platelet-fibrinogen-thrombin mixture as a corneal adhesive: experiments with sutureless lamellar keratoplasty in the rabbit.* **Invest Ophthalmol.** 1975;14(11):872-5.
- [25] Pearl RM, Wustrack KO, Harbury C, Rubenstein E, Kaplan EN. *Microvascular anastomosis using a blood product sealant-adhesive.* **Surg Gynecol Obstet.** 1977;144(2):227-31.
- [26] Knighton DR, Ciresi KF, Fiegel VD, Austin LL, Butler EL. *Classification and treatment of chronic nonhealing wounds. Successful treatment with autologous platelet-derived wound healing factors (PDWHF).* **Ann Surg.** 1986;204(3):322-30.
- [27] Marx RE, Carlson ER, Eichstaedt RM, Schimmele SR, Strauss JE, Georgeff KR. *Platelet-rich plasma: Growth factor enhancement for bone grafts.* **Oral Surg Oral Med Oral Pathol Oral Radiol Endod.** 1998;85(6):638-46.
- [28] Dohan Ehrenfest DM, Bielecki T, Mishra A, Borzini P, Inchingolo F, Sammartino G, Rasmusson L, Evert PA. *In search of a consensus terminology in the field of platelet concentrates for surgical use: platelet-rich plasma (PRP), platelet-rich fibrin (PRF), fibrin gel polymerization and leukocytes.* **Curr Pharm Biotechnol.** 2012;13(7):1131-7.

- [29] Borzini P, Balbo V, Mazzucco L. *Platelet concentrates for topical use: bedside device and blood transfusion technology. Quality and versatility.* **Curr Pharm Biotechnol.** 2012;13(7):1138-44.
- [30] Dohan Ehrenfest DM, Andia I, Zumstein MA, Zhang CQ, Pinto NR, Bielecki T. *Classification of platelet concentrates (Platelet-Rich Plasma-PRP, Platelet-Rich Fibrin-PRF) for topical and infiltrative use in orthopedic and sports medicine: current consensus, clinical implications and perspectives.* **Muscles Ligaments Tendons J.** 2014;4(1):3-9.
- [31] Dohan Ehrenfest DM, Del Corso M, Diss A, Mouhyi J, Charrier JB. *Three-dimensional architecture and cell composition of a Choukroun's platelet-rich fibrin clot and membrane.* **J Periodontol.** 2010;81(4):546-55.
- [32] Dohan Ehrenfest DM, Diss A, Odin G, Doglioli P, Hippolyte MP, Charrier JB. *In vitro effects of Choukroun's PRF (platelet-rich fibrin) on human gingival fibroblasts, dermal prekeratinocytes, preadipocytes, and maxillofacial osteoblasts in primary cultures.* **Oral Surg Oral Med Oral Pathol Oral Radiol Endod.** 2009;108(3):341-52.
- [33] Dohan Ehrenfest DM, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO.* **POSEIDO.** 2013;1(1):17-27.
- [34] Dohan Ehrenfest DM, Bielecki T, Del Corso M, Inchingolo F, Sammartino G. *Shedding light in the controversial terminology for platelet-rich products: platelet-rich plasma (PRP), platelet-rich fibrin (PRF), platelet-leukocyte gel (PLG), preparation rich in growth factors (PRGF), classification and commercialism.* **J Biomed Mater Res A.** 2010;95(4):1280-2.
- [35] Mendonca G, Mendonca DB, Aragao FJ, Cooper LF. *Advancing dental implant surface technology--from micron- to nanotopography.* **Biomaterials.** 2008;29(28):3822-35.
- [36] Shibli JA, Dohan Ehrenfest DM. *In dental implant surfaces, NanoWar has begun... but NanoQuest is still at stake!* **POSEIDO.** 2013;1(3):131-40.
- [37] Dohan Ehrenfest DM, Rutkowski JL. *Evolution of the dental implant market: an African tale revisited.* **J Oral Implantol.** 2012;38(3):201-2.
- [38] Abrahamsson I, Linder E, Larsson L, Berglundh T. *Deposition of nanometer scaled calcium-phosphate crystals to implants with a dual acid-etched surface does not improve early tissue integration.* **Clin Oral Implants Res.** 2013;24(1):57-62.
- [39] Coelho PG, Granato R, Marin C, Bonfante EA, Freire JN, Janal MN, Gil JN, Suzuki M. *Biomechanical evaluation of endosseous implants at early implantation times: a study in dogs.* **J Oral Maxillofac Surg.** 2010;68(7):1667-75.
- [40] Zumstein MA, Berger S, Schober M, Boileau P, Nyffeler RW, Horn M, Dahinden CA. *Leukocyte- and platelet-rich fibrin (L-PRF) for long-term delivery of growth factor in rotator cuff repair: review, preliminary results and future directions.* **Curr Pharm Biotechnol.** 2012;13(7):1196-206.
- [41] Dohan Ehrenfest DM, Bielecki T, Jimbo R, Barbe G, Del Corso M, Inchingolo F, Sammartino G. *Do the fibrin architecture and leukocyte content influence the growth factor release of platelet concentrates? An evidence-based answer comparing a pure platelet-rich plasma (P-PRP) gel and a leukocyte- and platelet-rich fibrin (L-PRF).* **Curr Pharm Biotechnol.** 2012;13(7):1145-52.
- [42] Bielecki T, Dohan Ehrenfest DM, Everts PA, Wiczowski A. *The role of leukocytes from L-PRP/L-PRF in wound healing and immune defense: new perspectives.* **Curr Pharm Biotechnol.** 2012;13(7):1153-62.

This article can be cited as:

Sammartino G, Del Corso M, Wisniewska LM, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine.* **POSEIDO.** 2014;2(2):105-15.

Editorial

The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity

David M. Dohan Ehrenfest,^{1,*} Lidia M. Wisniewska,^{1,2,3} Nelson R. Pinto,^{4,5} Marsel Z. Mirgazizov,⁶ Chang-Qing Zhang,⁷ and Adriano Piattelli.⁸

¹ LoB5 research unit, School of Dentistry & Research Center for Biomineralization Disorders, Chonnam National University, Gwangju, South Korea

² Department of Didactics and School Organization, Faculty of Education Sciences, University of Granada, Granada, Spain

³ Department of International Relations, Paris Sorbonne University, Paris, France

⁴ Graduate School of Periodontics and Implant Dentistry, University of the Andes (UANDES), Santiago, Chile

⁵ Department of Oral Health Sciences, Katholieke Universiteit Leuven (KUL) & Periodontology, University Hospitals Leuven, Leuven, Belgium

⁶ Federal Fund of Development of High Stomatologic Technologies of Russia (Biocompatible materials and implants), Moscow, Russia

⁷ Department of Orthopedic Surgery, Shanghai Sixth People's Hospital, Shanghai Jiao Tong University, Shanghai, China

⁸ Department of Medical, Oral and Biotechnological Sciences, University of Chieti-Pescara, Chieti, Italy

*Corresponding author: David M. Dohan Ehrenfest, LoB5@mac.com

Submitted on October 17th, 2014; accepted after minor corrections on October 27th, 2014.

The POSEIDO (Periodontology, Oral Surgery, Esthetic & Implant Dentistry Open) journal is now finishing its second year of successful existence as a new concept of inter-academic collaborative publishing platform [1]. The journey of the POSEIDO Community is only beginning, and many efforts are still needed to reach our vision and objectives, but these 2 first years allowed use to build the general skeleton of the POSEIDO environment, to illustrate the expected functioning of this platform, and also to launch the development of many working groups and collaborative projects, particularly a first series of Forum termed Forum Civitatis (in Latin, the “Forum of the City” literally, i.e. a platform of discussion and cooperation for our Community of Experts). On all these aspects, we can already gather a few observations and comments from these 2 years of activity.

1. Special themes, but each issue opened to all submissions

As it was initially stated, the first POSEIDO journal is not a mass publication journal, but a specialized theme journal [1]. One important characteristic of POSEIDO is the wish to create a platform of discussion and cooperation, to promote real international debates and sometimes consensus in the POSEID (Periodontology, Oral Surgery, Esthetic & Implant Dentistry) disciplines [2]. To reach this objective, a special theme is allocated to each issue of the journal, in order to regroup articles on a specific aspect of clinical or basic research and try to develop joint discussion and consensus articles.

This concept was designed for educational purposes, as the international scientific literature is growing extensively and data are more and more difficult to sort and interpret for the general readership, even for specialists, what leaves most publications with a very

limited real impact. By gathering articles around a theme and try to reach a consensus or at least a debate around this theme, the journal becomes more reader-friendly, and therefore more interesting and useful for our wide readership. We shall never forget that a scientific publication is first of all designed to serve a Community - in the case of POSEIDO, it is particularly a wide Community of oral and maxillofacial clinicians and basic researchers. The biggest success for a journal nowadays, it is to interest its readers and, in short, to be read extensively and kept precious as a real source of knowledge. The special themes are therefore an interesting method to reach these educational and clear communication objectives.

The development of special themes in each issue is, however, only a complementary strategy, and shall not be considered as a mandatory style of the Journal. This notion of special theme was sometimes understood as a limitation for submission. Many authors hesitated to submit their articles on different topics than the special themes, believing that they would not fit the profile of the journal. In reality, the journal is opened to all submissions, whatever the topic. If the Editors try to regroup the items in thematic issues, this is not a mandatory characteristic and independent articles can be published without limitations as long as they can interest our readership and bring interesting information.

Moreover, authors and research group members of the POSEIDO network are welcome to submit proposals of theme issues and suggestions of publications. The board of the journal will review all proposals carefully and openly, and motivated initiatives will always be appreciated. The functioning of POSEIDO is very flexible and adjusted to merits and timely initiatives. All authors are welcome to participate to this effort, and they will only be considered based on their work and scientific skills, with a special expectation on creativity and innovation.

In summary, if you have something interesting to publish, please do not hesitate to submit to the POSEIDO Journal, whatever the upcoming special themes.

2. The Forum Civitatis, a platform for transdisciplinarity

The concept of Special Theme was completed by another method of gathering of thematic knowledge, with a particular emphasis on transdisciplinarity and translational research. The knowledge that interests the POSEIDO diverse readership cannot be limited to clinical techniques or evaluation of materials in the oral field, as many aspects of the daily practice are in fact interconnected with other disciplines, particularly medical sciences (plastic surgery, orthopedics, oncology, etc.), engineering or education. This transdisciplinarity and translational approach are often needed to understand correctly some key parameters of the oral disciplines, but no integrated platform of cooperation and debate existed previously. This is why the notion of Special Theme was completed by the concept of Forum Civitatis.

The Forum Civitatis - or Forum of the City, our Community of Colleagues - is regrouping several platforms of exchange and debates, under the form of wide communities or smaller working groups for Experts, with the idea to develop new ideas and concepts in various aspects of the POSEID disciplines and to promote it through education and research. These forums are clearly identifiable through their own logo, following the general style and color scheme of the POSEIDO Forum Civitatis Communities (**Figure**). Each logo presents clear specificities and symbols reflecting the theme of each Community and the spelling of the acronym is always indicated. These icons were designed to be easily identifiable and to

complete or replace the traditional POSEIDO stamp when journal issues or documents are prepared by these Communities.

Three Forum entities are currently active: OASIS, PACT and ISAIAS. In 2014, each issue of the journal was connected to one of these forums, with the publication of a series of articles on their respective field, both creating a Founding issue for each of these Communities and illustrating their theme and functioning. These 3 first Forums cover some very interesting specialized aspects of the POSEID disciplines: the development of international standards, the research in regenerative medicine and internationalization of higher education. Two other Forums are activated to complete this interesting set of working groups: APOLLO and CRONOS.



Figure. Logos of the 3 first active Forums Civitatis, OASIS, PACT and ISAIAS. Each logo follows the general style and color scheme of the POSEIDO Forum Civitatis Communities, and is easily identifiable through specificities and symbols reflecting the theme of each Community, and with the spelling of the acronym.

2.1. The OASIS Forum Civitatis

The OASIS Forum (Open-Access Standards for Implantable Systems) is an international informal working group gathering scientific Experts (particularly ISO Experts of the ISO/TC106/Dentistry commissions), in order to develop new international standards for implantable systems and to promote their use in our professional community. The objectives of the Forum are interconnected:

- to facilitate the global cooperation between Experts in implantable systems, in order: to propose, develop, discuss and finally submit projects of standards all together in synergy; to allow a faster and more efficient development and application of new standards without delays;
- to support international scientific collaborations between the Experts, in order to discuss and gather experimental data to support accurate experimentally-driven and validated standards;
- to promote interactions between the Experts and the community of professionals through the POSEIDO network, to develop timely projects and to educate colleagues and practitioners about new standards.

The OASIS Forum has been designed and funded by the POSEIDO Foundation in order to remain completely independent from the commercial pressures and lobbying. The resources of the Foundation can be allocated by the Board of Directors in the form of research grants for the development of outstanding projects of standards.

The first issue of 2014 (Volume 2, Issue 1) was the first OASIS issue of the POSEIDO Journal and focused on a first open-access standard for Implant Surface Identification (ISI)[3]. This massive work was published in a series of articles prepared by an international panel of Experts, and is a good example of extensive data the OASIS Consortium is able to gather for the POSEIDO readership.

2.2. The PACT Forum Civitatis

The PACT Forum (Platelet & Advanced Cell Therapies) is an international research and education scientific community in the field of tissue engineering and regenerative medicine, interested in various forms of cell therapies, particularly stem cell research and platelet concentrates for surgical or infiltrative use (Leukocyte- and Platelet-Rich Plasma L-PRP and Leukocyte- and Platelet-Rich Fibrin L-PRF)[4].

The concept of this community is to promote international debates and translational and transversal research, i.e. from the basic science research to the clinical applications (translational) and between the many disciplines involved in this wide field of research (transversal). Transdisciplinarity - as a research strategy crossing discipline boundaries to create a holistic approach - is the key to reach common consensus and terminology in the many disciplines involved in this wide field of regenerative medicine, and is an absolute necessity for an efficient and safe development of these technologies.

The PACT Forum has been designed and funded by the POSEIDO Foundation in order to remain completely independent from the commercial pressures and lobbying, which constitute the major threat damaging the credibility of this scientific field.

The second issue of 2014 (Volume 2, Issue 2) was the first PACT issue of the POSEIDO Journal [4]. It reviewed the current endeavor in the field and gathered several major articles on the topic, particularly concerning the diversity of cells observable in a platelet concentrate and the impact of centrifuge quality and protocol on the cell content and biological signature of L-PRF (Leukocyte- and Platelet-Rich Fibrin) clots and membranes [5]. This issue is a good illustration of the PACT philosophy and a major scientific milestone prepared by this Community.

2.3. The ISAIAS Forum Civitatis

The ISAIAS Forum (Intercultural Sensitivity Academic Index & Advanced Standards) is an international informal working group about the internationalization of higher education and research in general, and its impact in dentistry in particular. This group is developing new concepts, methods and instruments of observation and development of the internationalization of an academic environment (University, campus, laboratory) and its impact on the perceptions and behaviors of all academic stakeholders (particularly students, teachers and researchers). This is a major instrument to improve international cooperation.

The third issue of 2014 (Volume 2, Issue 3) was the first ISAIAS issue of the POSEIDO Journal [6]. It described the general philosophy of international cooperation promoted by the POSEIDO Consortium, and the integration of the ISAIAS program as an interface to optimize and monitor the cooperation and internationalization of higher

education and research within the network. This issue illustrates also the kind of research this working group is implementing among the members of the network, as a powerful instrument of dialogue and preparation for deeper cooperation.

2.4. The APOLLO Forum Civitatis

The APOLLO Forum (Advanced Plastic & Orthopedic Literature & Logic Open Forum) is an international research and education scientific community in the field of plastic and orthopedic surgery and related research, designed to promote a transdisciplinary approach, debate and literature between medical fields and the POSEID sciences.

Plastic and orthopedic sciences are strongly connected with the POSEID disciplines, as these fields are sharing common interests in implantable biomaterials, surgical techniques and regenerative strategies and materials. For example, platelet concentrates (Leukocyte- and Platelet-Rich Plasma L-PRP and Leukocyte- and Platelet-Rich Fibrin L-PRF)[7] used in oral and maxillofacial surgery to improve soft and hard tissue healing, are also widely used as injection in sports medicine [8] and orthopedics [9] or as wound dressing for skin ulcer and wound healing in plastic surgery [10]. The experience gathered in one field is very precious for the understanding and improvement in other fields. Another example can be found in implant surface and bone biomaterials, where similar materials are used in implant dentistry and in orthopedics, while both disciplines are rarely sharing the same research perception and interests [11].

Despite this obvious transdisciplinarity among these fields, the cooperation between the domains remains indirect in most cases; the literature produced in one domain has in general a limited impact on others. As it can be observed in regenerative medicine and for implantable materials, there cannot be any significant advance without a better integration of the shared knowledge of these fields.

The objective of this open forum is, as the acronym spells it, to develop an integrated platform of literature and logic in plastic, orthopedic and dental sciences. The boundaries of this forum are in fact wider than plastic and orthopedic sciences, and the APOLLO Forum can cover most interconnected medical aspects in general. This original path requires to support interdisciplinary discussions, research and publications, to slowly create a common integrated publication body shared by Experts from these different fields.

2.5. The CRONOS Forum Civitatis

The CRONOS Forum (Cancer Research, Oncology & Novel Oncological Systems) is an international informal working group in the field of cancer research and oncology, with a particular interest in a transdisciplinary approach of cancer understanding and treatment, and in a more holistic conception of the oncological paradigms. Cancer research is an important field in the oral and maxillofacial area: cancers located in this area are among the most difficult to treat and their diagnosis is often connected to the observations of the oral specialists. Moreover, oral pathologies can influence negatively the outcomes of cancer treatments. Finally, the cancers and their treatments have always a significant impact on the oral health, both in terms of quality of life (discomfort, difficulties of swallowing and eating) and general health (e.g. development of mycosis or oral infections impacting the general health). Oral health is an important parameter and marker in oncology.

The CRONOS Forum does not focus strictly on oral cancers and oral aspects of cancer treatments. However, the objective of this group is not to publish extensively on cancer (what

would be outside of the theme of the POSEIDO Journal). CRONOS is first designed to promote a transdisciplinary cooperation on this topic and a more holistic approach of oncological research. Through this obvious need of transdisciplinarity, CRONOS is opened to discuss new paradigms in oncology and to offer original perspectives in the field. Finally, the CRONOS Forum has been designed and funded by the POSEIDO Foundation in order to remain completely independent from the commercial pressures and lobbying.

3. Perspectives

On many aspects, the POSEIDO journal is an original and non-conventional publication. POSEIDO was designed since its creation as an open-access self-managed cooperative platform for discussion and publication, based on international and transdisciplinary cooperation. Special themes and specialized Forums are strong elements of this strategy and identity.

The POSEIDO journal is particularly interested in transdisciplinarity and translational research. It can be observed in the board of the journal, which is including scholars from other non-dental disciplines such as material sciences, orthopedics, veterinary sciences, biological sciences, plastic surgery and oncology. Transdisciplinarity is very often the key for the successful development of new treatments and technologies, as it allows to combine the Expertise from different disciplines and to offer fresh perspectives to problems encountered in a field. In order to promote these cooperation and dialogues between different fields of medicine and research and to support this transdisciplinarity, the combination of special themes and specialized community Forums is our innovative path.

Finally, like many terms used in the POSEIDO environment, the term “Forum Civitatis” was selected carefully with its strong Ancient Latin meaning of a Community gathering around the Forum, a neutral place to exchange and talk. In the same way, it is important that all members of the POSEIDO Consortium contribute with honesty and efficiency to the development of the POSEIDO Common House, to make from this concept a major success. In this journey, specialized themes or forums are only instruments of cooperation, and the sincere motivation to join and participate to this Community remains the heart and motor of the development of this project worldwide. All members shall always remember that POSEIDO is an open platform and that all initiatives and proposals are welcome.

Disclosure of interests

The authors have no conflict of interest to report.

Acknowledgements

This issue was partially supported by a grant from the National Research Foundation of Korea (NRF) funded by the Korean government-MEST (No. 2011-0030121) and by the LoB5 Foundation for Research, France.

References

- [1] Dohan Ehrenfest DM, Sammartino G, Bernard JP. *The Periodontology, Oral Surgery, Esthetic and Implant Dentistry Organization (POSEIDO) and Open Journal: an international academic and scientific community for a new approach of open-access publishing*. **POSEIDO**. 2013;1(1):1-5.

- [2] Dohan Ehrenfest DM, Sammartino G, Shibli JA, Wang HL, Zou DR, Bernard JP. *Guidelines for the publication of articles related to platelet concentrates (Platelet-Rich Plasma - PRP, or Platelet-Rich Fibrin - PRF): the international classification of the POSEIDO*. **POSEIDO**. 2013;1(1):17-27.
- [3] Dohan Ehrenfest DM, Del Corso M, Kang BS, Leclercq P, Mazor Z, Horowitz RA, Russe P, Oh HK, Zou DR, Shibli JA, Wang HL, Bernard JP, Sammartino G. *Identification card and codification of the chemical and morphological characteristics of 62 dental implant surfaces. Part 1: description of the Implant Surface Identification Standard (ISIS) codification system*. **POSEIDO**. 2014;2(1):7-22.
- [4] Sammartino G, Del Corso M, Wisniewska LM, Bielecki T, Andia I, Pinto NR, Zhang CQ, Zou DR, Dohan Ehrenfest DM. *The PACT (Platelet & Advanced Cell Therapies) Forum: fostering translational research, transdisciplinarity and international collaboration in tissue engineering and regenerative medicine*. **POSEIDO**. 2014;2(2):105-15.
- [5] Pinto NR, Pereda A, Jiménez P, Del Corso M, Kang BS, Wang HL, Quirynen M, Dohan Ehrenfest DM. *The impact of the centrifuge characteristics and centrifugation protocols on the cells, growth factors and fibrin architecture of a Leukocyte- and Platelet-Rich Fibrin (L-PRF) clot and membrane. Part 2: macroscopic, photonic microscopy and Scanning Electron Microscopy analysis of 4 kinds of L-PRF clots and membranes*. **POSEIDO**. 2014;2(2):141-54.
- [6] Dohan Ehrenfest DM, Wisniewska LM, Shibli JA, Mirgazizov MZ, Zou DR, Pinto NR, Bernard JP, Sammartino G, Wang HL. *Developing a global scientific Community through cooperation and partnership: reinventing the intercultural interface, or the ISAIAS Prophecy in Internationalization of Higher Education and Research*. **POSEIDO**. 2014;2(3):167-77.
- [7] Dohan Ehrenfest DM, Rasmusson L, Albrektsson T. *Classification of platelet concentrates: from pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF)*. **Trends Biotechnol**. 2009;27(3):158-67.
- [8] Mishra A, Harmon K, Woodall J, Vieira A. *Sports medicine applications of platelet rich plasma*. **Curr Pharm Biotechnol**. 2012;13(7):1185-95.
- [9] Yuan T, Guo SC, Han P, Zhang CQ, Zeng BF. *Applications of leukocyte- and platelet-rich plasma (L-PRP) in trauma surgery*. **Curr Pharm Biotechnol**. 2012;13(7):1173-84.
- [10] Cieslik-Bielecka A, Choukroun J, Odin G, Dohan Ehrenfest DM. *L-PRP/L-PRF in esthetic plastic surgery, regenerative medicine of the skin and chronic wounds*. **Curr Pharm Biotechnol**. 2012;13(7):1266-77.
- [11] Dohan Ehrenfest DM, Coelho PG, Kang BS, Sul YT, Albrektsson T. *Classification of osseointegrated implant surfaces: materials, chemistry and topography*. **Trends Biotechnol**. 2010;28(4):198-206.

This article can be cited as:

Dohan Ehrenfest DM, Wisniewska LM, Pinto NR, Mirgazizov MZ, Zhang CQ, Piattelli A. *The development of special theme issues and the POSEIDO Forum Civitatis: OASIS, PACT, ISAIAS, APOLLO, CRONOS, or a new approach to transdisciplinarity*. **POSEIDO**. 2014;2(4):225-31.

Annex 3

**Official report prepared for the Presidency
of the Paris-Sorbonne University (Paris, France)**



***Role of the Service des Relations Internationales in the implementation
of the international policy of the Université Paris-Sorbonne in Paris***

**Lidia Maria Wiśniewska
University of Granada (Spain)**

**Research project done for the *Service des Relations Internationales* of
the Université Paris-Sorbonne (Paris IV)**

Supervisors

***Professeur délégué aux Relations Internationales, Madame Araceli Guillaume-Alonso
Chef du Service des Relations Internationales, Madame Dolorés Sobrino***



Report prepared during the research internship: Review of the Current Practices in the Internationalization of Higher Education and Research at the Université Paris-Sorbonne (Paris IV) in Paris - cultural approach

Role of the *Service des Relations Internationales* in the execution of the international policy of the Université Paris-Sorbonne in Paris



CONTENT OF THE REPORT

I. Content of the report.....3
 II. Abbreviations7
 III. Acknowledgments8

1. Introduction.....9
 1.1. Context of the report and its objective9
 1.2. Theoretical framework of the report10
 1.3. Methodology11

2. Institutional context of the *Service des Relations Internationales* of the Université Paris-Sorbonne (Paris 4, Paris IV)13
 2.1. Université Paris-Sorbonne (PARIS IV) – nowadays.....13
 2.1.1. Logo of the Université Paris-Sorbonne (Paris IV).....14
 2.1.2. Name of the Université Paris-Sorbonne (Paris IV)15
 2.2. History of the Université Paris-Sorbonne (Paris IV) 15
 2.3. Sorbonne University (Sorbonne Universités, SU)16
 2.3.1. Logo of the Sorbonne Universités (SU)17
 2.3.2. Objectives and strategic lines of the SU18
 2.3.3. Strategy development (SU)23
 2.3.4. Members of the Sorbonne University and associated establishments.....24
 2.4. International policy of the Sorbonne Universités (SU)25
 2.5. International policy of the Université Paris-Sorbonne and its mission26
 2.6. Members of the Sorbonne Universités and International Rankings.....28
 2.7. Image of the Université Paris-Sorbonne on the Web (website of the Université Paris IV, Facebook, Twitter, Wikipedia, YouTube, and the *Guide de l'étudiant of the Université Paris-Sorbonne Paris IV*) – international perspective.....37
 2.7.1. Institutional website of the Université Paris-Sorbonne (Paris IV) in the Google - paying attention to the international dimension.....37
 2.7.2. Wikipedia Page of the Université Paris-Sorbonne Paris IV.....39
 2.7.3. Facebook Page of the Université Paris-Sorbonne Paris IV.....40
 2.7.4. Twitter Page of the Université Paris-Sorbonne Paris IV.....41
 2.7.5. Classification of the French universities on YouTube 2014.....42
 2.7.6. Perspective on the international dimension of the Université Paris-Sorbonne Paris IV in the *Guide de l'étudiant 2013/2014* and *2014/2015*.....42
 2.8. Conclusions.....44

3. Service des Relations Internationales of the Paris IV47
 3.1. History of the *Service RI* of the Université Paris IV47
 3.2. Cultural framework of the performance of the *Service RI* (Paris IV)50
 3.2.1. Service RI in the organigramme of the Paris-Sorbonne University (comparative perspective of the position of the RI within university among university members of the SU) – reflection approach.....52
 3.2.2. Programs of international collaboration managed by the *Service RI* of the Paris-Sorbonne University (scholarships, collaboration with *Parismus*).....56
 3.3. Website of the Service RI (October 2014).....58
 3.4. Organization and role of the *Service des Relations Internationales* of the Paris IV.....59
 3.4.1. The mission and organigramme of the Service des RI.....59
 3.4.2. The roles of the members of the *Service des Relations Internationales*
 ❖ *The role of the Professeur délégué aux RI*..... 60
 ❖ *The role of the Chef du Service des Relations Internationales* 61
 ❖ *The roles/tasks of the staff of the Service RI* 62
 ❖ *Budget of the Service RI of the Paris IV*..... 64

3.5. Achievements of the Services RI (2009-2014).....	64
3.6. Assessment of the Service RI	65
3.7. Perceptions of the <i>Service RI</i> of the University Paris IV among campus population (academic staff, domestic and international students).....	65
3.8. Role of the Erasmus Coordinators at the Paris IV.....	66
3.9. How to encourage domestic students of the Université Paris IV to experience a study abroad? Perspective elaborated on the bases of the information from domestic students and Erasmus Coordinators	67
3.10. Conclusions	69
4. International mobility of the students in the framework of Erasmus program and Conventions at the Université Paris-Sorbonne (from 2005/2006 to 2013/2014)	71
❖ Mobility of the students in Erasmus program and international conventions at the Université Paris-Sorbonne Paris IV (2009/2010).....	75
❖ Mobility of the students in Erasmus program and international conventions at the Université Paris-Sorbonne Paris IV (2010/2011).....	80
❖ Mobility of the students in Erasmus program and international conventions at the Université Paris-Sorbonne Paris IV (2011/2012).....	84
❖ Mobility of the students in Erasmus program and international conventions at the Université Paris-Sorbonne Paris IV (2012/2013).....	89
❖ Mobility of the students in Erasmus program and international conventions at the Université Paris-Sorbonne Paris IV (2013/2014).....	92
❖ Conclusions.....	97
5. International mobility of the academic and administrative staff at the Université Paris-Sorbonne PIV (perspective on the mobility managed by the Service RI).....	98
5.1. International mobility of the academic staff of the Université Paris IV (general overview on the participation in Erasmus program and Conventions).....	98
5.2. International congresses, international symposiums (on the campus) with participation of the Université Paris-Sorbonne.	98
5.3. Visiting faculty/lecteurs at the Université Paris-Sorbonne Paris IV (stay not managed by the <i>Service RI</i>).....	99
5.4. International mobility of the administrative staff of the Université Paris-Sorbonne Paris IV (mobility managed by the Service of RI).....	102
5.5. Conclusions	103
6. Chosen services responsible for the management of the international collaboration through Research at the Université Paris-Sorbonne Paris IV	104
6.1. Actions of the internationalization of research at the University Paris IV.....	104
6.2. <i>Service des Doctorats</i> - International cotutelle in the Paris IV (from 2011/2012 to 2013/2014).....	105
6.3. <i>Bureau Europe</i> – Internationalization of Research of the members of the SU	111
6.4. Conclusions	112
7. Executive Summary	114
Future of the Université Paris-Sorbonne (perspective from April 2016)	117
Ethical considerations	118
Limitations of the Report	118
Bibliography	119
Annexes	123
About the author	146

ANNEXES

Annex 1. “Questionnaire about impact of international projects on formation for cultural diversity” spread among Erasmus coordinators and administrative staff of the *Service RI* of the Paris IV. One of the questionnaires of the ISAIAS project124

Annex 2. Questionnaire “*Etudiants partant dans le cadre d'une convention. Questionnaire de retour*” of the *Service des Relations Internationales* of the Paris IV.....126

Annex 3. Guide de l'étudiant 2013/2014 of the Université Paris-Sorbonne.
Chapter related to international mobility.....132

Annex 4. Guide de l'étudiant 2014/2015 of the Université Paris-Sorbonne.
Chapter related to international mobility.....133

Annex 5. Agreement of Scientific Cooperation between Université Paris-Sorbonne Paris IV and other institution (English and French version).....134

Annex 6. *Accords internationaux de l' Université Paris-Sorbonne Année 2015-2016*.....140

Annex 7. Conventions between the Université Paris IV and Latino-American, Asian, East European, South European, West European and Middle East Universities.....142

Annex 8. Sorbonne University in Numbers.....144

CHARTS

Chart 1: Description of the evaluation of UPMC (2014/2015) given by the Times Higher Education World University Rankings (included international outlook).....30

Chart 2: Description of the evaluation of UPMC (2015/2016) given by the Times Higher Education World University Rankings (included international outlook)30

Chart 3: Position of the Paris-Sorbonne Paris IV in the QS WU Rankings (2012-2016).....31

Chart 4: Numbers of academic staff and students vs international faculty and international students of the Paris IV – data taken into consideration by the methodology of QS Rankings.....32

Chart 5: Position of the Faculty of Arts and Humanities of the University Paris IV in the QS UW Rankings (2013-2016).....32

Chart 6: Position of the Faculty of Modern Languages of the University Paris IV in the QS WU Rankings (2013-2016).....32

Chart 7: Position of the Philosophy of Paris IV in QS Rankings (2003-2016).....32

Chart 8: Position of History and Archeology of the Paris IV in QS Rankings (2003-2016).....32

Chart 9: Position of Geography of the Paris IV in QS Rankings (2003-2016).....32

Chart 10: Position of Sociology of the Paris IV in QS Rankings (2003-2016).....32

Chart 11: Position of English Language & Literature of the Paris IV in QS Rankings (2003-2016).....33

Chart 12: Position of Linguistic of the Paris IV in QS Rankings (2003-2016).....33

Chart 13: Position of Politics of the Paris IV in QS Rankings (2003-2016).....33

Chart 14: Position of Communication and Media of the Paris IV in QS Rankings (2003-2016).....33

Chart 15: Position of the Faculty of Social Science and Management of the Paris IV in QS Rankings (2003-2016)33

Chart 16: Students mobility in Erasmus and Conventions (only the Anglo-Saxon countries) for the period 2004-2015.....72

Chart 17: Students' mobility through the Erasmus program and international Conventions for the period 2004-2015.....72

Chart 18: Students mobility in the framework of the Erasmus program and international Conventions from 2006/2007 to 2013/2014.....73

Charts 19-23: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2009/2010).....75

Charts 24-29: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2010/2011)80

Chart 30: Mobility of the students in Erasmus program and international Conventions (distribution according to the level of study) at the University Paris IV (2011/2012).....86

Chart 31: Mobility of the students in Erasmus program and international Conventions (distribution according to the level of study) at the University Paris IV (2012/2013)90

Chart 32: Mobility of the students in Erasmus program and international Conventions (distribution according to the level of study) at the University Paris IV (2013/2014).....94

Chart 33: Number of visiting lecturers at the Paris IV in 2011/2012.....99

Chart 34: Number of visiting faculty/lecteurs at the Paris IV in 2012/2013.....100

Chart 35: Number of visiting faculty/lecteurs at the Paris IV in 2013/2014.....100

Chart 36: Visiting professors/lecteurs at the Université Paris-Sorbonne Paris IV in the period from 2011/2012 to 2013/2014 (stay not managed by the Service RI)	101
Chart 37: Distribution of students in the international doctoral cotutelle according to scientific discipline; (2011-2014) – Université Paris-Sorbonne Paris IV.....	106
Chart 38: Registration rate of the students involved in the international doctoral cotutelle – - distribution by year and discipline at the Université Paris-Sorbonne Paris IV.....	107
Chart 39: Partner countries in the international doctoral cotutelle over 3 academic years (2011-2014); distribution of international conventions in the Paris IV.....	108
Chart 40: Partner countries in the international doctoral cotutelle over 3 academic years (2011-2014); distribution of international conventions in the Paris IV.....	109
Chart 41: Nationality of the students in the international doctoral cotutelle at the Université Paris-Sorbonne Paris IV (2011-2014).....	110

FIGURES

Figure 1: Logo of the Université Paris-Sorbonne (Paris IV, Paris 4).....	14
Figure 2: Logo of the Sorbonne Universités (SU).....	17
Figure 3: Logo of the Sorbonne Universités (SU)	17
Figure 4: Not actual logo of the Sorbonne Universités (French and English version)	17
Figure 5: French version of the official page of the Paris IV (November 2014).....	37
Figure 6: English version of the official website of the Paris IV (November 2014).....	38
Figure 7: Wikipedia Page of the Université Paris Sorbonne (Français) https://fr.wikipedia.org/wiki/Université_Paris-Sorbonne (Accessed 15.12.2015)	39
Figure 8: Wikipedia Page of the Paris-Sorbonne University (English) https://en.wikipedia.org/wiki/ParisSorbonne_University (Accessed 15.12.2015)	39
Figure 9: Facebook page of the Paris-Sorbonne Université (state: 10 December 2014).....	40
Figure 10: Twitter of the Université Paris-Sorbonne.....	41
Figure 11: Guide de l'étudiant 2013/2014.....	42
Figure 12: Guide de l'étudiant 2014/2015.....	43
Figure 13: Guides for the Erasmus students at the Université Paris-Sorbonne. Historical perspective at the name/designation of the Relations Internationales of the Paris IV.....	48
Figure 14: Organigramme of the Université Paris-Sorbonne (September 2014).....	53
Figure 15: Organigramme of Université Pierre et Marie Curie and position of Direction des Relations Internationales (October 2014).....	54
Figure 16: Organigramme of the Université de Technologie de Compiègne (October 2014).....	55
Figure 17: Website of the Service RI of the Paris IV.....	58
Figure 18: Organigramme of the <i>Service des Relations Internationales</i>	59

TABLES

Table 1: Achievements of the Service de Relations International since 2009-2014.....	59
Tables 2-8: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2009/2010).....	75
Tables 9-14: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2010/2011)	80
Tables 15-20: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2011/2012).....	84
Tables 21-26: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2012/2013)	89
Tables 27-32: Mobility of the students in Erasmus program and international Conventions at the University Paris IV (2013/2014).....	92
Table 33: Distribution of students in international doctoral cotutelle according to scientific discipline (2011-2014).....	106
Table 34: Students involved in the international doctoral cotutelle – distribution by year and partner country of the Université Paris-Sorbonne Paris IV	107

II. Abbreviations

Adeas – *Association des étudiants africains de la Sorbonne*: ADEAS

ARWU - Academic Ranking of World Universities

CNRS - le Centre National de la Recherche Scientifique (CNRS)

COMUE - *Communauté d'Universités et d'Établissements (COMUE) Sorbonne Universités*

EHEA – European Higher Education Area

H2020 – HORIZON 2020 the EU Framework Programme for Research and Innovation

INSU - Institut National des Sciences de l'Univers (INSU)

IUFM - IUFM Paris - Institut universitaire de formation des maîtres

MNHN – *Muséum national d'histoire naturelle*

UFR – *Unité de formation et de recherche* (Unit of Formation and Research), a faculty in the French universities and some others.

URAP - University Ranking by Academic Performance

UTC - Université de Technologie de Compiègne (in English: University of Technology of Compiègne)

PLI - Program for International Bachelor

PRES - *Pôles de recherche et d'enseignement supérieur* (PRES)

PUPS - Les Presses de l'Université Paris-Sorbonne

P IV – Paris 4, Université Paris-Sorbonne (in English: Paris-Sorbonne University)

P VI – Paris 6, Université Pierre et Marie Curie (in English: University Pierre and Marie Curie)

RI – international relations

Service RI – *Service des Relations Internationales*

SIAL - *Service Interuniversitaire d'Apprentissage des Langues*

SU – *Sorbonne Universités, Sorbonne University*

III. Acknowledgments

I would like to express my deepest appreciation to all those who provided me the possibility to complete this report. Special gratitude I give to Madame Professor Araceli Guillaume-Alonso (*Professeur délégué des Services des Relations Internationales*) and Madame Dolorés Sobrino (*Chef des Service Relations Internationales*), who accepted me and agreed to supervise my professional internship project in the *Service de Relations Internationales* at the *Université Paris-Sorbonne* and for their constant contribution in stimulating suggestions and encouragement, which especially helped me in writing this report.

Furthermore, I would also like to acknowledge with much appreciation the crucial role of the Staff of the *Service des Relations Internationales of the Université Paris-Sorbonne (Paris IV)*, who gave the time, the support, and the permission to use all required documentation and the necessary materials to complete the task “**Role of the *Service des Relations Internationales* in the execution of the international policy of the Université Paris-Sorbonne.**”

A special thanks goes to many professors, administrative staff, and students (domestic and international) of the *Université Paris-Sorbonne*, who shared with me their experience, opinions and feelings about their study and stay in this prestigious academic institution.

Furthermore, I am very grateful to the Staff of the International Office and the *Bureau Europe* of the *Université Pierre et Marie Curie* as well as the *Sorbonne Universités*, who have sheared their professional experience with me helping to get to know deeper the context of performance of the *Université Paris-Sorbonne* and its *Service des Relations Internationales*.

1. INTRODUCTION

In the *Introduction* chapter, the context of the report and the main objectives of this document will be presented. Theoretical framework and methodology used during this ethnographical, transdisciplinary research will be shortly described.

1.1. Context and objectives of the report

This report is a result of research-professional internship done in the framework of a PhD project related to a comparison of internationalization strategies and its impact on the Asian and European university campuses. The internship had place in the *Service des Relations Internationales* of the Paris-Sorbonne University (Paris 4, Paris IV) from March 2014 to October 2014. Some additional data from 2014/2015 were added during Report reviews. Its principal objective was to recognize a strategy of the response of the Paris-Sorbonne University for the challenges of globalization and its impact on the campus' population (intercultural competence development), taking into consideration organizational and national culture of the institution.

The main objective of this report is to visualize the role of the *Service des Relations Internationales* in the implementation of international policies of the Paris-Sorbonne University Paris IV.

Additional information related especially to the statistical results (*international cotutelle*, visiting professors/*lecteurs*, participation in the European Framework Program) of the implementation of international policy of the university, gathered during the process, will be also presented.

1.2. Theoretical framework of the Report

This research took place at the institutional level, because of that it was important to determine the organizational culture of the institution (focusing on the *Service des Relations Internationales*) and existing strategies of internationalization of higher education and research.

Organizational culture of an institution is strongly impacted by national culture. Following the definitions of Hofstede (1985, 2010) *culture consists of the unwritten rules of the social game* and **organizational culture is collective programming of the mind that distinguishes the members of one organization from other.**¹ Furthermore, organizational culture is the behavior of humans within an organization and the meaning that people attach to those behaviors. Culture includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits. It is also a pattern of such collective behaviors and assumptions, which are taught to the new organizational members as a way of perceiving and even thinking and feeling. Organizational culture affects the way people and groups interact with each other and with stakeholders. It also impacts the way processes and strategies are implemented (Handy, 1985), and their outcomes.

In relation to **international dimension at institutional level**, there are a lot of different strategies to enhance degree of internationalization. According to Knight (1995, 1997, and 2004), they can be divided into **programs (academic strategies)** and **organization strategies**. It is important to differentiate between these two elements, because focusing on one activity, other important issues will be overlooked. Program strategies can be divided into academic programs, research and scholarly collaborations, and extracurricular programs, among others. The organization strategies can be observed on the levels of governance, operations, services, human resources, and finances. Each set of instruments can lead to different degrees of change an institution is going to experience.

In order to understand the functioning of the *Service RI* of the Paris IV, the contexts of the Paris-Sorbonne University as well as the Sorbonne University should be presented.

Work definitions:

There is considerable confusion in the field regarding terminology that is used in relation to globalization and internationalization. In this Report these terms are understood as followed:

Globalization – following Joseph Stiglitz² – is a closer integration of the countries and the peoples of the world, which has been brought about by the enormous reduction in the cost of transportation and communication, and by the dismantling of political and economic barriers to the flow of goods, services, capital, knowledge, and to a lesser extent, people across borders.

Internationalization – as Knight said – is *“a complex process whose combined effect, whether planned or not, is to enhance the international dimension of the experience of higher education in universities and similar institutions.”*³

¹ It relates to the concept of habitus proposed by the French sociologist Pierre Bourdieu (1980) *“culture it is the collective programming of the mind that distinguishes the members of one group or category of people from others.”*

² Stiglitz J. E. is a recipient of the Nobel Memorial Prize in Economic Sciences (2001) and the John Bates Clark Medal. Stiglitz, J. E. (2003). *Globalization and its Discontents*. New York: W.W. Norton, 2002. Print. ISBN 0-393-05124-2.

³ Definition proposed by OECD (1994); de Wit (2002). *Internationalization of Higher Education in the USA and Europe. A Historical, Comparative and Conceptual Analysis*. Print. ISBN 978-1-60752-066-5; p. 113.

1.3. Methodology

In order to meet the objectives of the professional/research internship and objectives of this report, the **ethnographic case study** approach especially needed in the research on organizations, processes and their outcomes has been used. **Mixed methodology** (a combination of qualitative and quantitative methods, and methodological and data triangulation) has been used. A mixed methods research design implies collecting, analyzing and mixing both quantitative and qualitative data obtained through different sources and different methodologies. The combination of qualitative and quantitative approaches permits better understanding of research problems, assures the validity of research, and captures different dimensions of the same phenomena.

The qualitative methodology was based on a field research: no controlled observation and direct participative (localized) observation (participation in campus life, participation in cultural events, conferences, professional meetings), informal interviews/"chains of conversations" with academic staff (the Paris IV and the Paris VI), administrative staff (the Paris IV: *Service des Relations Internationales, Chargé des contrats de recherche, Cotutelle Internationale de thèses, École Doctorale*; the Paris VI: *Direction des Relations Internationales, Bureau Europe*; Sorbonne Universités: management of the COMUE, *Bureau Europe*; Université de Technologie Compiègne: online contact with International Office), national students (6 campuses of the Paris IV), international students and representatives of students' union, students' associations (example: Parismus, Adeas, others), photos, diary of the stay – professional reflections about the undertaken actions; universities' websites, Students' guide and on-line forums about study and stay in these universities, *Facebook, Twitter, Wikipedia, and YouTube*. Review of the literature: national policy documentation, reports of the external evaluation of the Paris IV, international rankings of universities, internal documents of the international offices and the universities (members of the SU) have been taken into consideration.

The quantitative methodology has used the ISAIAS FAST⁴ questionnaire of assessment of the outcomes of international policy on the campus population. This questionnaire, based on the theory of development of intercultural competences, the concepts and the key parameters proposed by Deardorff (2004, 2010) have been previously developed, statistically tested, and validated at the University of Granada (Spain) and Akershus & Oslo University College (Wisniewska, 2011)⁵. The previously validated questionnaire was slightly adapted to this study, and spelled in three slightly different forms adapted to students or to academic professionals (researchers, teachers, professors) and to the administrative staff of the Service RI, but all versions are strictly parallel and comparable. Moreover, most of the responders (98%) of the questionnaires

⁴ ISAIAS FAST questionnaire (Annex 1) is part of a global strategy *Intercultural Sensitivity Academic Index and Advanced Standards* ISAIAS, which has been developing during last 7 years in order to evaluate/estimate the impact of internationalization of a university on the campus population (students, teachers, administrative staff and other stakeholders). It is part of Lidia Wisniewska's PhD project, which has been developing in Asian and European campuses. Some of its results (such as an analysis of impact of leadership in internationalization of university in different cultural and professional contexts: Italian, French, Spanish and the South Korean campuses) are going to be published soon.

⁵ Wisniewska L. (2011). Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals. Master thesis. Høgskolen i Akershus. <https://oda.hio.no/jspui/handle/10642/971>. [Accessed 12.12.2015].

had an informal interview with the researcher, which permits to validate/contextualize the answers given in the questionnaire and developed discussions about the items of the questionnaire in the context of the *Paris IV* and the *Service des Relations Internationales*.

Quantitative methodology based on the statistics (related to international mobility) has been also used in order to show (quantify) the outcomes of the involvement of the Service RI in the implementation of the international dimension on the campus. This way of evaluation of the international offices, or even internationalization of a university is the most common way, nowadays.

2. CONTEXT OF THE SERVICE DES RELATIONS INTERNATIONALES OF THE UNIVERSITÉ PARIS-SORBONNE (PARIS IV, PARIS 4)⁶

Existence of many “Sorbonnes” in Paris can generate confusions among national and international stakeholders. Chapter 2 will bring closer institutional context in which the *Service des Relations Internationales* functions. General explanations related to the name of the Université Paris-Sorbonne Paris IV, its logo, history, and its current transdisciplinary context brought by the Sorbonne University (Sorbonne Universités, SU) will be introduced. Short overview on the creation of the SU and its relation with the Paris IV will be presented. Furthermore, objectives and the strategic lines of development of the SU as well as methods of strategy implementation will be shortly analyzed. Members of the Sorbonne University and establishments associated with the SU will be listed. Main axes of the international policy of the SU, which shapes general framework of the international relations of the Paris IV, and through that mission of the Service RI, will be introduced. At the end of this chapter, international visibility of the Paris IV and other academic members of the SU (Paris VI and UTC) will be explored through the six most popular international rankings of higher education. Additionally, the image of the Université Paris-Sorbonne on the Internet (institutional website, Facebook, Twitter, Wikipedia, YouTube, and the *Guide de l'étudiant* of the Université Paris-Sorbonne) – through international perspective will be studied.

2.1. Université Paris-Sorbonne (PARIS IV) - nowadays

Nowadays, the Paris-Sorbonne University (Paris IV) maintains strong myth of the historical Sorbonne, inside and outside of the institution. It is one of the most important strengths of its European heritage.⁷ The Paris IV is the main inheritor of the old Sorbonne, which dates back to the 13th century (more about history of this university can be found further in this Report), and which was one of the first universities in Europe, influencing by its “*Paris model*” many other countries.⁸ The biggest university in France dedicated to Literature, Languages, Civilizations, Arts, Humanities and Social Sciences, the university is still located on the original medieval foundations, and now extends to the Latin Quarter and to other areas in Paris.

The Paris IV in numbers represents:

- 21.000 students in initial training and 2615 in continuing education
- 2059 personal, where 1237 are teachers, faculty and researchers and 822 support staff

⁶ The information related to the name and the history of the Paris-Sorbonne University (Université Paris-Sorbonne) and the Sorbonne University (*Sorbonne Universités*), author of the report decide to based on the information which has been gathered through chains of the interviews on the campus as well as the information brought by the Wikipedia (modifications with the date: October 2014), as it is (and it will be probably) the most used source of quick information about this University for anyone interested in.

⁷ Value of heritage of the European universities has been discuss in Sanz, N. & Bergan, S. (2006). *The heritage of European universities*. Council of Europe Publishing.

⁸ See more: J. Minot: *l'Histoire des Universités Françaises*, Paris, PUF, 1991, in which Minot shows that “*Paris model*” was subsequently adopted by all universities. However, Renault, A. (Professor of the Paris IV), in his article “*The role of universities in the democratic European culture*” published in *Concept of democratic citizenship*, Council of Europe Publications, ISBN 92-871-44-52-4, December 2000 - argued, that “*this idea of spreading the ‘Paris model’ throughout Europe is a largely a myth.*”

- 92 degree titles are offered
- 18 UFR – training and research units
- 2 schools: CELSA⁹ and ESPE¹⁰
- 7 doctoral schools
- 16 sites in Paris¹¹
- 1 campus abroad – Paris-Sorbonne University Abu Dhabi, PSUAD (since 2006).¹²

2.1.1. Logo of the Université Paris-Sorbonne (Paris IV)

The Université Paris-Sorbonne is recognized with logo as followed:



Figure 1: Logo of the Université Paris-Sorbonne (Paris IV, Paris 4)

The University logo is the University's visual identifier. It should appear on all print and digital communications. It is important to apply the logo consistently and properly across all collateral to maintain a unified identity.

The university logo of the Paris IV consists of two components: the University shield (*Chapelle de la Sorbonne* – the oldest part of the Sorbonne) and wordmark ("PARIS SORBONNE UNIVERSITÉ," where "SORBONNE" is emphasized by bigger letters; below the "SORBONNE", the word "UNIVERSITÉ" - written in majuscules, but with smaller characters was centered). The word "SORBONNE" is underlined by a blue line.

Two colors are used in this logo: blue and yellow. The blue serves for the letters and the line, and the yellow draws the *Sorbonne Chapelle*.

The symbolic of the logo Paris IV visualizes historical heritage of this university and the processes by which this institution has passed: "Paris Université" relates to the first university organizations in Paris in XIIth century (please see point referring to the History of the Paris IV, below); the "Sorbonne" refers to the *Collège de Sorbonne*, which name became largely known all over the Europe since XIIIth century; and the outline of the oldest building of the Sorbonne – *Chapelle de la Sorbonne* (founded by Cardinal Richelieu in 1635-1642).

⁹ CELSA Paris-Sorbonne University is a French communication and journalist school (*grande école*) located in the west of Paris and it is a part of the Paris-Sorbonne University. <http://www.celsa.fr>.

¹⁰ L'ESPE - Ecole Supérieure du Professorat et de l'Éducation. <http://www.espe-paris.fr>.

¹¹ Information taken from the Paris IV web page: <http://www.paris-sorbonne.fr/Paris-Sorbonne-en-chiffres0> [Accessed 13.12.2015]. In comparison in 2006/2007: 25 876 students (together first, second and third year of license), 4 495 foreign students (together first, second and third license); 894 *enseignants*: 218 professors, 334 *maîtres de conférences*, 405 other *enseignants*; administrative staff: 538 from which: 178 personal administrative, technic, 38 librarians, 226 engineers, technics and administrative staff of research and education (ITARF). According to the: *Pôle des Relations Internationales* (2006). *Etudiants Erasmus Guide d'accueil*, 2006/2007. Université Paris-Sorbonne. https://www.msm.unidue.de/fileadmin/Dateien/ISMA/Informationsmaterial/Europa/Frankreich/Paris/Erasmus_Guide_2006.pdf [Accessed 13.12.2015].

¹² Paris-Sorbonne University Abu-Dhabi PSUAD. <http://www.sorbonne.ae> [Accessed 13.12.2015].

2.1.2. Name – Université Paris-Sorbonne (Paris IV)

The Université Paris-Sorbonne (Paris IV, Paris 4, in English: **Paris-Sorbonne University**) is one of the 13 autonomous universities created in 1971 after French riot (1968) by dividing *Paris University* (created about 1160), known World widely later as the *Sorbonne* or *la Sorbonne*. The university is often referred to the Sorbonne after the collegiate institution (*Collège de Sorbonne*) founded around 1257 by Robert de Sorbon, but it was always larger than the *Collège de Sorbonne*. Of the thirteen current successor universities, four have premises in the historical Sorbonne Building, and three of them include “Sorbonne” in their names.¹³

2.2. History of the Université Paris-Sorbonne (Paris IV)

The *University of Paris* (in French: *L'Université de Paris*) came into being during the 12th century as a result of the continuous growth of the Parisian schools that were grouped together on the hill called the Montagne Sainte-Geneviève. It is known as one of the first universities established in Europe (approximate year 1160). These schools provided instruction at three levels: *Baccalauréat* (grammar, dialectics, rhetoric), *Licence* (arithmetic, geometry, astronomy, music) and *Doctorate* (medicine, cannon law, theology).

At the beginning of 13th century because of its constant growth it was necessary to adopt more appropriate and organized structure. Consequently, King Philippe Auguste decided to provide the teachers and students with suitable living conditions and to guarantee with diplomas their education. The schools' organization system was redefined in accordance with two major principles. The first one was regrouping teachers and students in a community called *universitas*. The second principle was related to *its self-government*, which was guaranteed in the early part of the 13th century by three official texts: in 1200, a diploma by Philippe Auguste; in 1215, a confirmation by the papal legate; in 1231, the papal bull entitled *ParensScientarium* by Pope Gregory IX. Thus, the university became a legal entity, benefited from privileges, and acquired a seal bearing the inscription: “*Universitatis magistrorum et scholarium parisiensium.*”

The “poor students” could receive full board in colleges founded by donors. In these circumstances the **College of Sorbonne** for the poor students of theology was created. The Sorbonne takes its name from a college created in **1253** by Robert de Sorbon, the chaplain and confessor of the king Saint Louis, who confirmed its foundation in 1257. With help of a royal donation, the school was established in backstreet called the Rue Coupe-Gueule on the northern side of the Montagne Sainte-Geneviève.

Even though theology was taught in many convents, the *Collège de Sorbon* became one of the principle colleges of the Faculty of Theology, along with the *Collège de Navarre*, the *Collège du Cardinal Lemoine*, and the *Collège des Cholets*.

¹³ Universities in Paris with the name of “Sorbonne”: *Université Paris 1 Panthéon-Sorbonne* <http://www.univ-paris1.fr>; *Université Sorbonne Nouvelle–Paris 3* <http://www.univ-paris3.fr>; *Université Paris-Sorbonne Paris 4* <http://www.paris-sorbonne.fr>; three clusters of the Parisian universities: *Sorbonne Universités*, <http://www.sorbonne-universites.fr>, *Sorbonne Paris Cité*, <http://www.sorbonne-paris-cite.fr/fr>, and *Hautes Études Sorbonne Arts et Métiers (HeSam)* <http://www.hesam.eu>.

By the end of the **Middle Ages**, the University of Paris became the biggest cultural and scientific center in Europe, attracting about 20,000 students from many countries. It owed its reputation to the prestige of its teachers but also to its libraries the quality of which was as good as the papal library. The University of Paris was the cradle of the “second French humanism.”

Following the French Revolution, the Sorbonne’s **activities were suspended from 1793 to 1896**.¹⁴ With the growth of higher education, after French riots in **1968**, the university was divided into thirteen autonomous institutions.

Currently, some residual administrative functions of the 13 universities are formally supervised by a common chancellor, the rector of the Paris education authority, whose office is at the Sorbonne. Recently, these universities were clustered as three interdisciplinary university groups: the *Sorbonne Paris Cité*, *Hautes Études Sorbonne Arts et Métiers (HeSam)*, and *Sorbonne Universités* (Sorbonne University). The Université Paris IV is one of the academic members of the Sorbonne Universités, SU.

2.3. Sorbonne University (Sorbonne Universités, SU)

Sorbonne University (SU) is an alliance¹⁵ founded by the *Paris-Sorbonne University* (Paris IV), the *Pierre and Marie Curie University* (Paris VI), *University of Technology of Compiègne (UTC)*, Business Scholl for the World (INSEAD) and the National Museum of Natural History (INHEN) in 2010. Both Parisian universities (Paris IV and Paris VI) are inheritors of the Paris University (known as la Sorbonne), which in 1968, was divided into 13 universities spread out in Paris city.

The *Sorbonne Universités* is an answer for the government initiative called “*Initiative d’excellence*” (Idex) with a 7.7 billion euros fund. This call had as an objective to create in France five to ten centers of academic and research excellence of world class.¹⁶

The project “*Sorbonne Universités à Paris pour l’éducation et la recherche*” (The Sorbonne University in Paris for Education and Research) was selected as one of the IDEX’s winners. In April 2012, the agreement was signed by the Foundation of scientific cooperation, and by the State in order to finance the actions of the SU project for a trial period of 4 years (till 30 Jun 2016 with the possibility of extension).

¹⁴ Because of this suspension (1793 -1896) the University of Paris is **excluded from the list of the oldest** existing universities: See more http://en.wikipedia.org/wiki/List_of_oldest_universities_in_continuous_operation. During that period functioned *Université impériale*, *Université de France* (Imperial University of France or University of France), founded by Napoleon in 1808. Some of the faculties were located in the building of the old Sorbonne. See more: Léon, A. & Roche, P. (2003). *Histoire de l’enseignement en France*. Presses Universitaires de France. ISBN 2-13-053706-5.

¹⁵ **Sorbonne University alliance** is a continuity of the initiative “Operation Campus” started in February 2008 by the President of France Nicolas Sarkozy. Its main aim was to make few campuses of excellence that will reinforce the attractiveness and influence of the French universities internationally (in global rankings). Over 5 billion Euro funding was to be divided between prospectus clusters of universities. In this way, the Paris IV and the Paris VI, as well as other institutions (members of the Sorbonne University) took part of the *Pôles de recherche et enseignement supérieur (PRES)* de Sorbonne Universités, which nowadays took form of the *Communauté d’Universités et d’Établissements (COMUE) Sorbonne Universités* called “Sorbonne Universités” or “SU”.

¹⁶ According to the information given by: *Sorbonne Universités. Un contexte, une ambition*. http://www.sorbonne-universites.fr/fileadmin/user_upload/Sorbonne_Universites-Presentation_10_pages-Septembre_2013.pdf. [Accessed 13.12.2015].

The SU in numbers represents:

- 58,000 students, including 10,000 international students, 23,000 master's students and 5,200 doctoral candidates.
- About 7,000 researchers and professor-researchers (24 are researchers supported by the European Research Council, and 45 hold industry-sponsored research chairs, and 85 are members of the French academy of Science).¹⁷

2.3.1. Logo of the Sorbonne Universités (Sorbonne University, SU)

The University logo is the University's visual identifier. It should appear on all print and digital communications. It is important to apply the logo consistently and properly across all collateral to maintain a unified identity.

The university logo consists of two components: the University shield (S – written in majuscule) and wordmark ("SORBONNE UNIVERSITÉS", where "SORBONNE" is highlighted by a red line below which the "UNIVERSITÉS" was centered).

A red line highlights the "SORBONNE" – mythical image of an important European university. The logo has combination of colors: blue, white and red. The "S" is placed in the open "U", which plays a white or blue background.

Two versions of the logo of the SU are presented below:

Figure 2. Logo of the Sorbonne Universités



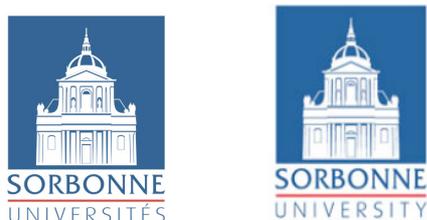
Figure 3. Logo of the Sorbonne Universités



Source: Available: <http://www.sorbonne-universites.fr>. [Accessed 15.12.2015].

Occasionally, on the Internet (institutional websites or institutional documents), or some paper documents from 2013/2014 and 2014/2015, other versions of the logo of the SU can be seen (not actual anymore):

Figure 4. Not actual logo of the Sorbonne Universités (Sorbonne University)



Sources: Available: <http://www.upmc.fr/en/university/idex.html>. [Accessed 15.12.2015]; *Guide de l'étudiant Paris-Sorbonne 2013/2014* and *Guide de l'étudiant Paris-Sorbonne 2014/2015*.

¹⁷ Marin. C. International Relations. "Sorbonne University" [Accessed 12.12.2015. www.sorbonne-universites.fr]. See more about this matter in Annex 8.

2.3.2. Objectives and strategic lines of the *Sorbonne Universités* (SU)

What is strategy? Strategy is not only a plan towards attaining missions and achieving aspirations, but is also a pattern and thus consistent over time. Chafee¹⁸ and Douglas¹⁹ agreed that strategy includes both organization and its environment, is complex in substance, affects the overall welfare of the organization, involves both content and process, is not purely deliberate, exist on different levels, and involves both conceptual and analytical thoughts processes. Keller²⁰ argued that strategy is grounded in an institution, shaping its own destiny, focuses on keeping peace with the current environment, influences by competition, and is obsessed with the fate of the institution. It should consider the tradition and values of an intuition as well as aspirations and priorities, while taking into consideration the strengths and weaknesses, both academic and financial, and the external environment.

Below the strategic responses of the SU toward globalized reality will be presented. Furthermore, the strategy development for such crucial moment in the history of the Sorbonne will be described.

The SU intends to mobilize community members around the project called *“Sorbonne Universités à Paris pour l'éducation et la recherche”* in order to implement the innovation, interdisciplinarity, promotion of problem-based pedagogical approach, diverse trainings for the first levels of university education as well as life long learning. These elements are the key points of the strategy, the outcomes of which will be the students prepared for a complex and divers world as well as social promotion.

The interdisciplinarity, preparation of students for divers world, development of university life in the heart of the Latin quarter as a real university campus, stimulation of dialog between sciences and society (especially taking into consideration development of new technologies), where the SU plays a stimulating role – are the principal challenges of the SU cluster. In order to meet them, the five main strategic lines have been developed.

Among the **strategic lines of the SU**, which indicate directions of changes among its members can be mentioned:

- a) Research
- b) Education, professional orientation and integration
- c) Economic, cultural y social development
- d) Students life on the campus
- e) European and International dimension
- f) Involvement of the personal.

To bring closer these ideas of development of the innovative approaches at the SU, some explanations will be presented below.

¹⁸ Chafee, E. E. (1985). From concept of strategy: From business to higher education. Higher education: Handbook of theory and research Vol. 1 (pp.133-171). New York: Agathon Press.

¹⁹ Douglas, T. (2012). Institutional Strategy. Positioning for Prestige. In: N. Bastedo Edit. *Ibidem*.

²⁰ Keller (1983). Academic Strategy: the management revolution in American higher education. Baltimore: John Hopkins University Press.

a) Research

The strategy of the Sorbonne University is focused on strengthening the quality of research of its member institutions by developing areas of excellence and encouraging the emergence of new fields of research at the interfaces between disciplines and especially by facilitating the work of its researchers and academics. By engaging in this path, the SU wants to be recognized as one of the leading research centers in Europe and the World.

To achieve these objectives the following actions have been planned:

- 1) spreading good practices that have been implemented in existing institutions to all the SU members;²¹
- 2) facilitating the work of researchers and academics by giving them access to the services they need;²²
- 3) developing a research strategy which would identify and develop new emerging themes.

The SU designed the projects that were submitted to various Call-for-Offers as structuring scientific operations, opening to conceptual or technological leaps. Fourteen Laboratories of Excellence (Labex), two Hospital-University institutes, and a health and biology infrastructure have been particularly selected. Built on the network of its research units, these projects define the strategic axes of the Sorbonne Universités²³ for the coming years. Some projects that were not selected by juries (but which scientific quality and strategic relevance have been recognized), will be supported by other instruments.

The methodological support

According to the document *Sorbonne Universités, un contexte une ambition* – the strategy of the SU is designed to encourage calls for projects that involve teams from different disciplines and different institutions. A joint seminar on a theme determined by a scientific committee identifies interested researchers and potential synergies. This will be followed by a call for projects involving different teams. The projects that prove holders may lead to recruitment procedures coordinated between different disciplines (“cluster hiring”).

The SU is also committed to fund methodological support for research in the field of documentation and libraries, including the establishment of a common portal; moreover, in the field of contractual research, the establishment of a shared support office for the search of national, European and company contract resources has been planned.

²¹ Example, project managed by the Bureau Europe related to the good practices of the SU members: <http://www.sorbonneuniversites.fr/actions/recherche/ouverture-a-linternational/bureau-europe.html>.

²² Organization of the Bureau Europe of the SU (located in the UPMC's facilities), which manages project related with: 1) joint trainings for researchers, faculty members or administrative staff; 2) sharing good practices in periodic roundtable; 3) awareness rising, information and communication about different actions - in the COMUE -to different academics; 4) help with proposal writing for the calls related to European research projects, such as Framework Program (proposed specially to the researchers who had not had previous experiences related with this kind of projects; 3) support for the organization of meetings for the preparation and writing of the collaborative projects; 4) diffusion of the information related to the international research projects, calls of the European Commission. See more: <http://www.sorbonne-universites.fr/actions/recherche/ouverture-a-linternational/bureau-europe.html>; <http://www.sorbonne-universites.fr/newsletter/la-lettre-de-sorbonne-universites/lettre-n2/un-bureau-europe-pour-sorbonne-universites.html>. [Accessed 12.02.2016].

²³ *Sorbonne Universités. Un contexte, une ambition, Ibidem.*

b) Education, professional orientation and integration

Committed to the public service, the SU wants to create ambitious, innovative and democratic university formation, where 5 objectives will be taken into consideration:

- Rethink the link between education and research and find new ways to study and teach adopted to the generation born with new technologies;
- Renew the terms of acquisition of disciplinary knowledge and transversal competences, and focus on a problem-based approach;
- Offer different paths with many gateways as a way of diversifying training program;
- Set up the network of educational resources and integrate them fully into the course training (technology platforms, ICT);
- Strengthen cultural and international opening.

In order to reach the objectives mentioned above principal actions have been planned: creation of *Le Collège des Licences de la Sorbonne*, transformation of *Les Masters*, creation of *le College doctoral de la Sorbonne*, life long learning, and pedagogic support.

- *Collège des Licences de la Sorbonne* - is planned to be focused and implement multidisciplinary, critical thinking, student orientation approach, as well as a system of "major/minor" or "double major" degree; as well as intercultural and international dimension. It is thought to be constructed through the calls projects conducted in the most flexible way possible in order to encourage innovation in the field. A new approach to the medical studies intends to propose a "health, sciences, and humanities" as courses, which are giving to students multiple opportunities: assistance of entry into medical studies; progressive specialization streams towards bi-disciplinary studies link with medicine and orientation towards science courses, engineering or humanities. The SU objective is to place 20% of this kind of training programs in the dynamics of this transformation by 2016 and 70% by 2022.
- *Transformation of Les Masters* – focused on deepening of specialist knowledge and broadening students' culture understood as exchanges of teaching units between programs and joint seminars, etc. Developing of international partnerships and programs. This transformation has been planned be implemented through calls for proposals, where the multidisciplinary, new educational tools, e-learning modules, lessons in English and the international partnership will be taken into consideration. Some innovative master courses are set up in the area of engineering (le Master System Design and Management du Labex MS2T), health (to meet the need of changing skills and new professional needs in this sector), and management modules.
- *le College doctoral de la Sorbonne* – respecting the rules of each discipline and ensuring the particularity of various doctoral schools, the Sorbonne Doctoral College led to a voluntary pooling component of doctoral education and the emergence of common identity. Interdisciplinary doctoral seminars, in connection with the Labex, familiarize PhD students to exchange with other communities, clearly communicate their knowledge and its understanding as well as other disciplinary approaches. To diversify potential carriers, the College extended doctoral possibilities to another sort of doctorate degree, such as: Doctorate Science and Management (UMPC – Collège des Ingénieurs), Doctorate Science and Risk Management, etc.

- *Life long learning* – three axes are planned to develop training through life: actions intended to provide access to the SU training for different audiences taking up their studies for career transition; training offers for the needs of business and leveraging the skills and multidisciplinary approaches of the SU; the training for primary and secondary teachers will be based on the skills and competences of the National Natural History Museum (*Muséum National d'Histoire Naturelle*) and of the Tertiary Professional School of Education (*l'Ecole supérieure des professions de l'éducation* (ESPE, ex-IUFM)).
- *Pedagogic support* - related especially to the teaching of foreign languages for domestic students and teaching of the French language to the foreign students. Among foreign languages there are: English, German, Arabic, Catalan, Chinese, Danish, Spanish, Finnish, Greek, Icelandic, Japanese, Italian, Latin, Dutch, Norwegian, Polish, Portuguese, Russian, Swedish and Yiddish). This objective is run through SIAL. **SIAL - Service Interuniversitaire d'Apprentissage des Langues** ²⁴ - it is an interuniversity service of language learning, common structure of the SU cluster (composed by: Paris-Sorbonne Paris IV, Université Pierre et Marie Curie – Paris VI, le Muséum National d'Histoire Naturelle, l'Université Technologique de Compiègne, and l'INSEAD in collaboration with l'ESPE de Paris).

This service is a pilot project for the development of institutional partnership of the COMUE.

c) Economic, cultural and social development

Sorbonne University wants to play a role of an actor of social, cultural and economic compartmentalization of knowledge by meeting the expectations of the society. The SU plans to train all its students in order to become more open professionals who can work in diverse environments and understand many facets of the business world. In order to reach these objectives, students will be involved in collaborative projects that combine the phases of technological and economic maturation of knowledge transfer or business creation.

Being an actor of the dialogue between science and society the SU is planning to value the business and results of research, disseminating knowledge among different audiences and engaging in a real dialogue between science and society. The SU plans to focus on the existing mechanisms among partners and will promote: Inter-University ages, lecture series such as "heart to Science" (which will make way for debates between specialists from different disciplines on the same theme), actions conducted with wider audiences by the Museum, etc.

The media "sound Sorbonne", "Radio Sorbonne", "TV-Sorbonne", the new communication technologies, and the network of educational resources will be utilized to develop this aspect of the SU. Digitalization Presses of the Sorbonne and new form of the activities considered Presses de la Sorbonne will be studied.

To develop contractual research, Sorbonne University will establish one *service* that will accompany its researchers in negotiating research contracts with industry. This service will result from the expansion of existing services in some of its facilities.

²⁴ Sorbonne Universités. *Un contexte, une ambition, Ibidem.*

A strategic partnership with the *Fraunhofer Gesellschaft* (FhG) allows the introduction of the skills of the FhG on research partnerships within the laboratories of the SU. The SU plans to develop two iconic venues for innovation, Compiègne innovation center on 6000 m² and second center in the heart of the Jussieu campus, Paris Park on 15000 m². Dedicated to hosting companies based on laboratory as well as the hosting of subsidiaries, *spin off* or branches of companies will play an essential role in economic development promoted by the SU.

Finally, the SU aims to build research capacity in the field of digital technologies, light and sound that profoundly transform the health, communication, autonomy, and mobility.

d) Students life on the campus²⁵

Student life on the campus is a key factor in building a global university and common identity. The organization culture and the material conditions of the campus are part of the implementation of the project objectives.

The SU campus life is planned to be an important vector of development of interdisciplinarity: promoting meetings between students from different fields (literature, social sciences, hard sciences, engineering, medicine) and between students and researchers and teaching staff, giving them the possibility of conducting joint initiatives.

Students represent diversity of ages, backgrounds, nationalities and needs, practices and various living areas. It is important to take it into consideration while providing them with places and services, which will contribute their dedication to academic life through research, sports, health, catering, student initiatives, and personal development.

In conjunction with the City of Paris, Sorbonne University plans to make more noticeable almost continuity of its campus in the heart of the city. Including the support of the Campus Plan, the SU will develop places of studies, in particular, on the site of sociability in the *Clignancourt Centre* with the project "Champollion Sorbonne".

In this perspective, SU planes to implement the following actions:

- better students living conditions through: 1/ actions to improve their health monitoring, to develop actions of prevention and health education in a center that is able to accommodate all students as part of personalized appointments with nurses, doctors, social workers and psychologists; 2/devices for immediate response to emergencies (including psychological) that a growing number of students is faced with;
- Making the project study to develop student housing, particularly in partnership with municipalities in the Paris suburbs (*Bondy, Ivry-sur-Seine, Boulogne Billancourt ...*) and the *Cité Internationale Universitaire*;
- Development of individual and collective sports, and the organization of joint events specific to strengthen the student and academic community;

²⁵ All information was taken from the *Sorbonne Universités. Un contexte, une ambition, Ibidem.*

- Creation of student association for "high-level musician" and "high level of dancer," like student status "high-level sport;"
- Pooling of cultural policies and activities: music making, drama, workshops, oral expression, writing workshops.
- A "*student jobs*" program in the service of the education of students in order to involve them in the life and work of the SU structures, and to promote the establishment of a culture shared by different populations present on the campus;
- A "Sorbonne scholarship" program, designed to promote successful students taking into account the needs of financing induced by specific route (double curriculum, mobility, training, etc.).

2.3.3. Strategy development

In order to accomplish the SU objectives, the central structure playing the role of leadership in the period of transition has been created. Firstly, that structure has been known as the PRES and since 2014 is known as the COMUE.

The process of innovation and changes is never easy and all kind of resistances is perceived as its natural element. It is especially present in the societies with high uncertainty avoidance (France is one of them).²⁶ To be able to reach the objectives of the SU, the involvement of all members of the cluster is needed. Taking into consideration the national context as well as organizational context of its members, the management of the SU invites **to a voluntary participation in the calls** for the projects that wish to generate some innovative initiatives.²⁷

The integration of the SU member institutions into a single university center will be done through a phased approach, differentiated and pragmatic involving all of those who wish to be involved in jointly defined collaborative projects. It is also important that the building of the SU is done transparently and develops step-by-step, democratic functioning. In the current state, the SU is a Scientific Cooperation Foundation (FCS).²⁸

The SU strategy building - is a dialogue between the SU partners that specify, in the new legislative framework, the participation of each establishment and each single university center, with a vision and a common strategy. Each future components of the SU will argue the degree of autonomy wants to benefit from, terms of participation, and timing of the steps realized. The establishment and operation of the SU based on the principle of subsidiarity: the levels of strategic and operational responsibility will therefore be clearly distinguished, redundancies will be avoided and match democracy.

Currently, the members are working on several projects (for example through: created by the Sorbonne Universités - the *Bureau Europa* in 2014; by common meetings) in order to strengthen the relations between them, to improve international

²⁶ According to Hofstede's (2010) cultural dimension theory, the **uncertainty avoidance** (UAI) is a dimension expresses the degree to which the members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue here is how a society deals with the fact that the future can never be known. Countries exhibiting strong UAI maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. Weak UAI societies maintain a more relaxed attitude in which practice counts more than principles.

²⁷ Information gathered during informal interviews with the administrative staff of the SU. It is matching information form the document, *Sorbonne Universités. Un contexte, une ambition. Ibidem.*

²⁸ *Sorbonne Universités. Un contexte, une ambition, Ibidem.*

visibility, and create a new excellent international institution in the coming years. The most significant projects of this alliance are the "Sorbonne College" (*Collège de la Sorbonne*) for Bachelor's degree teaching and the "Sorbonne Doctoral College" (*Collège doctoral de la Sorbonne*) for PhD candidates.²⁹

The alliance has received €130 million from the French State.

2.3.4. Members of the Sorbonne University and associated establishments

Members³⁰ of the Sorbonne University are:

- ❖ *Le Centre International d'Etudes Pédagogiques (CIEP)*
- ❖ *Le Centre National de la Recherche Scientifique (CNRS)*
- ❖ *L'Institut National de Recherche en Informatique et en Automatique (INRIA)*
- ❖ *Business Scholl for the World (INSEAD)*
- ❖ *L'Institut National de la Santé et de la Recherche Médical (INSERM)*
- ❖ *l'Institut de Recherche pour le Développement (IRD)*
- ❖ *Le National Museum of Natural History (MNHN)*
- ❖ *Le Pôle Supérieur d'Enseignement Artistique de Paris Boulogne-Billancourt (PSPBB).*
- ❖ *L'Université Paris-Sorbonne – Paris 4*
- ❖ *L' Université Pierre et Marie Curie – Paris 6*
- ❖ *L' Université de Technologie Compiègne.*

Establishments associated with the Sorbonne University³¹

- ❖ *L'Université Panthéon-Assas,*
- ❖ *L'École nationale de la magistrature (ENM),*
- ❖ *Le Centre de formation professionnelle notariale de Paris (CFPNP),*
- ❖ *L'École de formation des barreaux (EFB),*
- ❖ *Les Écoles de Saint-Cyr Coëtquidan,*
- ❖ *L'École des officiers de la gendarmerie nationale (EOGN),*
- ❖ *L'École nationale des chartes,*
- ❖ *L'Institut national d'histoire de l'Art (INHA),*
- ❖ *Le Centre des monuments nationaux (CMN),*
- ❖ *Les Archives nationales,*
- ❖ *L'École Navale.*

²⁹ Initiative d'excellence **SUPER Idex Sorbonne Université.**

http://media.enseignementsuprecherche.gouv.fr/file/IDEX_2/58/6/IDEX2_-_SUPER_206586.pdf [Accessed 12.12.15].
Wikipedia page about SU. [http://en.wikipedia.org/wiki/Sorbonne_University_\(alliance\)](http://en.wikipedia.org/wiki/Sorbonne_University_(alliance)) [Accessed 12.12.15].

³⁰ Members of the SU according to the "Statuts de la Communauté d'Universités et d'Établissements Sorbonne Universités." Version from 27 May 2014.

³¹ List of establishments associated with the Sorbonne Universités according to the Sorbonne Universités webpage: <http://www.sorbonne-universites.fr/a-propos-de/les-membres-de-sorbonne-universites/> [Accessed 22.01.2015].

2.4. International policy of the Sorbonne Universités

Members of the SU have their own network of international partners with whom have been developing scientific collaboration on the level of the laboratories, faculties, professors, and researchers. The SU, not only regroups the institutions of different fields (bringing internal scientific diversity), but also aims to give more international visibility to its cluster/members. The creation of a comprehensive/multidisciplinary university allows a more ambitious international partnership policy. The Sorbonne University will seek to establish partnerships in limited numbers (about ten) but intense in collaboration, with universities in developing countries or formerly emerging such as Brazil, South Africa, China, Singapore, India, others.³²

It is especially taking into consideration the visibility in the most followed international rankings.

According to the SU³³, its European and international policy has 3 objectives:

- **Improvement of welcomes and facilitate mobility** – reception services for the international students and researchers have been planned to be strengthened and shared for their better support and integration. Over time, an international center with some French courses and life spaces will be created. While for domestic students, who have opted for international degree -license or master – the support will be provided by services “*services d’appui*” preparing them for international mobility. This objective is introduced in life of the campus through pilot project of SIAL.
- **Building of strategic institutional partnership** – some complementary international collaboration conducted by teams will be established with selected universities. They will structure bilateral exchange of students, postgraduates and researchers in the framework of transdisciplinarity. These strategic partnerships are planning to involve economic partners, cultural institutions, and local partners of the SU.
- **Integration of the European dimension** - seen as a stronger involvement of the SU in the European Research Agency and European programs. Some support to existing services, which are responsible for the preparation of the European projects’ proposals will be added, shared and expended. These steps will permit the Sorbonne to take active part of the European debate on the development of higher education and research in Europe, especially through active participation in the *League of European Research Universities* (LERU).³⁴

³² «Comme dans le cas de la recherche, l’IDEX a été conçu comme **un appoint commun aux initiatives existantes des partenaires**. Le fait de constituer une **université pluridisciplinaire** permet de mener une **politique de partenariats internationaux plus ambitieux**. Sorbonne Universités cherchera à établir des partenariats en nombre limité (une petite dizaine) mais intense avec des universités situées dans les pays émergents ou anciennement émergents (Brésil, Afrique du Sud, Chine, Singapour, Inde, etc. <http://www.sorbonne-universites.fr/idx-super-de-nouvelles-etapes-franchies> .

³³ Policy here presented can be seen in ‘*Sorbonne Universités un contexte un ambition*’ (published in September 2013; on the web of the SU). The steps of its implementation have been observed during internship period.

³⁴ LERU - *League of European Research Universities* – it is a consortium of European research universities. Its purpose is to influence policy in Europe and to develop best practice through mutual exchange of experience. [Accessed 10.12.2014 <http://www.leru.org>. Membership in LERU, which is by invitation, is periodically evaluated against a broad set of quantitative and qualitative criteria, such as research volume, impact and funding, strengths in PhD training, size and disciplinary breadth, and peer-recognized academic excellence [Accessed 14.12. 2014] <http://www.leru.org/index.php/public/about-leru/members/>.

2.5. International policy of the *Université Paris-Sorbonne Paris IV* and its mission

International policy of a university is impacted by many factors such as global economic, social, cultural, historic situation, international policy on the European and global level, national policy, regional policy, tradition of the university, leadership of the university, organizational culture of the university (values, attitudes and practices) and many others. On the other hand, policy of the university impacts its own mission, vision, students and academic as well as administrative staff and all stakeholders. Moreover, the policy of a university is impacting the social, cultural and economic situation at regional, national, European and global level.

The *Université Paris-Sorbonne (Paris IV)* is a public institution with a scientific, cultural and professional character with a legal personality and educational, scientific, administrative and financial autonomy.³⁵

The **mission of the Université Paris-Sorbonne** is to give initial and long-life formation, scientific and technological research, where diffusion and use of its results should serve to the society. These previously mentioned elements will be based on the development of innovation, transfer technology (when it is possible), assessment and support to recognized associations and charity foundations, and public policies to address the societal challenges as well as the social, economic and sustainable development. Social promotion of employability, diffusion of humanistic culture, especially through human and social sciences,³⁶ and the scientific/research culture, technical and industrial culture, are other elements of its mission.

Two last points of the mission of the Paris IV³⁷ presented in *Titre I de la Constitution et des missions de l'Université* (Article 3, point 5 and 6), relate to the university approach towards internationalization: point 5 says about participation of the University in the **construction of the European Area of Higher Education and Research**, and point 6 says about **international collaboration**.

Regarding the construction of the European Area of Higher Education and Research the administrative implementation of the Bologna Process at the Paris IV has finished.³⁸ The three levels of academic education in the French context took form of: License 1, License 2, License 3 (three years of bachelor study), Master 1 (first year of master), Master 2 (second year of master) and three years of doctoral studies. Active participation in Erasmus program as well as in other mobility programs shows compatibility of its ECTS points. However, still exists some small number of professors

³⁵ According to the *Statuts de l'Université Paris-Sorbonne* "L'Université Paris-Sorbonne, ci-après dénommée « l'Université » ou « l'Université Paris-Sorbonne » est un établissement public à caractère scientifique, culturel et professionnel doté de la personnalité juridique et de l'autonomie pédagogique, scientifique, administrative et financière. The Constitution was signed 16 of May 2014 with the note of going to be valid in 2016.

³⁶ Agreement of the *Statuts* of the Université Paris-Sorbonne with the **Leiden Statement** (signed by LERU network) about important role of the social sciences and humanities in the global research landscape as well as its promotion can be observed. http://www.leru.org/files/publications/LEIDEN_Statement.pdf. [Accessed 12.12.2015].

³⁷ Article 3 of the "*Titre I de la Constitution et des missions de l'université*" points "5° La participation à la construction de l'Espace européen de l'enseignement supérieur et de la recherche; 6° La coopération internationale."

³⁸ In the implementation of the Bologna Process at Paris IV, **actively participated Madame Dolorés Sobrino actual administrative Head of the Service RI of the Paris IV.**

who do not recognize subjects, which have been taken in a foreign university and participants of the mobility had to retake the subject in the Paris IV.³⁹

The Université Paris-Sorbonne takes part of the **alliance Sorbonne Universités** (Sorbonne University). This organizational strategy **has been increasing a dynamic of international dimension in creation of multidisciplinary culture** of the Paris IV.⁴⁰

The Université Paris IV created a “*Commission des relations internationales*”⁴¹ led by a *Professeur délégué*. This Commission is organized by geographical areas. However, it intends to develop cooperation with areas not only on the geographical basis but also taking into consideration functional and political criteria. According to this concept of cooperation, four areas that reflect a cultural and scientific tradition were defined:

- European Union, the whole Europe and the new neighborhood;
- *Francophonie* ;
- Developed countries that serve as a reference for education and research;
- Emerging countries, where the new political and economic competition is nowadays.⁴²

The international policy of the Paris IV promotes **reciprocity, exchange and portage** in the approach to international collaboration in the area of higher education and research.⁴³

Referring to the international partnership, the Paris IV focuses on “*not what can be given but more on what can be shared and exchange.*” Following this thought, looking for the new international partners is to look for the destinations, which are interesting for domestic students. Internationalization is perceived here not as a reason to bring a huge number of students on the campus, but as an exchange of students and researchers, knowledge and experience with the foreign institutions.

³⁹ Opinion based on interviews with domestic students on the campus of the Paris IV.

⁴⁰ Opinion based on interviews and observations on the campus.

⁴¹ Information noted on the website of the *Service Relations Internationales* of the Université Paris-Sorbonne. <http://www.paris-sorbonne.fr/la-politique-des-ri> [Accessed 12/15/2015].

⁴² *Ibidem*.

⁴³ Opinions based on interviews, documents reviews (for example statistics and Agreements of scientific cooperation of Paris IV) and observations.

2.6. Members of the Sorbonne University and international rankings

Rankings are not a new phenomenon in higher education. Comparative data on the European universities have been published for more than 150 years.⁴⁴ The national and international rankings have transcended the assessment arena and achieved the status of cultural phenomenon.⁴⁵ The rankings not only measure institutional behaviors, but also shape them.⁴⁶ Not just national but global comparisons of higher education have become increasingly important in the goals and policies of states. In France, Germany, China, and elsewhere the performance of the nation's universities in the annual Shanghai Jiao Tong comparison of research performance is a primary driver of accelerated investment in research.⁴⁷

In that context, one of the objectives of the Sorbonne Universités is to improve international visibility of its members. Even if the existence of global/international rankings brings many debates about their accuracy, they are still quite important tool of evaluation within Academia. Students, families, researchers, academics and other stakeholders they wish to invest their time and economical resources with universities, which prepare them in the most excellent way for the global challenges and give the best opportunities of professional and personal development. The university rankings are the tools, which in some way help/orient the stakeholders in this kind of choice. Many rankings have been created during the last couple of years and there is not consensus about their efficiency. However, probably the most followed in the global context⁴⁸ are the *Academic Ranking of World Universities (ARWU)*,⁴⁹ or the *Times Higher Education World University Ranking (THE)*,⁵⁰ and the *QS World University Rankings*⁵¹.

⁴⁴ Stuart, D. L. (1995). Reputational rankings: Background and development. *New Directions for Institutional Research*, 88, 13-20.

⁴⁵ Pussier, B. & Marinson, S. (2012). The Elephant in the Room. Power, Politics, and Global Rankings in Higher Education. In: N. M. Bastedo (Ed.), *The Organization of Higher Education. Managing Colleges for a New Era*. Baltimore: The Johns Hopkins University Press.

⁴⁶ Krip, D. L. (2003). *Shakespeare, Einstein and the bottom line*. Cambridge, MA: Harvard University Press; Hazelkorn, E. (2013). How Rankings are Reshaping Higher Education. In: Climent, V., Michavila, F. and Ripolles, M. (eds). *Los Rankings Univeritarios. Mitos y Realidades*.

⁴⁷ Salami, J. (2009). *The challenge of establishing world class universities*. Washington, DC: World Bank.

⁴⁸ In the United States the most prominent ranking is the *U. S. News and World Report's (USNWR)* annual compendium, *America's Best Colleges*, which were first published in 1983. Pussier, B. & Marison, S. (2012). In the European context the **U-Map** (2009) and **U-Multirank** were proposed (2011). (Seen 07.12.2015. European Parliamentary Research Service <http://eptthinktank.eu/2014/05/23/university-ranking-and-u-multirank-2/>; Hazelkorn, E. (2013). Europe Enters the College Rankings Game. Could the EU's new U-Multirank someday challenge U.S. News? [http://www.washingtonmonthly.com/magazine/september october 2013/features/europe enters the college rank 046894.php?page=all](http://www.washingtonmonthly.com/magazine/september%20october%202013/features/europe%20enters%20the%20college%20rank%20046894.php?page=all). [Accessed 07.12.2014].

⁴⁹ **Academic Ranking of World Universities (ARWU)** also known as a Shanghai Ranking is annual university rankings published by Shanghai Ranking Consultancy since 2003. [Accessed 10.12.2014] <http://www.shanghairanking.com>. It is taking into consideration scientific fields such as: Mathematics, Physics, Chemistry, Computer Sciences and Economics/Business. Methodology used during evaluation has been presented on the web page <http://www.shanghairanking.com/ARWU-SUBJECT-Methodology-2014.html#2>. [Accessed 10.12.2014].

⁵⁰ **Times Higher Education World University Rankings (THE)**– are annual university rankings published by the British Times Higher Education (THE) magazine and supplied by the Thomson Reuters since 2010. Previously published jointly with *Quacquarelli Symonds* as the **THE-QS World University Rankings**. It gives a list of the best global universities judging their core missions – teaching, research, knowledge transfer and **international outlook**. The top universities rankings employ 13 calibrated indicators in order to provide the most comprehensive comparisons, which are trusted by students, academic, university leaders, industry and governments. <http://www.timeshighereducation.co.uk/world-university-rankings/>. [Accessed 10.12.2014].

It is taking into consideration scientific fields such as: **Art and Humanities** (Archeology, architecture, art, Asian Studies, Classics, Cultural studies, Dance, Film, Radio & television, History & Philosophy of science, Languages & Philology and Linguistic Studies, Literature, Music, Philosophy, Theatre, Theology & Religion, arts& Humanities – other topics), Clinical, Pre-clinical and Health, Engineering and Technology, Life sciences, Fiscal sciences and **Social sciences**. The methodology, used during elaboration of the rankings, is presented on the website.

Considering the role of the international rankings within Academia the position of the universities, which takes part of the SU cluster has been presented below.

The 6 rankings which have been considered in this Report are:

- a) Academic Ranking of World Universities (ARWU) - Shanghai Ranking
- b) Times Higher Education World University Rankings
- c) World Reputation Ranking 2014
- d) QS World University Rankings (2014/2015)
- e) University Ranking by Academic Performance (UARP)⁵² 2014/2015.
- f) Ranking Web of Repositories.⁵³

a) The Academic Ranking of World Universities (ARWU) - Shanghai Ranking

Ranking of the French universities in the Shanghai Rankings (2014/2015) can be visualized as followed:

Top 20 universities in ARWU	Top 100 universities in ARWU	Top 200 universities in ARWU	Top 300 universities in ARWU	Top 400 universities in ARWU	Top 500 universities in ARWU
Fu. 0	Fu. 4	Fu. 8	Fu. 14	Fu. 17	Fu. 21

Fu. – French universities

❖ *Université Paris-Sorbonne (Paris IV) in the ARWU*

The Shanghai Ranking does not take into consideration Art and Humanities, because of that, this Ranking is not relevant (directly) for the Paris IV.

❖ *Université Pierre et Marie Curie (Paris VI) in the ARWU (2003-2014)*⁵⁴

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Position	65	41	41	45	39	42	40	39	41	42	37	35

<http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/methodology>.

[Accessed 10.12.2014]. These rankings are especially **criticized in the context of the Paris IV** because, even if they are related to Art and Humanities, they give much importance to citations undermining non Anglo-Saxon universities that do not use English as their dominant language of publication (non English item is much harder to come across) and books traditionally used in humanities and social sciences are rarely covered by citation records. (Information from the chain of informal interviews hold with the academic staff on the campus of the Paris IV).

⁵¹ **QS World University Rankings** are annual university rankings published by British Quacquarelli Symonds (**QS**).

They publish the rankings results in key media around the world. QS tried to design rankings in order to look at a broad range of university activities such as: academic peer review, student ratio, citation per faculty, recruiter review, **international orientation**, and aggregation. This ranking is **the most problematic and criticized** among the three rankings (especially its methodology). Bookstein at all (2010). Too much noise in the time Higher education rankings. *Scientometrics*, DOI 10.1007/s11192-010-0189-5.

<http://link.springer.com/article/10.1007%2Fs11192-010-0189-5#page-1>. [Accessed 10.12.2014].

⁵² **University Ranking by Academic Performance (URAP)** this Research Laboratory was established at Informatics Institute of Middle East Technical University in 2009. Main objective of URAP is to develop a ranking system for the world universities based on academic performances, which determined by quality and quantity of scholarly publications. In line with this objective, yearly World Ranking of 2000 Higher Education Institutions have been released since 2010. <http://www.urapcenter.org/2014/index.php>. [Accessed 06.12.2015]. The indicators taken into consideration during evaluation are: number of articles, citations, total document, journal impact total, journal citation impact total and **international collaboration**. [See more: <http://www.urapcenter.org/2013/methodology.php?q=3>]. [Accessed 06.12.2015].

⁵³ The "**The Ranking Web of World repositories**" is an initiative of the Cybermetrics Lab, a research group belonging to the *Consejo Superior de Investigaciones Científicas* (CSIC), the largest public research body in Spain. The aim of this Ranking is to support Open Access initiatives and the free access to scientific publications in an electronic form and to other academic material. The webpage indicators used by this ranking measure the global visibility and impact of the scientific repositories. http://repositories.webometrics.info/en/About_Us. [Accessed 06.12.2015].

⁵⁴ Academic Ranking of World Universities: in 2014 the Paris VI got 35 position and in 2015 – 36 position. <http://www.shanghairanking.com/fr/ARWU2015.html> [Accessed 06.12.15].

❖ **Université de Technologie de Compiègne in the ARWU**

It has been not listed in the Shanghai Rankings.

b) In the Times Higher Education World University Rankings (2014/2015 and 2015/2016) – THE

The *Times Higher Education World University Rankings 2015-2016* lists the best global universities and are the only international university performance tables to judge world class universities across all of their core missions - teaching, research, knowledge transfer and international outlook.

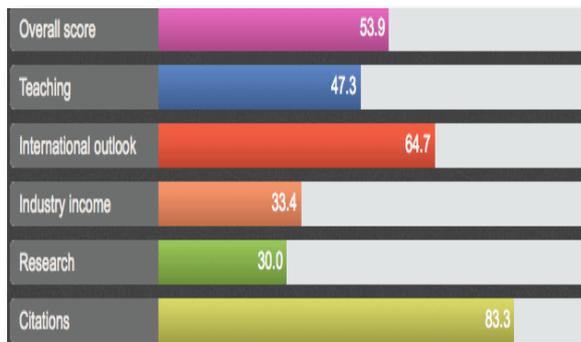
❖ **Université Paris-Sorbonne (Paris IV)**

It is not included in this ranking.⁵⁵

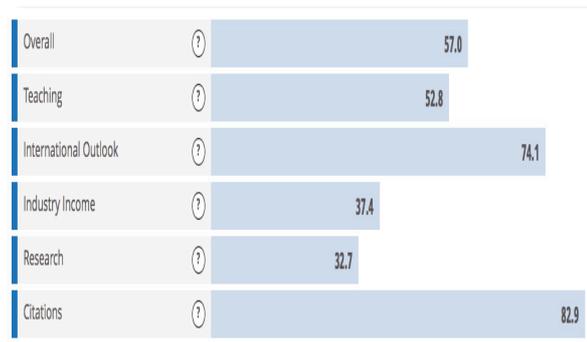
❖ **Université Pierre et Marie Curie (Paris VI)**

It has been listed in the 103rd position on a world scale and in the 2nd position in France (2014/2015).⁵⁶ In the THE Rankings 2015/2016, the Paris VI University got the position 113, even if the points that the institution gathered in all categories were higher than in previous year. The biggest impact was brought by the “Citations” (see Chart 1), and by the “International outlook” - 64.7 in 2014/2015, and 74.1 in 2015/2016.

Chart 1 and Chart 2: Description of the evaluation of the UPMC (2014/2015 – Chart 1 and 2015/2016 – Chart 2) given by the *Times Higher Education World University Rankings* (included international outlook⁵⁷)



Data from the THE 2014/2015 – 103 position.



Data from the THE 2015/2016 - 113 position.

Sources: THE World University Rankings: www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/institution/universite-pierre-et-marie-curie, <https://www.timeshighereducation.com/world-university-rankings/universite-pierre-et-marie-curie?ranking-dataset=133819>.

❖ **Université de Technologie de Compiègne**

It has been not included in this ranking.

⁵⁵ No institution can be included in the overall World University Rankings unless it has published a minimum of 200 research papers a year over the five years the methodology of ranking examines. However, for the “Citations”, the threshold drops to 100 papers a year for subjects that generate a high volume of publications and 50 a year in subjects such as social sciences where the volume tends to be lower.

The majority of institutions in Thomson Reuters’ Global Institutional Profiles database, which fuels the rankings, provide detailed subject-level information. In rare cases where such data are not supplied, institutions are either excluded or public sources are used to inform estimates. For more information: [Accessed 12.12.2015]

<http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/methodology>.

⁵⁶ In 2013/2014 UPMC was placed on the 96th position and in 2012/2013 on the 81st position in the THE Ranking.

⁵⁷ **International outlook** (according to **THE rankings**) – this category has into consideration diversity on the campus and to what degree academics collaborate with international colleagues on research projects. Both elements show how global an institution is in its outlook. For more details see [Accessed 05.01.2015] <http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/methodology>.

c) In the World Reputation Ranking 2014⁵⁸ and 2015⁵⁹

- ❖ **Université Paris-Sorbonne** – has improved its position in this ranking obtaining 51-60 reputation rank (in 2015). Since 2012 till 2014 its position rank was 71- 80.
- ❖ **Université Pierre et Marie Curie** – in 2015 the Paris VI has not been listed among 100 universities. Previously, the UPMC got 91-100 reputation rank (in 2014), 81-90 position (in 2013) and 91-100 position (in 2012).
- ❖ **Université de Technologie de Compiègne**
It has been not listed in this ranking.

d) In the QS World University Rankings (2014/2015 – 2015/2016)

❖ **Université Paris-Sorbonne Paris IV**

In 2015/2016 the Paris IV has improved its global position in the QSUR Rankings from the 227th (in 2014) to the 222nd (50.30 score). On the scale of France, the position has been also improved, from the 9th (2014/2015) on the 6th position in 2015/2016 in those Rankings. According to the last QSUR, Paris IV got 31.2 score for the indicator of the “*International Faculty*” and 52 score for the “*International Students*” (Chart 3). For the total number of academic faculty 942, the 112 are international faculty. The 3,522 are international students out of 22,210 of the total number of students (Chart 4).

While in the Ranking by subjects⁶⁰ the Paris IV was listed as:

- 30th (2014/2015) and 26th (2015/2016) in the philosophy on a world scale and the 3rd in France (in 2014/2015 and 2015/2016).
- 51-100 rank in the history on a world scale and the 2nd in France. Some drop can be observed here in comparison to previous year where the Paris IV was on the 36th place in history, on a world scale and the 2nd in France.
- Geography 101-150 on a world scale and the 2nd in France (2014/2015-2015/2016).
- Linguistic 51-100 on a world scale and the 1st in France (2014/2015-2015/2016).
- 9th (2015/2016) and 16th (2014/2015) in the modern languages on a world scale and the 1st in France.⁶¹

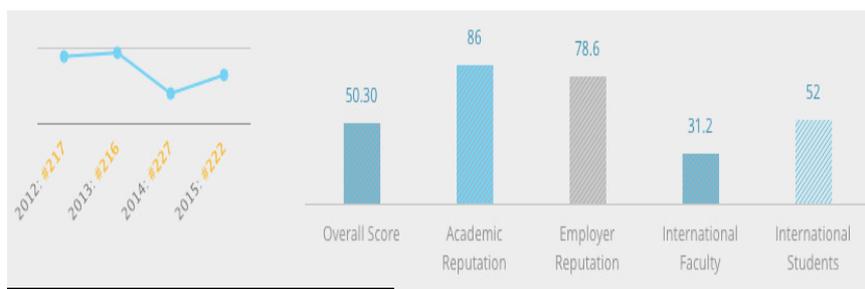


Chart 3: Position of the Université Paris-Sorbonne Paris IV in the QS WU Rankings (2012-2016)*

⁵⁸ **World Reputation Ranking** is taking into consideration teaching reputation and research reputation. Among 100 universities in this World's scale 2 French universities are mentioned: the Paris-Sorbonne Université and the Université Pierre et Marie Curie [Accessed 05.01.2015] <http://www.timeshighereducation.co.uk/world-university-rankings/2014/reputation-ranking/range/71-80>. Methodology used in this ranking was accessed 01.05.2014: <http://www.timeshighereducation.co.uk/world-university-rankings/2014/reputation-ranking/methodology>.

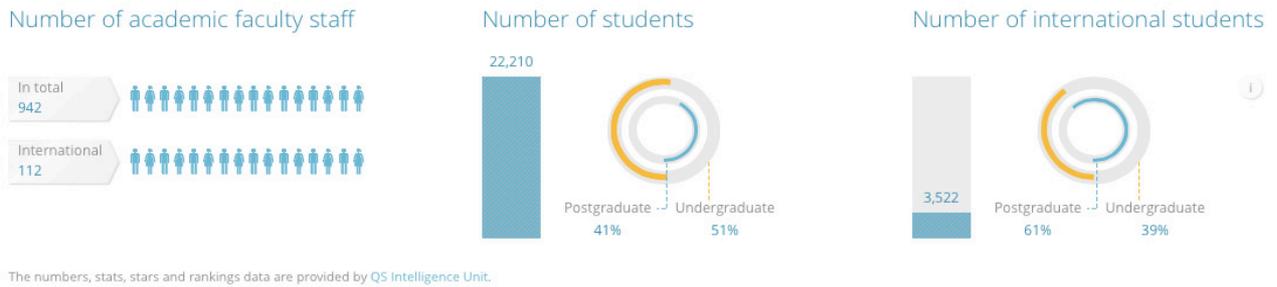
⁵⁹ World Reputation Ranking. <https://www.timeshighereducation.com/world-university-rankings/universite-paris-sorbonne?ranking-dataset=128776>. [Accessed 06.12.2015].

⁶⁰ Three extensive datasets are used in order to rank universities' performance in specific academic disciplines. Those are QS's major global surveys of academics and employers (reflecting academic reputation and employers reputation), and research impact through citations data from Scopus. See more: <http://www.topuniversities.com/university-rankings-articles/university-subject-rankings/qs-world-university-rankings-subject-methodology>. [Accessed 06.12.2015].

⁶¹Data from the QS World University Rankings (2014/2015).

[http://www.topuniversities.com/university-rankings/university-subject-rankings/2014/chemistry#sorting=rank+region="+country=158+faculty="+stars=false+search](http://www.topuniversities.com/university-rankings/university-subject-rankings/2014/chemistry#sorting=rank+region=). [Accessed 07.12.2015].

Chart 4: Number of academic staff and students vs. international faculty and international students of the Paris IV – data considered by the methodology of the QS Rankings (2015/2016)



Sources: QS Topuniversities [Online]. [Accessed 15.12.2015]

<http://www.topuniversities.com/universities/universite-paris-sorbonne-paris-iv>.

Chart 5: Position of the Faculty of Arts and Humanities of the Paris IV in the QS WU Rankings (2013-2016)*



Chart 6: Position of the Faculty of Modern Languages of the Paris IV in the QSWU Rankings (2013-2016)*

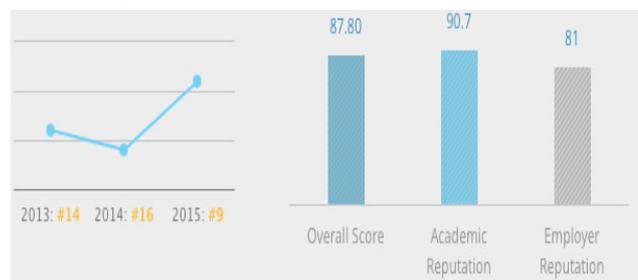


Chart 7: Position of the Philosophy of Paris IV in QS Rankings (2013-2016)*



Chart 8: Position of History and Archeology of the Paris IV in QS Rankings (2013-2016)*

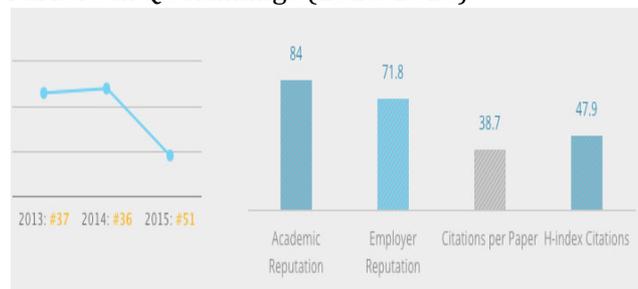


Chart 9: Position of Geography of the Paris IV in QS Rankings (2013-2016)*

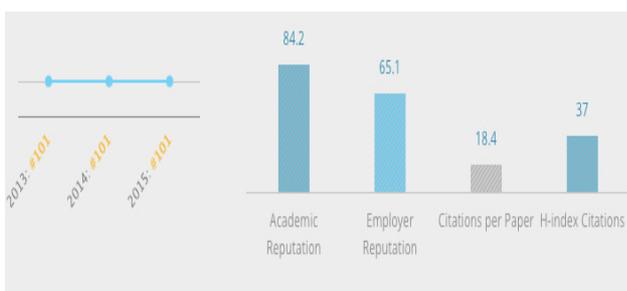


Chart 10: Position of Sociology of the Paris IV in QS Rankings (2015-2016)*



* Sources: QS Topuniversities [Online]. [Accessed 06.12.2015] Available:

<http://www.topuniversities.com/universities/universite-paris-sorbonne-paris-iv#subject>.

Chart 11: Position of English Language & Literature of the Paris IV in QS Rankings (2003-2016)*

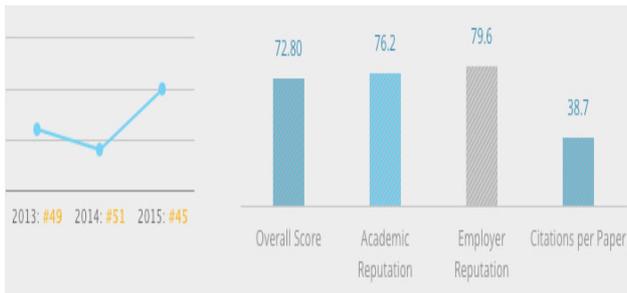


Chart 12: Position of Linguistic of the Paris IV in QS Rankings (2003-2016)*

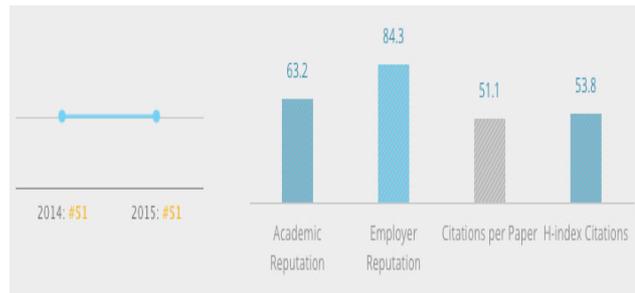


Chart 13: Position of Politics of the Paris IV in QS Rankings (2013-2016)*



Chart 14: Position of Communication and Media of the Paris IV in QS Rankings (2015-2016)*



* Sources: QS Topuniversities [Online]. [Accessed 06.12.2015] Available: <http://www.topuniversities.com/universities/universite-paris-sorbonne-paris-iv#subject>.

Chart 15: Position of the Faculty of Social Sciences and Management of the Paris IV in QS Rankings (2014-2016)



Sources: QS Topuniversities [Online]. [Accessed 06.12.2015] Available: <http://www.topuniversities.com/universities/universite-paris-sorbonne-paris-iv#faculty>.

❖ **Université Pierre et Marie Curie**

It was ranked on the 115th position overall in the World and 3rd in France in 2014/2015. Last year (2015/2016) its global position dropped to the 137th, but among the French universities maintained its 3rd place.⁶²

❖ **Université de Technologie de Compiègne**

It has been placed as NA+.⁶³

⁶² QS World University Rankings 2015/2016. <http://www.topuniversities.com/university-rankings/world-university-rankings/2015#sorting=rank+region+=country+=faculty+=stars=false+search=>. [Accessed 06.12.2015].

⁶³ "NA" in QS World University Rankings - usually applies to specialized institutions, which only cover a narrow scope of subjects (exp. business schools, technical schools). Some of these institutions get high scores for one or more of the indicators used to create the ranking. However, in order to be awarded an overall ranking position, an institution

e) In the University Ranking by Academic Performance (URAP)⁶⁴ 2014/2015 – World Ranking

❖ *Université Paris-Sorbonne* and *Université de Technologie de Compiègne* have not been listed in the URAP ranking.

❖ *Université Pierre et Marie Curie*

It was ranked as **25th** overall on the World scale and 1st in France.

On the other hand, the *Université de Technologie de Compiègne* has been ranked 4 best French engineering school in the "Usine nouvelle" magazine, February 2014.⁶⁵

Taking into consideration **Multidisciplinary** Ranking of URAP – The *Université Pierre et Marie Curie* was listed on the **35th** position. Other members of the SU have not been listed in this category.⁶⁶

In the category of **History and Archeology** of the URAP among the French universities were listed: *University of Bordeaux* (10th position), *Université de Versailles Saint Quentin en Yvelines* (26th position), *Université Aix-Marseille 3 Paul Cezanne* (33th position). The *Université Paris-Sorbonne* has not been listed.

In the category of **Philosophy and Religious** studies among 100 universities no French university has been mentioned.⁶⁷

f) In the Ranking Web of Repositories⁶⁸ - 2015

The good practices in international movement supporting open access, and optimizing the scientific and institutional visibility among members of the SU have been noted in the **CNRS-INSU**,⁶⁹ and in the **National Museum of Natural History**.⁷⁰ The CNRS-INSU was ranked on the 21th position⁷¹ on the France scale, and on the 707th position on the World scale, and **MNHN** has been ranked on the 77th position in France and on the 1625th position in the World rank.

The Paris IV, the Paris VI, and the UTC have been not listed in this ranking.

must meet the following two criteria: 1. Courses offered at both undergraduate and postgraduate level 2. Active in at least two of the five major faculty areas the Ranking consider (arts & humanities, social sciences & management, engineering & technology, life sciences & medicine, natural sciences). Institutions which rank for an individual indicator, but don not meet previously mentioned requirements, will receive "NA" <http://www.topuniversities.com/university-rankings-articles/world-university-rankings/qs-world-university-rankings-methodology>. [Accessed 06.12.2015].

⁶⁴ **University Ranking by Academic Performance (URAP)** this Research Laboratory was established at Informatics Institute of Middle East Technical University in 2009. The main objective of URAP is to develop a ranking system for the world universities based on academic performances, which is determined by quality and quantity of scholarly publications. In line with this objective yearly World Ranking of 2000 Higher Education Institutions have been released since 2010. <http://www.urapcenter.org/2014/index.php>. [Accessed 06.12.2015]. The indicators taken into consideration during evaluation are: number of articles, citations, total document, journal impact total, journal citation impact total and **international collaboration**.

See more <http://www.urapcenter.org/2013/methodology.php?q=3>. [Accessed 06.12.2015].

⁶⁵ Available: <http://www.usinenouvelle.com/comparatif-des-ecoles-d-ingenieurs-2014>. [Accessed 06.12.2015].

⁶⁶ Multidisciplinary Ranking of the **University Ranking by Academic Performance (URAP)**. <http://www.urapcenter.org/2014/mult.php?q=MS02MDA=>. [Accessed 06.12.2015].

⁶⁷ Philosophy and Religious study in the **University Ranking by Academic Performance (URAP)**. <http://www.urapcenter.org/2014/phil.php?q=MS0yNTA=>. [Accessed 06.12.2015].

⁶⁸ Ranking Web of Repository – its short characteristic was brought on the page 19 of this document.

⁶⁹ The Repository was named: *HAL – INSU: Archives ouvertes CNRS-INSU*. HAL Institut National des Sciences de l'Univers INSU. <https://hal-insu.archives-ouvertes.fr>. [Accessed 06.12.2015].

⁷⁰ Archives ouvertes HAL –MNHN. <https://hal-mnhn.archives-ouvertes.fr>. [Accessed 06.12.2015].

⁷¹ Ranking Web of Repositories, France: <http://repositories.webometrics.info/en/Europe/France%20>. [Accessed 06.12.2015].

Conclusions

The most prominent sector of higher education can be understood as a competitive, prestige “market”, where global rankings define relative organizational success and secure its legitimacy.⁷² Rankings are exceptionally effective in legitimating prestige-seeking behaviors while excluding other goals. Perhaps this tendency is stronger in the USA context, however, the European one is moving towards.

This chapter focused on the analysis of the international visibility of the university members of the SU in international rankings. Special attention was given to the *Université Paris-Sorbonne Paris IV*.

Following the Shanghai Ranking (ARWU) in the top 20 World universities there is no French university. In the top 100 universities in the World - four French universities are mentioned and among them the *University Pierre et Marie Curie (Paris VI)*. The Paris IV, as an educational institution focused on humanities and social sciences, is not considered (directly) by this ranking. The *Université de Technologie de Compiègne* has been not listed here.

However, **Paris IV** in the World Reputation Ranking in 2015 was mentioned on the **51-60** position, improving from the 71-80 position in the previous years.

In 2015/2016 the **Paris IV** has improved its global position in the QSUW Rankings from the 227th (in 2014) to the **222nd** with overall score 50.30. It is important to mention that to count the overall score, the international dimension of the Paris IV was taken into consideration through looking at the proportion of national faculty and students to the international faculty and international students. According to this Ranking, on the France scale, the Paris IV improved its position from the 9th (2014/2015) to the 6th position in 2015/2016. However, on the World scale Paris IV dropped in 2015 taking into consideration division by Faculty: The Arts and Humanities dropped on the 36th position (2015) from the 33rd (2014), and Faculty of Social Science and Management dropped on the 127th (2015) from the 115th of the previous year. On the other hand, a big improvement could be noticed in the case of the Faculty of Modern Language, where Paris IV was ranked on the 9th position (2015) improving from the 16th position in the previous year. More detail analysis in relation to the Paris IV subjects' position was presented in this subchapter.

In relation to other members of the SU, according to the QSUW Rankings, the Paris VI was ranked on the 115th position overall in the World, and 3rd in France in 2014/2015. Last year (2015/2016) its global position dropped to the 137th, but among the French universities maintained its 3rd position. The UTC was mentioned in the QSUW Ranking in the NA+ category.⁷³

The evaluation of the international dimension of an educational institution is a very challenging task. Most of the universities in the World still limit the evaluation of those complex efforts and its impact to the number of international mobilities, number of international agreements and conventions, etc. Two of the rankings mentioned above

⁷² Pussier, B. & Marinson, S. (2012). *Ibidem.*; Hazelkorn, E. (2011) Globalization and the Reputation Race in Rankings and the Reshaping of Higher Education: the Battle for World. Class Excellence. Palgrave MacMillan.

⁷³ In order to see more about NA+ of the QSUW Ranking, see page 33 of this Report.

(URAP and THE) try to **measure** this complex issue; the **QSUIW** also introduced some indicators of internationalization (such as: presence of the international faculty and students on the campus) to the overall score of an educational institution. In the case of the **URAP, International Collaboration** "(...) is a measure of global acceptance of a university. International collaboration data, which is based on the total number of publications made in collaboration with foreign universities, is obtained from InCites for the years 2011-2013. The weight of this indicator is 15% in the overall ranking. For the 2014 URAP World Ranking, bibliometric data is obtained through Thomson Reuters' InCites research analytics service."⁷⁴

The Paris VI was mentioned in the 25th position in the World, and first in France in the URAP. The Paris IV and the UTC were mentioned neither in the URAP nor in THE ranking.

The **THE World University Rankings** also examine the **International outlook**. *This category looks at diversity on campus and to what extent academics collaborate with international colleagues on research projects.* The ability of a university to attract international students, and best international faculties is perceived as a key to its success on the World stage; this factor is measured by the ratio of international to domestic staff and students. The third international indicator (international co-authorship) calculates the proportion of a university's total research journal publications that have at least one international co-author and reward higher volumes.⁷⁵ However, the Paris IV is not listed here. The Paris VI has been ranked on the 113 position in 2015/2016 dropping from the 103 place in the previous year. The highest scores the Paris VI received in the category of "Citations" (82.9), and the *International outlook* (74.1).

One of the principal objectives of the SU is to give more international visibility, also through international rankings, to all its members. Good practices of the SU partners in this matter should be shared. Potential of the existence of the Paris-Sorbonne (in Paris) and the Paris-Sorbonne University Abu Dhabi should be considered. Further study related to this issue is recommended.

⁷⁴ The 23 subject areas used in the ranking are based on the discipline classification matrix developed by the Australian Research Council for journals indexed in Web of Science. Information. <http://www.urapcenter.org/2015/indicator.php?q=6> [Accessed 12.12.2015].

⁷⁵ See more: Times of Higher Education (THE) World University Rankings. <http://www.timeshighereducation.co.uk/world-university-rankings/2014-15/world-ranking/methodology> [Accessed 06.12.15].

2.7. Image of the *Université Paris-Sorbonne* on the Internet (institutional Website, Facebook, Twitter, Wikipedia, YouTube, and the *Guide de l'étudiant* of the *Université Paris-Sorbonne (Paris IV)* – international perspective

Website of a university is a visit card for the different stakeholders, who are interested in this university. Easy findings in the Google, easy and clearly organized home page, working links, use of languages version (or not), the vocabulary (related with updated educational policies), updated information, these basic elements - among many others - give the first impression of the culture of the university. Furthermore, the website of the university to outsiders gives impressions, encouraging or discouraging for further interactions, while among the campus participants it impacts development of their culture of work and professionalism.

Moreover, clear, transparent information about the university organization, its mission, vision, strategic planes give also impression about the state of an organization and general mapping of the values of the institution (introducing sensation of chaos or avoiding sensation chaos, and developing a culture of transparency and consultation of the information within and outside of the institution), of the faculty, administrative staff and students (future professionals). User-friendly websites are one of the strategic elements of the university.⁷⁶

Because of the importance of the image of a university which is built through the official canals of information, an analysis of the web pages of the Paris IV (Figures 5 and 6), Wikipedia (Figures 7 and 8), Facebook (Figure 9), Twitter (Figure 10), and YouTube, as well as paper and online version of the *Guide de l'étudiant Paris-Sorbonne*, was done.

2.7.1. Institutional Website of the *Université Paris-Sorbonne (Paris 4)* in the Google - paying attention to the international dimension

Figure 5: **French version** of the official web page of the *Université Paris-Sorbonne* (November 2014)



Source: Université Paris IV website: <http://www.paris-sorbonne.fr> (November 2014).

⁷⁶ Example of information posted on the website of the Oxford University: "These cookies allow us to distinguish you from other users of our website, which helps us to provide you with a good experience when you browse our website and enables us to improve our website." <http://www.ox.ac.uk/content/cookie-statement>. [Accessed 15.12.2015].

Figure 6: **English version** of the official web page of the *Université Paris-Sorbonne Paris IV* (November 2014)



Source: Web page Paris-Sorbonne University Paris IV: <http://www.english.paris-sorbonne.fr>.

Observations in relation to web page of the Université Paris-Sorbonne (Paris IV):

- The link, which supposed to lead to the “Español” version, does not work, neither in the French version nor in the English version of the website.
- English version differs significantly from the French version of the website.
- In relation to the “internationally related vocabulary” reviewing websites of the Paris IV in the French version can be observed: lack of the world “internationalization”, very limited use of the world “international”, “innovation”, “intercultural” (the word “intercultural” was used twice in the recent calls for the new projects organized by the SU – December 2014).
- Some of the links used in the French version and in the English version of the website of the Paris IV do not work.⁷⁷
- Sometimes, finding required information on the website of the Paris IV is a big challenge, especially for the international stakeholders; however, about difficulties in navigation on the website were mentioned also by the domestic students.
- The relationship (differentiation and organization) between websites of the *Université Paris-Sorbonne* and *Sorbonne Universités* became easier to understand during 2014/2015 compering with 2013/2014.
- Existence of so many “Sorbonnes” in Paris can be very confusing for the international stakeholders (who are searching for some practical information about this university), especially those led by the myth of the Sorbonne. Strategy of keeping websites updated, well organized, and easy distinguishable is very important.

⁷⁷ Example of the links which do not work: <http://newsletter.paris-sorbonne.fr/spip.php?page=newsletter-5>.

2.7.2. Wikipedia page of the *Université Paris-Sorbonne Paris IV*

For many stakeholders the Wikipedia page is one of the first sources of information, a part of the official website of a university. The Wikipedia web page of the Université Paris-Sorbonne (English and French version) and Wikipedia web pages of the institutions related with the context of this university - (Sorbonne Universités – French version, Sorbonne University – English version) Université de Paris (French version, English version, Polish version, Spanish version), Sorbonne (English version) and Université Pierre et Marie Curie (French and English version)- have been reviewed.

The information posted on the Wikipedia pages of the Paris IV (state updated 14 of October 2014, 8 of December 2014) and Wikipedia pages of other institutions related closely to Paris IV (institutions mentioned above) is compatible and clearly explained. It is especially relevant in relation to the history of these institutions as well as the future strategic planes of the cluster Sorbonne Universités. It is also meaningful for the future stakeholders (national and international) of this historical institution.

The list of the Wikipedia pages related to the Université Paris-Sorbonne have been reviewed:

- Université Paris-Sorbonne http://fr.wikipedia.org/wiki/Université_Paris-Sorbonne
- Sorbonne Universités [http://en.wikipedia.org/wiki/Sorbonne_University_\(alliance\)](http://en.wikipedia.org/wiki/Sorbonne_University_(alliance))
- Université de Paris http://fr.wikipedia.org/wiki/Université_de_Paris,
- University of Paris http://en.wikipedia.org/wiki/University_of_Paris
- Universidad de Paris http://es.wikipedia.org/wiki/Universidad_de_Par%C3%ADs
- Uniwersytet Paryski http://pl.wikipedia.org/wiki/Uniwersytet_Paryski
- Sorbonne <http://en.wikipedia.org/wiki/Sorbonne>
- Sorbonne (disambiguation) [http://en.wikipedia.org/wiki/Sorbonne_\(disambiguation\)](http://en.wikipedia.org/wiki/Sorbonne_(disambiguation))
- Université Pierre et Marie Curie http://en.wikipedia.org/wiki/Pierre_and_Marie_Curie_University, http://fr.wikipedia.org/wiki/Université_Pierre-et-Marie-Curie.



Figure 7: Wikipedia Page of the *Université Paris-Sorbonne* (Français)
Available https://fr.wikipedia.org/wiki/Université_Paris-Sorbonne [Accessed 15.12.2015].

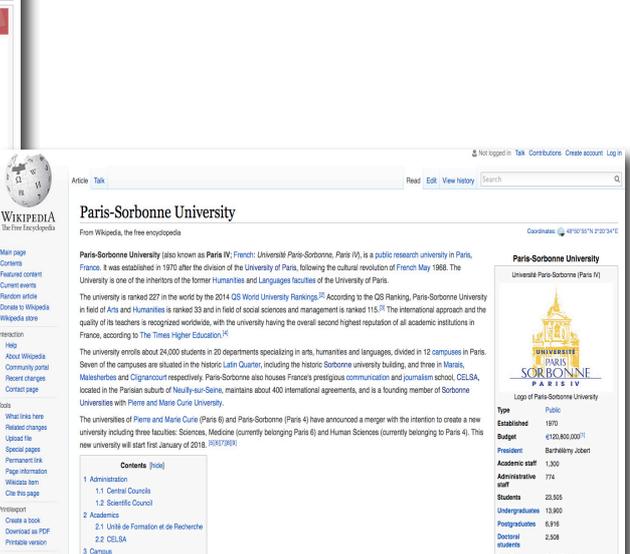


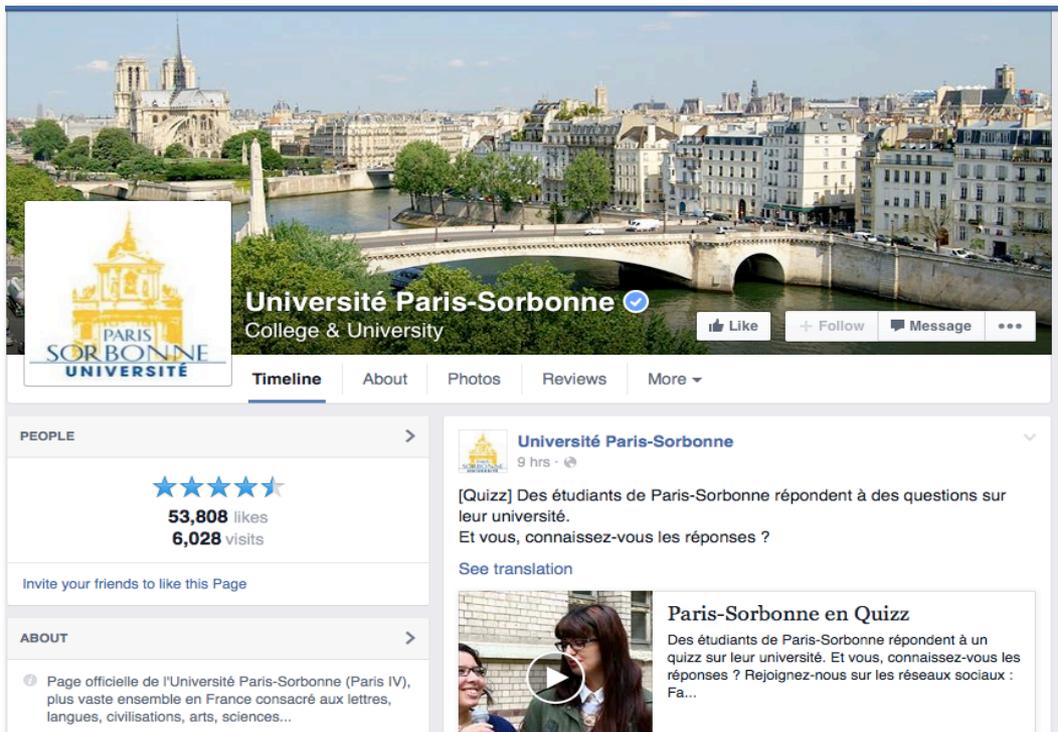
Figure 8: Wikipedia Page of the *Paris-Sorbonne University* (English).
https://en.wikipedia.org/wiki/Paris-Sorbonne_University
[Accessed 15.12.2015].

2.7.3. Facebook page of the Paris IV

Facebook page of the Université Paris-Sorbonne (Paris IV), created in 2010, has been reviewed. (<https://www.facebook.com/Universite.Paris.Sorbonne?fref=ts>).

After 4 years of the online existence, it has 53,808 likes (for the data: 10 December 2014), and over 6000 visits.

Figure 9: Facebook page of the Université Paris-Sorbonne (state: 10 December 2014)



Sources: <https://www.facebook.com/Universite.Paris.Sorbonne?fref=ts&rf=108740262483276>
[Accessed 10.12.2014].

Observations:

After reviewing 4 years of the Facebook's posts⁷⁸ of the Paris IV, the image that emerged from this popular social network can be described as: a French university of culture and humanity in the context of Paris and museums. Scholarships for domestic students or job opportunities for students, especially in the context of the Sorbonne; also gender information (feminism) can be found.

Facebook page of the Paris IV from the international perspective (analysis by year):

- **2014** - one post related directly with international students was posted (in French);
- **2013** - one post inviting to apply for courses offered by the Paris IV was posted (in English);
- 29 January - one invitation to study in Quebec (for domestic students);
- Post about award received by a participant of one *cotutelle* between Quebec and the Paris-Sorbonne;
- Posted an offer of bilingual student job;

⁷⁸ All posts of Facebook which have been published since its creation in 2010 till December 2014 have been reviewed.

- Post of one “European art” of graffiti;
- **2012** - “Construire l’Europe: un project”, (posted: October);
- October – post: *la ville de Paris organisa une Nuit des Etudiantes du Monde*;
- *Un colloque international* – (posted: 3 of October);
- *Un colloque international: John Cage* (posted: 18 Jun 2012);
- Posted: 13 Jun - French meeting about Europe;
- Posted: English website of the Paris 4- for international students;
- Posted: January 14st- video of *Parismus*;
- **2010** (7 May) - one invitation of Erasmus to Paris – “*Venir étudier à Paris-Sorbonne*”.
- 9 December – information about instructive meeting for Erasmus participants.

The analysis presented above showed that international dimension of the Paris IV on Facebook page of this institution is quite modest. In 2014, just one post related directly to international students was posted.

2.7.4. Twitter⁷⁹ page of the Paris IV

Twitter profile of the Université Paris-Sorbonne has been existing since November 2010. Nowadays (status for 11.12. 2014), it has about 10.9 K followers. It shows mostly images of students’ environment at different campuses of the Paris IV, cultural life of the campus and Paris city. Information about job opportunities for students, scholarships, offered courses, and the library news of the Paris-Sorbonne are usually posted. The re-tweets are mostly below 10 per post.

Figure 10: Twitter of the *Université Paris-Sorbonne Paris IV*



Sources: Twitter https://twitter.com/Paris_Sorbonne [Accessed 11.12.2014].

⁷⁹ Twitter profile of the *Université Paris-Sorbonne*. Available: https://twitter.com/Paris_Sorbonne.

2.7.5. Classification of the French universities on YouTube 2014⁸⁰

Video consumption is increasing significantly during last years. It is becoming one of the most popular networks to use, share, and site; watching videos is nearly 55% of active users in France. Here, raises a question - what kind of impact it has?

Below, some classification about participation in YouTube of the French universities (taking into consideration the Sorbonne Universités) were presented:

The most active French university in YouTube

- 4th position- Université Technologique de Compiègne

The channels with the most subscribers

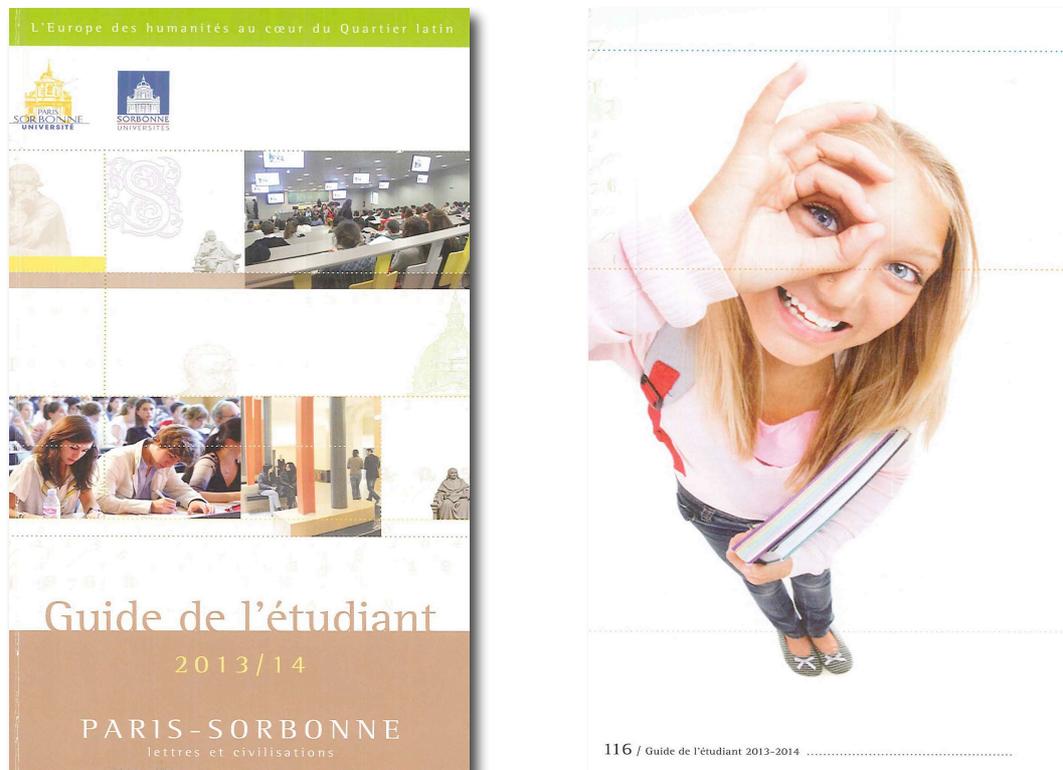
- Placed as the 2nd: Université Paris-Sorbonne 1066
- Placed as the 7th: Université Pierre et Marie Curie 362

Universities with the best average views per video

- Placed as the 1st Université Paris-Sorbonne IV 5659 views with the video:
<https://www.youtube.com/user/UnivParisSorbonne>

2.7.6. Perspective on the international dimension of the Université Paris-Sorbonne Paris IV in the *Guide de l'étudiant* 2013/2014 and 2014/2015

Figure 11: *Guide de l'étudiant* 2013/2014*



⁸⁰ Data taken from the web Campus Communication, *L'Agence de Communication de l'enseignement supérieur et de la recherche Paris/Nantes* <http://www.campuscommunication.fr/2014/07/classement-des-universites-sur-youtube-2014/>. [Accessed 15.12.2014].

Figure 12: *Guide de l'étudiant 2014/2015**



Sources: * Pictures of the *Guide* 2013/2014 (p.43) and 2014/2015 (p.44) (cover of the Guide and last page of the chapter devoted to “*International mobility*”) were prepared by the author of the Report.

The *Guide de l'étudiant* (see more Annex 3 and Annex 4) has been marked with 2 logos: the logo of the Paris-Sorbonne and the logo of the Sorbonne Universités (not valid anymore). The guide gives basic information related to the functioning of the *Université Paris-Sorbonne*. It is proposed in French version and composed of 9 short chapters: 1. *Découvrir l'Université Paris-Sorbonne*, 2. *S'inscrire: Où? Quand? Comment?*, 3. *Les enseignements*, 4. *Réussir vos études*, 5. *La recherche*, 6. ***La mobilité internationale***, 7. *La vie de l'étudiant*, 8. *Informations pratiques*, 9. *Liste des enseignants*.

Furthermore, the guide is user-friendly, has a nice graphic layout, is clearly organized, bringing some kind of transparency about organizational culture of the Paris-Sorbonne, and can be used in paper and online version which helps in larger international visibility of the institution. However, should be mention that the software making the guide available online, is giving some difficulty to read this document (Guide 2014/2015).

The small chapter (pages 112-115) devoted to the international mobility, presents brief information for incoming and outgoing students, short indication about financial aid for domestic students who are interested in taking a period of study abroad, and contact addresses where more information can be obtained. The *Guide* is distributed among the students by the *Service RI*.

2.8. Conclusions

The organizational culture of universities' international affairs offices is strongly impacted by the national culture and the organizational culture of the university which they take part of. Nevertheless, they create their own organization culture, and that will be analyzed deeper in the next chapter. In this chapter the analysis has been focused on the external institutional context of the *Service RI*, it means on the University Paris-Sorbonne (Paris IV), Sorbonne University, and the Paris IV's international image/visibility on the Internet, and in the *Guide de l'étudiant* of this university.

Taking into consideration, the importance of the context in which the *Service RI* is immersed, existence of many Sorbonnes in Paris, closer explanations related to the name of the *Université Paris-Sorbonne Paris IV*, its logo, history, and its current transdisciplinary context brought by the Sorbonne University (*Sorbonne Universités*, SU) has been presented. Current process of innovation of the Paris IV (through participation in the SU) in which the *Service RI* is actively involved has been briefly described.

Since its outset in the XIIth century, the Sorbonne hosted international students, influencing with its model many other European universities. During centuries, its cultural heritage, and environment rich in development of scientific knowledge have been attracting excellent international scholars. Since 1968, when the Paris University was divided in thirteen autonomous universities, the heart of the mythical Sorbonne dedicated to Humanities took the name of *the Université Paris-Sorbonne Paris IV*. Currently, taking into consideration the need of the international visibility, national French policy encouraged to the centralization of the Parisian universities (inheritors of the Sorbonne), which were clustered into three interdisciplinary groups: the *Sorbonne Universités*, *Sorbonne Paris Cité*, and *Hautes Études Sorbonne Arts et Métiers* (HeSam). The *Université Paris-Sorbonne* is one of the members of the *Sorbonne Universités* (SU).

Sorbonne Universités is a comprehensive Higher Education and Research cluster of leading institutions in their domains (universities: Paris IV, Paris VI, UTC, and other institutions). The SU is in constant process of changes passing from the *Pôles de recherche et enseignement supérieur (PRES)* of the Sorbonne Universités into *Communauté d'Universités et d'Établissements (COMUE)* of the Sorbonne Universités. Its international policy shaped commonly by the presidents and representatives of the international affairs offices of each member of the cluster is executed by those offices, in the case of the Université Paris-Sorbonne by the *Service RI*.

The SU intends to mobilize community members around the project called "*Sorbonne Universités à Paris pour l'éducation et la recherche*". The strategy of building the SU concerns the involvement of all members of the cluster in common projects in democratic and voluntary way. The management of the SU invites to the voluntary participation in the calls for the projects, which generate some innovative, transdisciplinary, often international, and inter-institutional initiatives. The SU alliance, as an organizational strategy, **has been increasing the dynamic of the international dimension through the stimulation of the multidisciplinary culture** of the Paris IV.

Among the **strategic lines of the SU**, which indicate directions of changes among its members, can be mentioned: research, digitalization, education and professional orientation, and integration (creation of *le Collège des Licences de la Sorbonne*,

transformation of *les Masters*; creation of *le Collège doctoral de la Sorbonne*; *life long learning with use of the professional strengths of the SU members*; and pedagogical support related especially with the teaching of foreign languages, example: SIAL project - *Service Interuniversitaire d'Apprentissage des Langues*); economic, cultural and social development; students life on the campus; European and International dimension, and involvement of the staff in all processes of the changes.

Main axes of the international policy of the SU, which shapes the general framework of the international relations of the Paris IV, and though that the mission of the *Service RI*, have been introduced in this chapter. The SU' European and international policy has three objectives: 1) improvement of welcomes and facilitate mobility, 2) building of strategic institutional partnerships which involve economic partners, cultural institutions, as well as local partners of the SU, and 3) integration of the European dimension, which is mainly understood as involvement of the SU in the European Research Agency and European programs. That will give to the SU active participation in the European debate on the development of Higher Education and Research in Europe (participation in LERU).

The international policy of the *Université Paris-Sorbonne* takes part of the University's mission, and through the SU alliance it is strongly related to the axes of the international policy of the SU. Construction of the European Area of Higher Education and Research, and international collaborations in general, are mentioned among Paris IV international policy directions.

Four areas of academic collaboration that reflect a cultural and scientific tradition were defined by the international policy of *Paris IV*: European Union, the whole Europe and the new neighborhood; *Francophonie*; developed countries (that serve as a reference for education and research); and emerging countries.

The international policy of the Paris IV promotes **reciprocity, exchange and portage** in the approach to international collaboration in the area of Higher Education and Research.

Furthermore, in this chapter, the international visibility of the Paris IV and other academic members of the SU (Paris VI and UTC) has been explored through the six most popular international rankings of higher education. Results showed that French Higher Education Institutions are poorly represented in international rankings, with only 20 of them featured in the top 500 in the Shanghai ranking. The duality of the French system (universities/"*grandes écoles*" and universities/public research institutions) is also a source of fragmentation, even through the creation of COMUEs, which will be in a better position to promote visibility of institutions. Following the Shanghai Ranking (ARWU), in the top 20 World universities, there is no French university. In the top 100 universities in the World, four French universities are mentioned and among them the *University Pierre et Marie Curie (Paris VI)*. The Paris IV, as an educational institution focused on human and social sciences, is not considered (directly) by this ranking. The *Université de Technologie de Compiègne* has been not listed here. However, the **Paris IV** in the World Reputation Ranking in 2015 was mentioned on the **51-60** position, improving from the 71-80 position in the previous years.

In 2015/2016 the **Paris IV** has improved its global position in the QS World University Rankings from the 227th (in 2014) to the **222nd**. According to this Ranking on the

French scale, the Paris IV improved its position from the 9th (2014/2015) to the 6th position in 2015/2016. The international outlook taken into consideration by some of the rankings was appreciated in the case of the University Paris VI.

At the end of this chapter, the international perspectives on the image of the Université Paris-Sorbonne on the Internet (institutional Website, Facebook, Twitter, Wikipedia, YouTube, and *Guide de l'étudiant* of the Paris IV) have been analyzed.

Website of a university is a visit card for the different stakeholders, who are interested in this university. This aspect is extremely important especially in a so uncommon situation as the existence of many Sorbonnes in Paris. Easy findings in the Google, easy recognition of "requested Sorbonne," easy and clearly organized home page, working links, use of languages version (or not), the vocabulary (related with updated educational policies), updated information, those basic elements - among many others - give the first impression of the culture of the university. Furthermore, the website of the university to outsiders gives impressions, encouraging or discouraging for further interactions. Campus participants are also impacted by the "culture of the web page", especially their professional culture related with transparency.

The Paris IV is present on Internet in the social networks like: Facebook, Twitter, YouTube (in 2014, Paris IV was ranked on the first position among French Universities with the best average views per video). The existence of many Sorbonnes in Paris requires clear online identification of each institution, and even if this approach has been improving a lot during last years, still this matter can be very confusing for outsiders. The *Guide de l'étudiant* is user-friendly, has a nice graphic layout, is clearly organized, and brings some kind of transparency about organizational culture of the Paris-Sorbonne; it can be used in paper and online versions, what helps in the visibility of this institution.

In the days of globalization and massification of Higher Education, when cultural conflicts of Huntington theory⁸¹ become more and more present, the Université Paris-Sorbonne, as one of the most important historically universities in Europe, with a rich cultural and scientific heritage, has a big responsibility and challenge to create its own intelligent internationalization, and this one should be expressed by the canals of institutional communication within and outside of the institution.

⁸¹ Huntington, SP. (1996) *The clash of civilizations and the remaking of World Order*. New York: Touchstone.

3. SERVICE DES RELATIONS INTERNATIONALES OF THE UNIVERSITÉ PARIS-SORBONNE PARIS IV

This chapter will be focused on the organizational culture of the *Service des relations internationales* of one of the oldest, traditional and mythical European university – Paris-Sorbonne.⁸² Different elements, which create and impact this culture, will be analyzed. This ethnographical study helps to highlight the specific context of the *Service RI* of the Paris IV, what will be pointed out in the diverse subtitles of this chapter.

Short history of the creation of the *Service des relations internationales* at the Paris IV will be outlined. Cultural framework of the *Service RI*, which determines its performance, will be presented. Moreover, reflective approach towards the position of the *Service RI* as well as its name within the context of the Paris IV will be brought. A comparative perspective on the position of the international relations in the organization charts among university members of the SU will be presented. Furthermore, the programs through which the *Service RI* manages international collaboration will be shortly characterized.

The organization and role of the *Service RI* of the Paris IV will be analyzed through its mission, *organigramme*, and descriptions of the roles of the office staff. The online face of the *Service RI* will be brought by the analysis of its website.

The achievements of the *Service RI* of the Paris-Sorbonne in the period from 2009 to 2014 will be presented in this chapter.

Moreover, the assessment methods of the *Service RI* will be described. Some perceptions in relation to the *Service RI* of the University Paris IV among campus population (academic staff, domestic and international students) will be also presented.

This chapter will bring closer (based on the field study) the role of the Erasmus Coordinators in the context of the Paris IV. Moreover, the question “*How to encourage domestic students of the Université Paris IV to experience a period of study abroad?*” will be approached through the opinions of the domestic students and Erasmus Coordinators.

3.1. History of the Service RI of the Paris IV

For centuries, international students were part of the landscape of the Sorbonne and its “ancestors”. In 1998, the Sorbonne Declaration⁸³ (first step to the Bologna Declaration)⁸⁴ in the Sorbonne has been signed. Since 2000, the Validations Office

⁸² History of the *Université Paris-Sorbonne* was presented at the beginning of the previous chapter.

⁸³ Sorbonne Joint Declaration, Joint declaration on harmonization of the architecture of the European higher education system. (1998).

⁸⁴ The **Bologna Declaration** (Joint declaration of the European Ministers of Education convened in Bologna on 19 June 1999) is the main guiding document of the Bologna Process. It was adopted by ministers of education of 29 European countries at their meeting in Bologna in 1999. It proposed the European Higher Education Area in which students and graduates could move freely between countries, using prior qualifications in one country as acceptable entry requirements for further study in another.

Figure 13: Guides for the Erasmus students at the Université Paris-Sorbonne. Historical perspective at the name/designation of the *Relations Internationales* of the Paris IV

Figure 13a: *Pôle des Relations Internationales*



Figure 13b. *Pôle des Relations Internationales*



Source: Pôle des Relations Internationales (2006). *Etudiants Erasmus Guide d'accueil*, 2006/2007. Université Paris-Sorbonne (Paris IV).

Figure13c: Guide for the Erasmus students (2008) *Pôle des Relations Internationales*

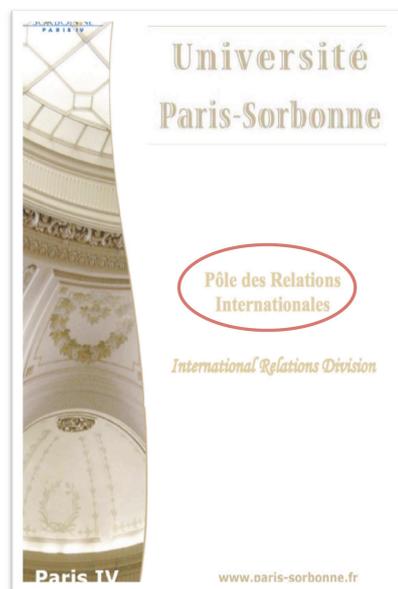


Figure13d: Recent web page del *Service des Relations Internationales*



Source 13c: Université Paris-Sorbonne, Pôle de Relations Internationales, International Relations Division (2008). http://www.paris-sorbonne.fr/Files/ri/1Brochure_Bilingue_avec_couverture_et_photos.pdf.

Source 13d: Website of *Le Service des Relations Internationales*: <http://www.paris-sorbonne.fr/l-international/le-service-des-relations/la-politique-des-ri/>. [Accessed 12.12.2015].

(*Bureau des Validations*) had existed as a form of an international relations office and attend all students with foreign nationality, who wished to study at the Paris-Sorbonne. In the beginning, the Office functioned with a very limited administrative staff (2-3 people) and the number of outgoing and incoming students was very small.⁸⁵

By the time, as the number of the international students have increased, more personnel working in these issues was needed and in 2005 the Service RI moved to a new place. It was a former library building, a part of the complex of the Sorbonne (address: 1, rue Victor Cousin, 75005 Paris), which the participants of international mobility can appreciate nowadays, too. In the period of 2004-2008, the RI of the Paris IV have had significant development: a new bigger place, more administrative staff - 8 people, many new international conventions have been signed, more budget for RI was given (almost double of the recent one), active collaboration in the dimension of internationalization between the President of the University (at that time {2003-2008} Jean-Robert Pitte) and the RI has been developed, and in 2006 the *Université Paris-Sorbonne Abu Dhabi* was established. Moreover, what nowadays is called the *Service des RI*, during that period had been called the *Pôle des Relations Internationales* (See Figure 13).⁸⁶ Administrative staff of the RI neither knows nor understands, why the name has been changed, however, perceives this evolution as an impoverishment of the importance of the RI at the Paris IV.⁸⁷

During last years, the number of administrative staff of the RI decreased, although, the number of students in mobility (national and international students) increased significantly. Currently (with the date 11.11.2014), the Service RI of the Université Paris-Sorbonne is composed of a *Professeur délégué aux relations internationales* + administrative Head of the Service + 4 people + part-time student. Since 2012, the *Professeur délégué aux relations internationales* is Madame Araceli Guillaume-Alonso and the Head of the *Service des Relations Internationales* is Madame Dolorés Sobrino (related with this Office since 14 years).

⁸⁵ Information from the informal interviews held with the staff of the Service RI of the Paris IV.

⁸⁶ Information from the interviews held with the staff of the Service RI of the Paris IV. Document, where that name was used can be seen here: *Pôle des Relations Internationales* (2006). *Etudiants Erasmus Guide d'accueil*, 2006/2007. Université Paris-Sorbonne (Paris IV).

https://www.msm.unidue.de/fileadmin/Dateien/ISMA/Informationsmaterial/Europa/Frankreich/Paris/Erasmus_Guide_2006.pdf [Accessed 12/09/2015].

Université Paris-Sorbonne, *Pôle de Relations Internationales*, International Relations Division (2008).

http://www.paris-sorbonne.fr/Files/ri/1Brochure_Bilingue_avec_couverture_et_photos.pdf. [Accessed 12/09/2015].

⁸⁷ Information from the interviews held with the administrative staff of the Service RI.

3.2. Cultural framework of the performance of the Service RI

Service RI performs in the framework of international and national educational policies, regional policy as well as culture, the Paris IV University interior roles⁸⁸ and an international policy of the university.

The process of the policies' implementation and its results depend strongly on the organizational culture of the *Service RI* itself and on the organizational culture of the university (values of the organization, what was defined by Hofstede as the “*collective mental programming of people in an environment*”).⁸⁹

The Université Paris-Sorbonne, as an organization, characterizes hierarchical culture as many of the universities do. Furthermore, could be said that it has elements of the role culture (Apollo culture)⁹⁰ and club culture (Zeus culture).⁹¹ Moreover, strong power distance⁹² can be observed. This type of organization looks to the past in order to predict the future, based on the assumption that tomorrow will be like yesterday. On the other hand, this allows the organization to examine and pull apart yesterday in order to formulate improved rules and procedures. “*Stability and predictability are assumed and encouraged*” (Handy, 1985. p.45). The field research has confirmed characteristics of cultural national dimensions: high uncertainty evidence, strong power distance and high individualism, and over medium pragmatism (Hofstede et. al., 2010; Hall & Hall, 1990; Peterson, 1993 and field observations).

⁸⁸ *Règlement Intérieur Université Paris-Sorbonne Paris IV.*

⁸⁹ Hofstede, G. H. (1980). *Culture's Consequences. International Differences in Work Related Values.* Sage Publications.

⁹⁰ According to the Handy's classification of organizational culture – **Apollo culture (role culture)** is a type of culture based on the definition of the role or the job to be done. The role culture is stereotyped as bureaucracy. The symbol used to represent this type of culture is a Greek temple. The pillars of the temple represent the functions and divisions in an organization “*The pillars are joined managerially only at the top (...) where the heads of the functions and divisions join together to form the board, management committee, or president's office*” (Handy, 1985, p.44). The pillars are also connected through rules, procedures and pediment. The role or set of duties is fixed in the Apollo culture. Furthermore, in this type of organization, efficiency is determined upon meeting deadlines and standard objectives. This turn results in very little initiative among the employees. Furthermore, apollonian cultures abhor change. Generally this culture in response to a change in the environment would be to first ignore. “*Role cultures respond to drastic changes in the environment (example: new funding sources) by setting up a lot of cross-functional liaison groups to hold the structure together. If these measures do not work, the management will fall, or the whole temple will collapse in merger, bankruptcy, or a consultants' reorganization*”; Handy, C. B. (1985). *Understanding Organizations.* p.48.

⁹¹ **Zeus culture (club culture)**: Handy used a spider web to represent the club culture. The most important lines, however, “*are the encircling [lines], the ones that surround the spider in the middle, for these are the lines of power and influence, losing importance as they go farther from the center. The relationship with the spider matters more in this culture than does any formal title or position description*” (Handy 1985, p.14). Handy also maintains that this type of culture is excellent for “speed of decisions” (Handy, 1985, p.15). However, because of its speed, quality is dependent upon Zeus and his inner circle. The club culture achieves its speed through empathy. This in turn leads to very little documentation within the organization and face-to-face meetings between Zeus and his subordinates or contacts.

⁹² Hofstede's (2010) cultural dimensions related to French national culture noticed: 1) high **power distance** (68 out of 100) which is understood as the degree of social acceptance of the unequal distribution of power in organizations and institutions; 2) high **uncertainty avoidance** (86 out of 100) which is seen as *the extend to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these*. Because of that the structure and planning are highly required; 3) high **individualism** (71 out of 100) understood as *a degree of independence a society maintains among its members. In these societies people are supposed to look after themselves and their direct family only*; 4) medium level of **pragmatism** (63 out of 100) – describes how every society has to maintain some links with its own past while dealing with the challenges of the present and future – the highest score the society has the most pragmatic approach has: they encourage thrift and efforts in modern education as a way to prepare for the future. (For example South Korea has score 100).

Slightly different organizational culture has been developing in the *Service RI*. Its characteristic is an administrative approach to the tasks, efficiency related mostly with *Apollo culture* and small power distance within the members of the office. On the other hand, a bit bigger power distance in relationship Service RI' staff vs students could be perceived.⁹³ The strengths of the Service RI are based on the competences and long experience of the staff involved in the *role culture*. Some elements of the task culture (*Athena culture*)⁹⁴ and Zeus culture (elements of the university's culture) can be observed. However, the small number of personal and a big administrative demand are pushing staff towards the development of the attitudes and values of the "administrative culture" (Apollonian culture).

In conclusion: In the current situation of the Paris IV University (including the Service RI), which is more and more involved in the alliance of the Sorbonne Universités, the differences of cultural organization of the cluster's members and the SU itself are significant issues to consider.

There is no one right way to manage anything.⁹⁵ Different organizations, offices, services, have different way of management, which impacts considerably the values and attitudes, all their stakeholders. Apollo culture, Athena culture, Zeus culture and Dionysus culture works differently, in different kinds of organizations, cultural settings and their success depends on appropriate choice of these ways contextualizing them to the objectives of an organization, the times, and the general environment. Usually mix of the management cultures can be observed, as it is also the case of the *Service RI* of the Paris IV University. This theory of cultural propriety brought by Handy demystifies organizations (their ways are taken by granted as if they were part of nature's law), with the purpose to make people think about the way in which they work and the ways in which they might have to work. The awareness about why people work the way they work (understanding of the influence of culture on work), it makes people more open to the challenges and changes in all kinds of environments.

⁹³ Research field, interviews with domestic students, and administrative staff of the Service RI.

⁹⁴ **Athena culture** (task culture) – according to Handy (1995, p.21) this approach sees management as being concern with the continuous and successful solutions of problems. The Athena organization is a network of loosely linked *commando units*, each unit being largely self-contained but having a specific responsibility within an overall strategy. It judges performance in terms of results, or solved problems.

⁹⁵ Handy (1985, 1995); Peterson (1993). *Managers and National Culture*. Quorum Books, Westport, London. ISBN: 0-89930-602-0.

3.2.1. Service RI in the organizational chart of the Paris-Sorbonne University (comparative perspective of the position of RI within university among university members of the SU) – reflection approach

In the management culture of university, where predominates bureaucracy, strong hierarchy, high power distance as well as a role culture (Apollo culture) with club culture (Zeus culture)⁹⁶, it could be worthy to reflect on:

- What kind of impact on the implementation of international dimension on the campus has the **position of the RI and other services** (responsible for internationalization efforts), within organigramme of the university Paris IV?
- Does the **position of the Service RI in the organigramme** have some impact on the perception and involvement of the administrative staff and academic staff in the implementation of the international policies on the campus (example: importance of international mobility of domestic students)?
- Is it important in the perception of the students, academic community and stakeholders the **vocabulary used in relation to the RI**: *Service des Relations Internationales*? *Pôle des Relations Internationales*? *Directions des Relations Internationales*?⁹⁷
Name used in the Paris VI and in the *Université de Technologie de Compiègne* is: *Directions des Relations Internationales*, while in both universities exist also “Services”, however, in they are not related to the RI.
In the Paris IV, the RI are related with the name: *Service des Relations Internationales*.
- How far from the *Zeus* (President of the *Université Paris-Sorbonne*) are placed the RI of the Paris IV? Does it have any impact on the development of international dimension within university?

Currently, the **Service RI** of the Paris IV has “statutes”⁹⁸ of “service,” which is linked with the **President** of the Paris IV through the position of the ***Professeur délégué aux relations internationales***.

Please, see the *Organigrammes* of the three universities of the Sorbonne Universités presented below.

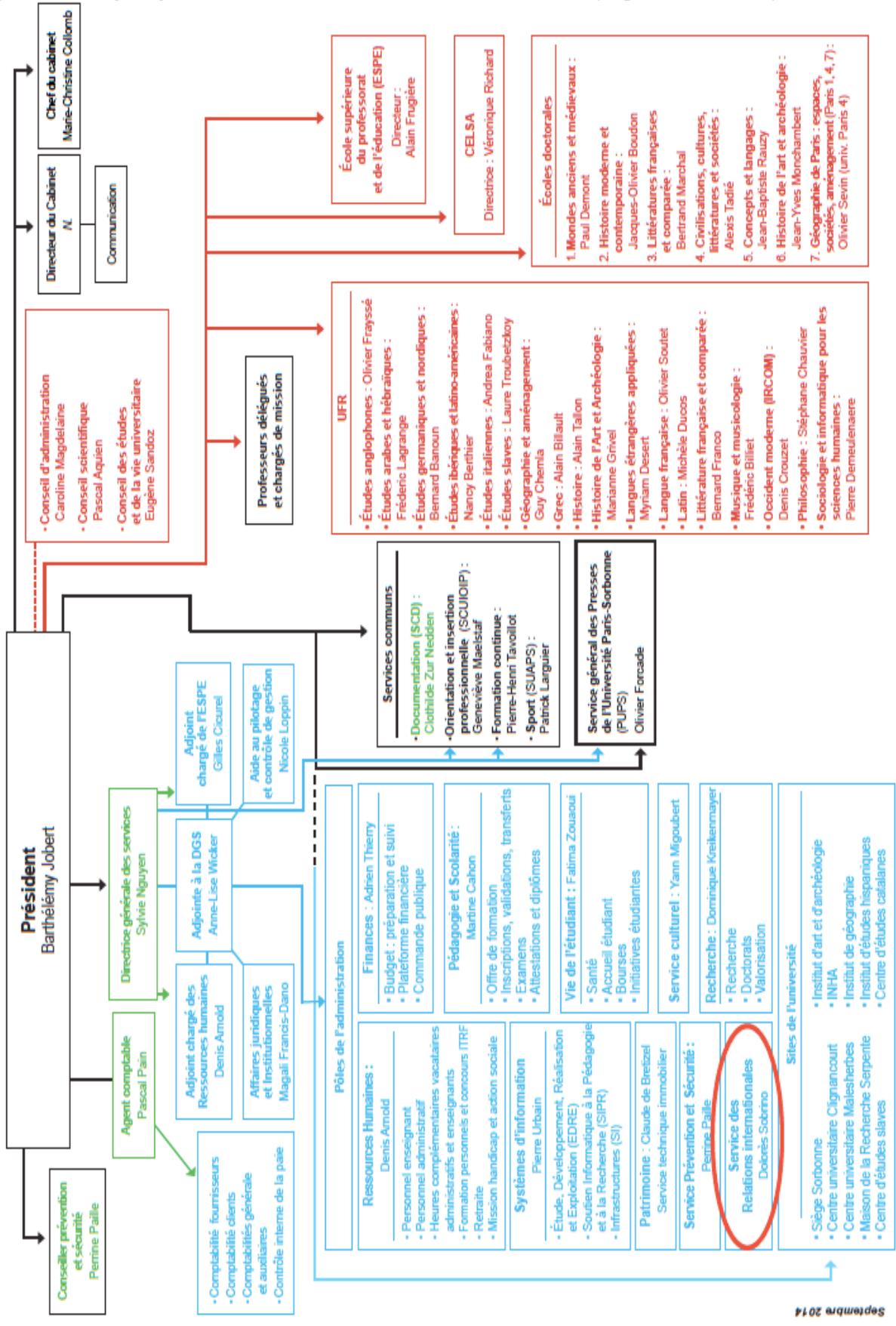
⁹⁶ Author of the report used Handy's (1985) divisions of organizational culture and Hofstede's (2010) theories to classify information collected on the campus of the Paris IV.

⁹⁷ Questions appeared during “chains of discussions ” with administrative and academic staff of the Paris IV and Paris VI, as well as through reviewing documentations from these universities and the UTC (see Figure 14, Figure 15 and Figure 16).

⁹⁸ The author is using here the word “statutes”, however, any written document about the organization or statutes of the office RI has been found. From the chains of the interviews seems that, some years ago, the name of the ***Pôle des Relations Internationales*** has been changed into the ***Service des Relations Internationales***. See more, p. 47-49 of this Report.

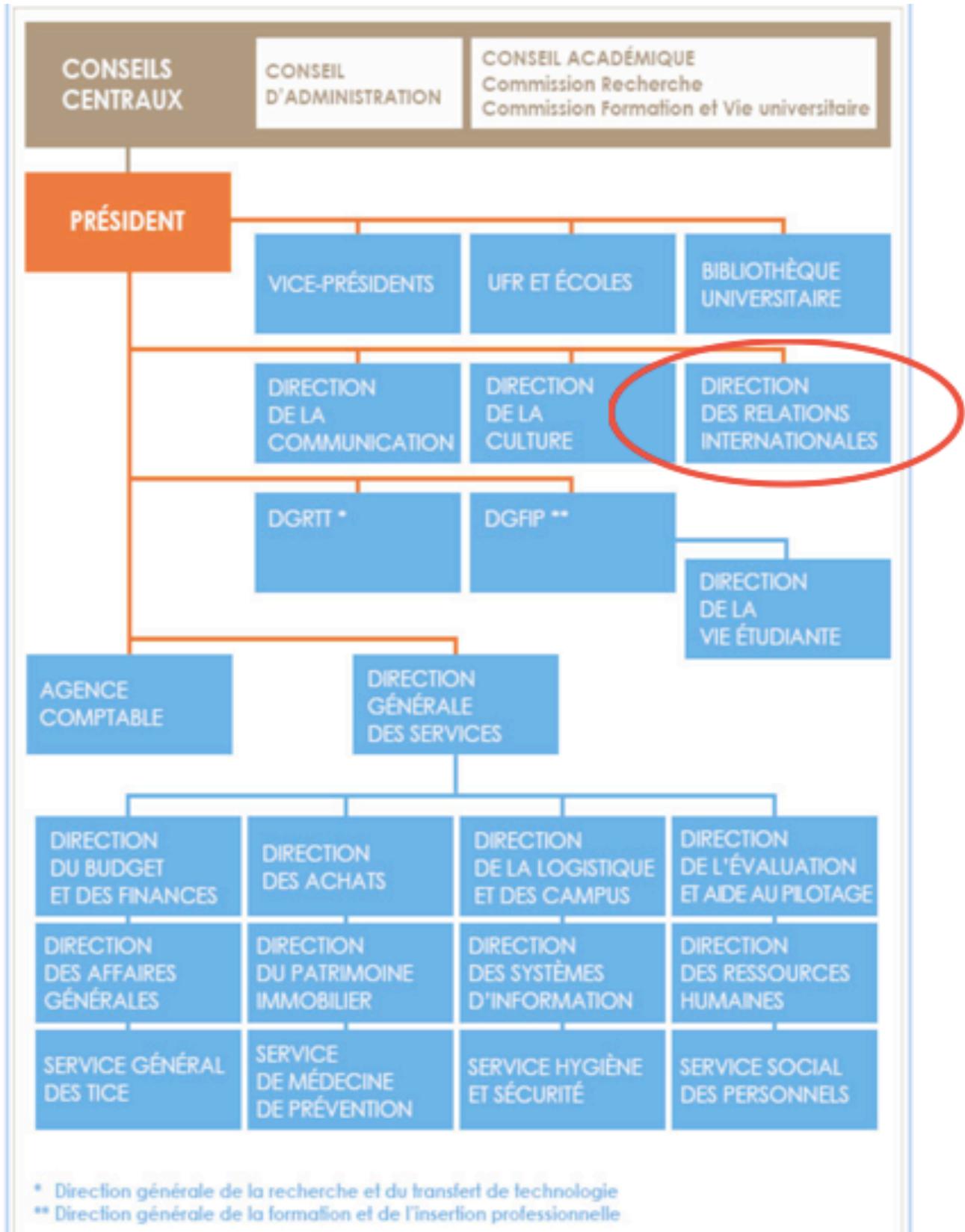
Figure 14: Organigramme of the Université Paris-Sorbonne (September 2014)

ORGANIGRAMME DE L'UNIVERSITÉ PARIS-SORBONNE



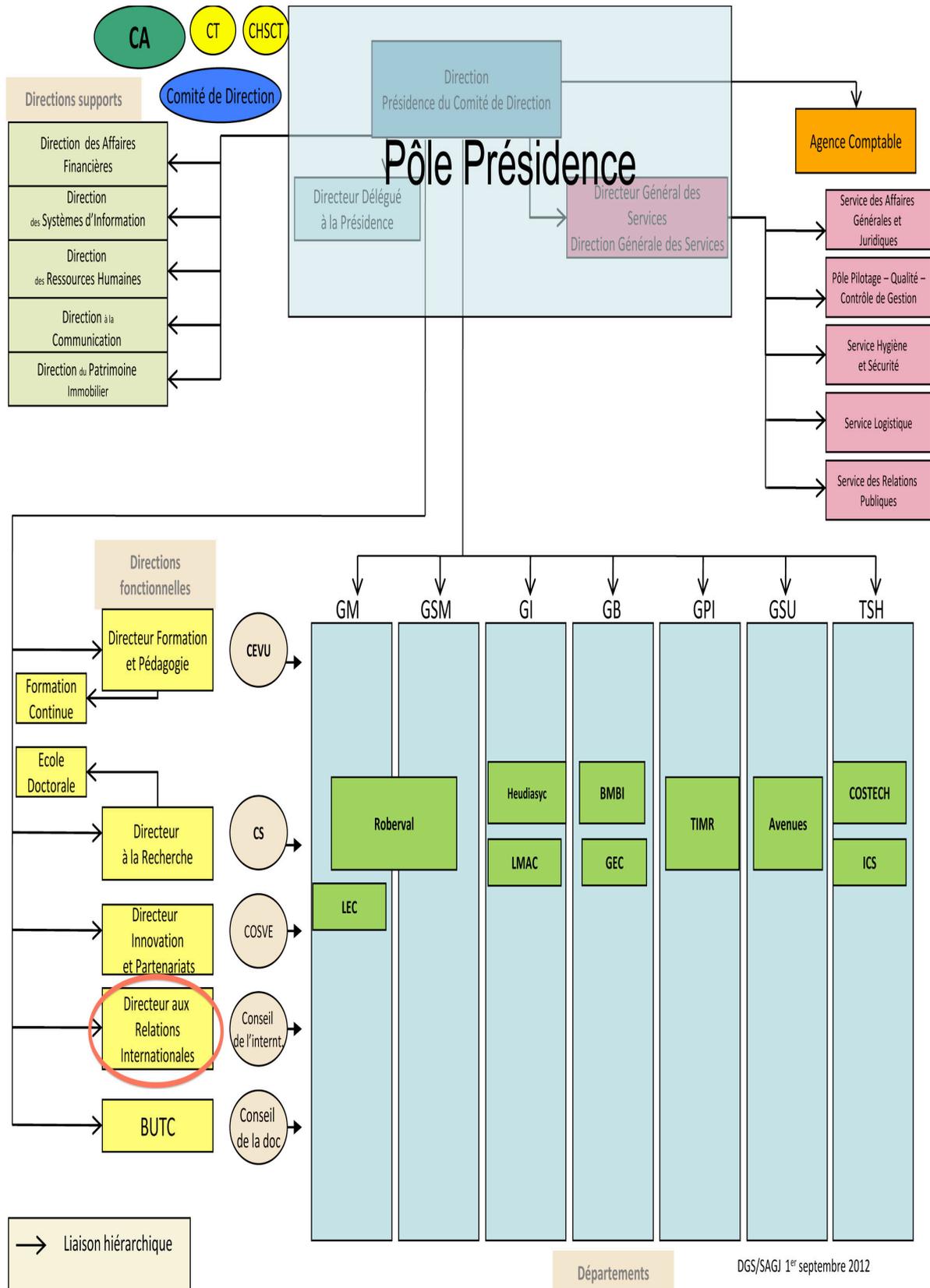
Sources: Paris IV website, Sept. 2014. http://www.paris-sorbonne.fr/IMG/pdf/Organigramme_sept14.pdf.

Figure 15: Organigramme of Université Pierre et Marie Curie and position of Direction des Relations Internationales (October 2014)



Source: UMPC Sorbonne Universités website: <http://www.upmc.fr/fr/universite/organisation.html>

Figure 16: Organigramme of the *Université de Technologie de Compiègne* (October 2014)



Sources: Document was given by the *Directions Relations Internationales* of the *Université de Technologie de Compiègne*.

3.2.2. Programs of international collaboration managed by the Service RI of the Paris-Sorbonne University (Paris IV)

Service RI executes the University Paris IV policies related with international mobility programs such as: Erasmus (and currently Erasmus +), European and international conventions and agreements, PLI (Program for International Bachelor) in collaboration with Brazil, Sino-French Institute of Renmin University of China. Office also manages some scholarships provided for the domestic students' international mobility.

Closer description of these programs, which give framework of the work done by the Service RI have been presented below:

- **Erasmus+ Program**

Erasmus+ Program is a European Union Program, which replaces previous Erasmus Program, supporting economically and legalizing European mobility of students, academic and administrative staffs. It is the most used European program in the management of the mobility in the Service RI of the Paris IV.

Erasmus+ brings opportunities for cooperation across Education, Training, Youth and Sport (for the first time). Its budget 14.7 billion euro increased by 40% comparing to current spending levels.

The higher education institutions, in order to participate in the various ERASMUS+ activities, must be awarded the Erasmus Charter for Higher Education 2014-2020⁹⁹ and must sign bilateral agreements with partner institutions. The Charter sets out the fundamental principles to which the institutions must adhere, while bilateral agreements state the specifics of the individual institutional cooperation.

- **European and international Conventions and Agreements**

European and international conventions and agreements are other ways of management of international collaboration between universities with the aim of encouraging international dimension in education and research. *Agreement of Scientific Cooperation (see the Annex 5)* with the purpose of development of scientific collaboration in the field of Education and Research in the Humanities and Social Sciences, between Paris IV and other university contains: rights and duties of contracting institutions.

Service RI of the Paris IV manages many students' mobility in the European and intercontinental context (See Chapter 4, Annex 6, and Annex 7).

The statistics from last years (2004-2014), related to the mobility within Conventions, will be presented in next chapter.

- **PLI - Program for International Bachelor**

It is funded by the Brazilian agency CAPES. This program provides an international exchange with the Brazilian universities on the undergraduate level. After the first year of the bachelor's program, the Brazilian students spend one year in France specializing in chemistry, biology, mathematics, physics or letters before returning to their home university in Brazil for the last year of practical training that will prepare them for their future teaching profession.

⁹⁹ Erasmus Charter for Higher Education 2014-2020.

http://acro.ceu.edu/sites/acro.ceu.edu/files/basic_page/field_attachment/eche.pdf. [Accessed 07.12.2014].

- **Sino-French Institute of Renmin University of China**

Institute was created in October 22th, 2010 - is a platform cooperation and co-diploma mobility. Members of this institute are: the University Paul Valéry (Montpellier 3), the **University of Paris-Sorbonne (Paris IV)**, and Kedge BS school, and Chinese university of excellence - Renmin University of China [Renmin nationally is ranked 1st for the humanities and social sciences, and 3rd for the major taught (economics and management, law, political sciences)]. The Institute is based on two fundamental principles: pooling and excellence. The result of this cooperation is dual international degree (French and Chinese bachelor and master's degree). Moreover, Chinese students taking the International Master in Management "International Brand and Luxury Management" have their first year of study in China and the second one in France.¹⁰⁰

- **The SUNRISE project**

In order to maximize the impact of its strategic partnerships, the SU has established "SUNRISE" funding to help expand the existing programs at each partner institution. In case of Paris IV some resources will be managed by the *Service RI*. The SUNRISE is designed to move from student exchanges to establishing international schools, or from research collaboration between labs to co-supervision of doctoral students. The SUNRISE approved projects receive a specific budget to implement additional cooperation and seeking reciprocal contributions from the strategic partners.

- **Domestic scholarships supporting international mobility (status for 2014)**

In addition to the Erasmus+ scholarships, the Service RI manages distribution of the scholarships, which support international mobility of domestic students (taking into consideration their economic situation). In some of those actions the *Service RI* collaborates with the **Students' Union**. These scholarships are:

1. *Bourse de la Ville de Paris* (160€ per month)

2. *Aide à la mobilité Internationale du Ministère de l'Education Nationale - Bourse AMI – MEN* - 400€ per month for the stay between two and nine months.

3. *Aide à la mobilité Internationale des Etudiants du Conseil Régional d'Ile de France* Bourse AMIE-CRIF, between 250€ to 450€ per month (stay between one to ten months).

4. *Fonds de Solidarité et de Développement des Initiatives Etudiantes (FSDIE)* - depends on the economical situation of the student.

5. *YALE-NUS College* - It is a program of exchange between the Paris IV and Yale-NUS College (National University of Singapore).¹⁰¹ It is specially directed to the students of Philosophy, History, Museum studies, Asian studies in general, Urbanism and Social Sciences at the Master level.

6. New projects/programs related with economical support given to the domestic students, in order to encourage their international mobility, are in the preparation of the SU. The funds are going to be distributed to the students by the *Service RI*.¹⁰²

¹⁰⁰ SIP Available: http://stdc.sipac.gov.cn/en/?do=News_AscxNewsView_MTczMQ [Accessed 15.12.2014].

¹⁰¹ Further information, requirements related to the participation in this program students can find on the page of the Service RI of the Paris IV: <http://www.paris-sorbonne.fr/procedure-de-candidature> [Accessed 15.12.2014].

¹⁰² Information gathered during meetings with the staff of the RI of the Paris IV.

3.3. Website of the Service des RI (October 2014)

This is the website of the Service RI, which welcomes all international students, international stakeholders and domestic students, and other stakeholders who would like to have some international experience at the *Université Paris-Sorbonne Paris IV*.

Information on the website is updated by the staff of the Service RI, each section by a person responsible for the unit which contains specific information related to that section.

Figure 17: Website of the Service RI of the Paris IV

The screenshot shows the website of the Service des RI of the Paris IV. The page has a green header with the university logo and navigation links. The main content area is titled "L'INTERNATIONAL" and contains three columns of information: "VENIR ÉTUDIER À PARIS-SORBONNE", "PARTIR ÉTUDIER À L'ÉTRANGER", and "L'UNIVERSITÉ D'ÉTÉ". Each column includes a brief description and a "En savoir plus" link. Below these columns are sections for "Le service des relations internationales" and "Diplôme de français pour les étudiants étrangers".

Sources: <http://www.paris-sorbonne.fr/l-international> [Accessed 11.12.2014].

Observations:

- User-friendly graphic layout of the website of the Service RI of the Paris IV.
- Easy organization of the website and an easy search for the information designed for incoming and outgoing students in the framework of international mobility managed under Erasmus program and Conventions.
- Updated information about scholarships for the domestic students who would like to experience a period of study abroad.
- Easy searched contact of the staff of the *Service RI*.

3.4. Organization and role of the *Service des Relations Internationales* of Paris IV

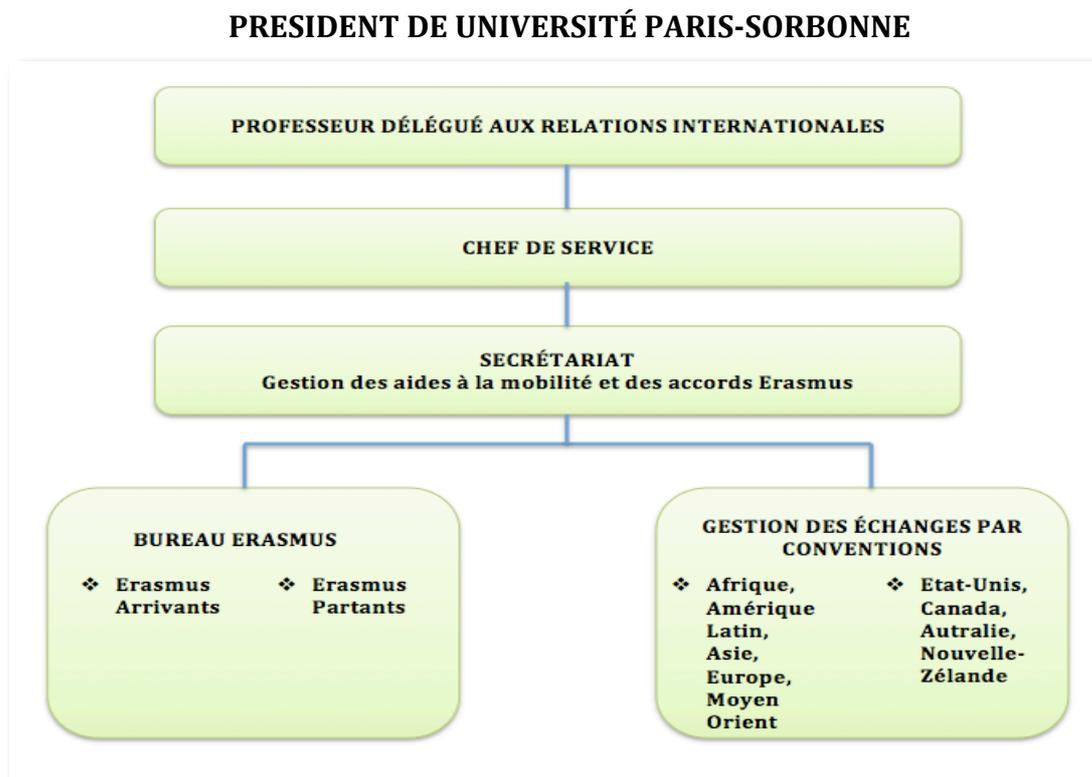
3.4.1. Mission of the Service des RI

The missions of the *Service RI* formalize the contribution and specific role of the Service, structure on which depends the Head of the Service (executive structure).¹⁰³

The *Service des RI* is perceived as an executive structure of the international policy of the Paris IV, with strongly dominant role of the President of this University (Zeus culture).¹⁰⁴

Organization chart of the Office

Figure 18: *Organigramme* of the *Service des Relations Internationales*



Sources: Own elaboration.

To ensure the best achievements in the implementation of the international policies in the Paris IV, the university (through centralization strategy) has strengthened its administrative center and has created "*Commission des relations internationales*" led by a *Professeur délégué*. This Committee has been organized by geographical areas. However, it intends to develop cooperation with areas not only on the geographical basis but also taking into consideration functional and political criteria.

According to this concept of academic cooperation, four areas were defined:

- European Union, the whole Europe and the new neighborhood
- *Francophonie*
- Developed countries, which are a reference for education and research
- Emerging countries, where the new political and economic competition is nowadays.

¹⁰³ "Missions du Service. Les missions formalisent la contribution et le rôle spécifique du service, de la structure dont dépend l'agent." Source: Internal document from the Service RI.

¹⁰⁴ See more pages 50-51 of this Report.

3.4.2. Roles of the members of the *Service des Relations Internationales* of Paris IV

a) The role of the *Professeur délégué aux Relations Internationales*

Since 2012, the responsible is Professor Araceli Guillaume Alonso.

I. As a responsible for the international relations of Université Paris-Sorbonne, she is in charge of the dynamism of the international activities of the university, having into consideration some principles such as:

- Increase number of international interchanges and conventions which can be offered to the domestic students in order to encourage their mobility;
- Consensus in collaboration with the head of the Service RI and whole team of this office in order to ensure smooth flow of the incoming and outgoing students;
- Facilitating management and contacts as well as good dissemination of information related to the international interchanges of the professors/academic staff (in the measure related to the services given by the Service RI), having into consideration that most of the mobility related to the academic staff is managed by the *Service de la Recherche* and by the *Unité de Formation et de Recherche* (UFR);¹⁰⁵
- Making ownership on a personal level as well as on the level of the *Service de RI* of the international policy framed by the Presidency and Boards of the University, especially by the *Conseil Scientifique* (CAC);
- In general terms, improvement of the international image of la Sorbonne through:
 - reception of international visitants,
 - contacts with diplomatic services with offices in Paris,
 - professional travels related with prospects collaboration especially to the USA, as well as to the Erasmus program collaborators,
 - relationship with the International Organization of the Francophonie, and IdA.
 - following and actualization of the existing international agreements and some specific programs such as CUF (*Collège Universitaire Français*) with Saint-Petersburg and Moscow, and others).

II. As a referent of international relations of the Université Paris-Sorbonne before the COMUE, the PRES Sorbonne Universités and its Comité des Référents (COREFRI):

- To study and implement all new international strategies developed together with COMUE. These strategies give a priority to the target-countries (*le pays-cible*). These countries have been defined at the moment of signing of agreements and the obtainment of the IDEX (Initiatives of excellence): SUPER¹⁰⁶ reached in 2012 by the PRES SU (COMUE SU now a days).
 - In 2014, UNAM (Universidad Nacional Autónoma de México) actively joined the group of *pays-cible*, within the multidisciplinary program.
 - Moreover, recent initiatives are **focused on** a project related to collaboration within a network of the **excellent European universities**, one per country.
 - The interchange with **Brazil** (through the **PLI**-Program for International

¹⁰⁵ To gather information about activities related with international dimension of these Services, further research field is needed.

¹⁰⁶ Initiative d'excellence "Sorbonne Universités à Paris pour l'Enseignement et la Recherche" - SUPER IDEX Sorbonne Université - it has been designed as a common project to existing initiatives. It will have interdisciplinary and international focus. Sorbonne University will seek to establish partnerships in limited numbers (about ten) but intense with universities in already emerged countries or formerly emerging such as **Brazil, South Africa, China, Singapore, India**, and others.

<http://www.sorbonne-universites.fr/idex-super-de-nouvelles-etapes-franchies>. [Accessed 07.12.2014].

Bachelor¹⁰⁷ and others), **Singapore**, and **China (Sino-French Cooperation)**,¹⁰⁸ have been already implemented and very soon **India** will have closer collaboration with the SU.

- Playing the role of the link between the SU and the *Université Paris-Sorbonne*, especially spreading the information about economic tools, which permit to plan and implement new projects in the Paris 4, for example: mobility grants for undergraduate and postgraduate students, professors, international classes, summer schools, etc.

The idea of *partenariats privilégiés* should be highlighted here, with limited number of partners, but with selected partners who are playing a very important role in the development of strategic lines. The objective is to work together in transversal way in limited, but important objectives. The value of the projects is seen through their quality and not quantity.

b) The role of the *Chef du Service des Relations Internationales* of the Paris IV

Chef of the Service des RI under of the authority of a *Professeur délégué* contributes to the execution of the policy of international cooperation of the university increasing international attractiveness of its education and its integration into the European and global system.

I. Functions of the Chef de Service RI

➤ **Contribution of the chef into the mission of the service**

- To prepare, manage and coordinate partnership activities;
- To follow legal and financier aspects of the conventions;
- Organizes welcoming of the foreign students en the framework of different exchange university programs;
- Framing service of the personnel;
- Controls and fallowness of the budget given to the international service;
- Ensure annual indicators related to the Services RI;
- Collaborates with *Service de la recherche* about transversal issues between these two services;
- Contributes development of projects the university has interest in;
- Secure development of actions related with international cooperation at university, towards domestic and foreign community.

II. Activities of the Chef de Service RI

A. Preparing, managing and coordinating all activities related with bilateral partnerships and programs with the European countries and other parts of the World;

- Ensuring the validity of agreements in their legal and financial aspects in collaboration with *le service des affaires générales* (general affairs) and the finances department.

¹⁰⁷ **PLI** Program for International Bachelor - funded by the Brazilian agency CAPES. This program provides an international exchange with Brazilian universities at the undergraduate level. More information can be seen on the page 56 of this Report.

¹⁰⁸ More information about Sino-French cooperation can be seen on the page 57 of this Report.

- Organizing and ensuring a smooth reception of the foreign students in the programs of exchanges of the university and developing the adequate conditions required to promote the mobility of students.
 - Managing the staff responsible for monitoring the actions of cooperation, for applying the management procedures and welcoming the students.
 - Controlling of the budget given to international issues (regional and European scholarships, scholarship of mobility, resources of solidarity with students' initiatives);
 - Communicating and sharing with *Service de la recherche* all transversal information related to both services;
 - Contributing to the development of the university projects (initiative teachers-researcher, or students), and giving adequate logistic help (Classes internationales, *Université d'été*).
 - Securing the actions of collaboration with community of the university and community of the foreign universities, giving all supports of communication adapted to the public, in collaboration with service of communication.
 - Participating in the preparation of the projects (project proposal) in collaboration with the members of COMUE.
- c) Staff responsible for international collaboration through Erasmus program for the outgoing students of the *Université Paris-Sorbonne* (1 person + help from other person)**
- Responsible for the preparation of all administrative documentation related with outgoing students in the framework of Erasmus;
 - Responsible for students during mobility and all daily work related with this issue.
 - Meetings with faculty coordinators of Erasmus students.
- d) Staff responsible for international collaboration through Erasmus program for the incoming students (1 person + some help of a person contracted temporary for 2-3 months)**
- Responsible for the preparation of all administrative documentation related with incoming students in the framework of Erasmus.
 - Responsible for students in mobility and all daily work related with this issue.
 - Responsible for contacts with the *Parismus Association*¹⁰⁹ in relation to the international students issues (such as accommodation in Paris).
 - Meetings with faculty coordinators of Erasmus students.
- e) Staff responsible for collaboration of the Paris IV through Conventions with the Anglo-Saxon countries (1 person)**
- Responsible for the preparation of all administrative documentation related with conventions (outgoing and incoming students) between the Paris-Sorbonne University and Canadian, American, New Zealand's universities and Australian's universities.

¹⁰⁹ *Parismus* Association – it is a voluntary association of the students of the Sorbonne, located at the Paris IV. Among its principal goals can be mentioned: 1) to welcome and help foreign students arriving in Paris IV; 2) to enable French and foreign students to get to know each other; 3) to help foreign students integrate in Paris and in the Sorbonne; 4) organization of different activities: evenings, international dinners, monthly meeting in a bar (the Apérismus), meetings in the restaurants, cinema, at concert, cultural visits guided by the students of history of art in the Paris region and in France, picnics, etc. <https://sites.google.com/site/parismus/home>. [Accessed 12.12.2015].

- Responsible for collection of opinions of national students from their stay abroad (use of questionnaire).¹¹⁰
- Responsible for students in mobility and all daily work related with.
- Meetings with faculty coordinators of international mobilities.

Among 3 **Australian** Universities, the mobility collaboration is developed with Sydney area: Macquarie University, University of New South Wales and University of Sydney.

Among the **Canadian** universities the mobility collaboration is developed with: all universities in Quebec and the Glendon College in Toronto.

Among the **United States** universities can be mentioned collaboration through the programs: **APA** (DePauw University), **AYA** (Bard College), **CUPA** (Bard College, Carleton College, Oberlin College, Reed College, Université du Massachusetts, Baylor University) **EDUCO** (Cornell University, Tulane University), **IES** (different universities) **MICEFA** (different universities), **Sweet Briar Program** (Denison University, Sweet Briar College, Washington and Lee University), **Vassar Wesleyan** (Vassar Wesleyan College) and **conventions** (American University of Paris, Boston College, Brown University, Columbia University, Smith College, Stanford University).

Collaboration with **New Zealand** is hold through Université d'Auckland. ¹¹¹

f) Staff responsible for collaboration of the Paris IV through Conventions with all parts of the World (without the Anglo-Saxon countries)(1 person)

- Responsible for the preparation of all administrative documentation related with conventions (outgoing and incoming students and staff) between the Paris-Sorbonne University and the African, Asians, Latino American, European and Middle East universities.
- Responsible for scholarships, mobility of students and professors and all administrative daily work related with.

In **Latin America**, the Paris IV collaborates with the Argentinian, Brazilian, Chilean, Colombian, Mexican and Peruvian Universities.¹¹²

In **Asia**, the Paris IV collaborates with Japanese, Chinese, Korean (South Korea), Thai and Singapore's universities.¹¹³

In the **East Europe**, the Paris IV collaborates in the framework of international Conventions and agreements with the Croatian, Hungarian, Polish and Russian universities.¹¹⁴

In the **West of Europe**, the Paris IV collaborates in the framework organized by convection with Italian, German, Belgian, Spanish and Swiss universities.¹¹⁵

In the **Middle East**, the convention framework organizes collaboration of the Paris IV with Lebanon and Israel.¹¹⁶

g) Staff responsible for the Secretariat of the Service RI (1 person)

- Responsible for assistance of the head of RI.
- Helps to colleagues when needed.

¹¹⁰ *Questionnaire of return*. See Annexes 2, p. 125.

¹¹¹ For more detailed information about *Accords internationaux de l' Université Paris-Sorbonne Année 2014-2015* and *Année 2015-2016* see Annex 6, p. 139, and Annex 7, p.141.

¹¹² For more details see the statistics below related to those collaborations, and Annex 7, p.141.

¹¹³ *Ibidem*.

¹¹⁴ *Ibidem*.

¹¹⁵ *Ibidem*.

¹¹⁶ *Ibidem*.

- Takes part of the committee for scholarships for out going students.

h) Person in temporary contract (1 person)

Hi/she is coming in period overloaded by work related with new incoming students (2-3 months per year).

❖ Budget of the Service RI of the Paris IV

One of the pillars of the development of international dimension of a university is the budget given to these purposes. The budget received by the Service RI during last years:

Year 2011: XX XXX€

Year 2012: XX XXX€

Year 2013: XX XXX€

Year 2014: XX XXX€

For the year 2015, it has been asked for 60 000€.

3.5. Achievements of the Service de Relations International since 2009-2014

Table 1: Achievements of Service des Relations International since 2009-2014

- ✚ Complete use of the application MOVEON (2010).
- ✚ Dematerialization of records (2009).
- ✚ Dossiers de candidature en line (2009).
- ✚ Erasmus students received their student card in the Service RI (since 2009).
- ✚ Organization of the Winter Classes (with Brazil) (2010).
- ✚ Organization of the Summer University (2011).
- ✚ Program PLI with Brazil (since July 2013).
- ✚ Membership in the first Sino-French Cooperation Institute of Renmin University of China (Renmin IFC)¹¹⁷ (actively since September 2014).
- ✚ Increase about 29% of Erasmus points in 2014-2015, the number of domestic students who have participated in the international mobility have increased between 23% and 26% since 2012. (Taking into consideration Erasmus in 2011/2012- **306** students of the Paris IV took their period of study abroad, in 2012/2013 – **385**, in 2013/2014 – **350** students).¹¹⁸
- ✚ The University of Paris-Sorbonne classified **10th** in the top-ten **French universities most dynamic in the Erasmus Program**.¹¹⁹
- ✚ Optimized utilization of mobility grants, 100% of the credits used.
- ✚ Initiative of participation in the SU inter-campus program- student job (since 2014).
- ✚ Development of good practices in the collaboration with the Erasmus Coordinators.
- ✚ Initiative of good practices in the transparency in implementation of international policy in the university - international professional-research stage with the outcome of this report (2014).

¹¹⁷ For more information about the program see page 57 of this Report.

¹¹⁸ For more detail about statistics related to international mobility of outgoing and incoming students in the framework of the Erasmus Program, Conventions and Agreements with foreign educational institutions see Chapter 4.

¹¹⁹ Portal Agency Erasmus+ France. <http://www.agence-erasmus.fr/actualite/628/decouvrez-le-palmares-erasmus-des-universites-dynamiques>. [Accessed 06.01.2015].

3.6. Assessment of the Service des RI

The Service RI of the Paris IV University has internal and external evaluation. The external evaluation is done annually by the Ministry of Education. The evaluation is done according to early given indicators. Most of them are related to the statistical information.

Internal evaluation is composed of many elements:

- Each member of the Service RI is evaluated annually by the chef of the Service RI taking into consideration his/her professional objectives and performance.
- Some feedback from the international students about their stay at la Sorbonne is gathered (oral way), during ordinary meetings with administrative staff.
- Some feedback about the preparation process for outgoing students is gathered by the 4 questions of the questionnaire titled "*Etudiants partant dans le cadre d'une convention. Questionnaire de retour*", which is filed after their back to la Sorbonne. (However, this questionnaire was applied just among the students going to the US, Canada, New Zealand, Australia).

3.7. Perceptions of the Service RI of the University Paris IV among the Academic staff and students (domestic and international students)

a) Perception among the Academic staff

Mostly, academic staff, who collaborates with the Service RI, are Erasmus Program coordinators (27 coordinators of the Paris IV) and very limited number of domestic professors who have or would like to have a mobility period in a foreign institution. The Erasmus Coordinators perceive their collaboration with the Service RI as very good. The service provided them was very often described as an "*excellent*", "*efficient*" and as a "*one of the best within the Paris IV*". Good organization, efficiency, professionalism were very often highlighted (as a way of approach administrative matters practiced by the Service RI) by the interviewed coordinators.

b) Perception among the domestic students

Almost all (95%) of the national students (interviewed) know, that at the university exists an office responsible for the international exchanges related with Erasmus. Big number of them had had this knowledge before they came to the Paris IV (news from previous school, TV, radio); some students got to know about the Service RI from the colleagues, from the professors and some from the information received from university e-mail account.¹²⁰

All students (interviews on the campus and opinions taken from the "Return Questionnaire"¹²¹), whose have had a contact with the Service RI gave a very positive opinion about the Service RI. However, they emphasized very stressful process of applications for the mobility and short time devoted to this matter.

¹²⁰ The order has been mention according to the students' indications of source of the information received about Erasmus program or mobility abroad.

¹²¹ "*Return questionnaire*" – is a tool used by the Service RI to gather opinion of the domestic students who came back from their mobility abroad (see Annex 1, p. 124).

There were some cases, where the students felt discouraged from international mobility, through some critics of their academic records or their colleagues' stories related to the problems with recognition of the exams, which have been passed abroad.

Some cultural/intercultural preparation before leaving home campus was recognized as very needed. Nevertheless, this observation has been given mostly by the returned French students, or those who already had some work or educational experience abroad (not touristic one). Most of the interviewed academic staff (with small number of exceptions)¹²² agreed that the curriculum given during class is sufficiently preparing domestic students to go abroad.

c) Perception among the international students

International students who gave their opinion about their stay in the Paris IV perceived very positively administrative support of the Service RI. However, they felt it was limited regarding to their needs.

They have had many problems related to pedagogical issues, cultural matters, dormitory/flat problems (examples: questions about exams, choice of the subjects to study because some which had been proposed in the learning agreement it was impossible to follow as they took place at the same time; questions during class, cultural shock, etc.) and they were left without any support, as the Service RI managed mostly administrative issues.

3.8. Role of the Erasmus Coordinators at the Paris IV

Usually, there is one coordinator per faculty (called in French *UFR - unité de formation et de recherche*). In case of large mobility of the students within the same faculty, two or more coordinators are responsible for the students' mobility (one for national and other one for international students). They can be chosen administratively to become a coordinator (taking into consideration their previous experience with international issues), however, most of them wish to perform this function.

They are responsible for choosing the domestic students in order to go for international mobility, they give support in preparation of required documentation; they change the grades (when the students return with their records gathered in a foreign university) and they maintain contact between faculty and the *Service RI*.

Further initiatives in relation to this role depend mostly on the personal attitudes of a coordinator and perception of needs of the students a coordinator is working with.

In relation to the international experience of the Erasmus coordinators, most of them have had some short period of stay abroad or they have a foreign origin and they have been living for many years in France.

In general, the interviewed coordinators showed a positive attitude towards the exchange programs and the use of English language in higher education and research. A wish of participation in a course related with development of the writing skills in

¹²² Most of the interviewed academic staff members (95%) were the institutional Erasmus coordinators at Paris IV.

Academic English has been discerned among some of the academic staff who would like to be more active in international publishing.

However, there was a singular case (important having into consideration that many students from that faculty are going abroad, and there are incoming students as well) that criticized Erasmus program and especially the use of English language during international mobility, arguing that: *"The language of mobility should be the one of the country of destination."* The author of this document has been asked by the interviewee to note this opinion in this report.

Some of the coordinators (whose involvement was beyond of the administrative issues, what gave them an opportunity to have many exchanges with domestic and international students) mentioned some problems of *"existence of cultural shock among the outgoing and incoming students."*¹²³

3.9. How to encourage domestic students of the Paris IV to experience a study abroad? Perspective elaborated on the bases of the information from domestic students and Erasmus Coordinators

Why to study abroad? There is a lot of literature showing the advantages of a period of study abroad: improvement of sociolinguistic skills, development of intercultural competences, and training in intercultural/international teams, openness, learning of new technics and perspectives, etc. On the other hand, some critics of the students' international experiences have been noticed: cultural shock and health problems related with, post return-shock, etc. How positive or negative that experience is depends on the preparation of the students, academic and administrative staff, and campuses for the challenges related with international dimension within Academia.

Students who go abroad are the ambassadors of France in foreign countries and those who are coming to study in the Université Paris-Sorbonne are the ambassadors of their country on the Sorbonne's campus. Relationships the students vs. academic staff, the students vs. administrative staff as well as the international students vs. domestic students are very important for the development of cultural sensitivity (intercultural sensitivity) and perspective about the host country and visitors' country. These cultural meetings and feelings developed around them by the actual and future professionals, decide on a big scale about the future international relationships between countries. A university campus (its culture and stakeholders' attitudes) is a facilitator of the space and opportunities for these intercultural and international meetings.

As one of the first and most important elements of the intercultural competences¹²⁴ the students, academic and administrative staff of the Paris IV have mentioned the knowledge of foreign languages,¹²⁵ understood as the knowledge of

¹²³ Opinions from informal interviews held with academic staff of the Paris IV.

¹²⁴ **Intercultural competence** - understood according to the definition of Deardorff D. (2009) *"the ability to communicate effectively and appropriately in intercultural situations based on one's intercultural knowledge, attitudes, skills and reflection abilities"*.

¹²⁵ Linguistic competences (understood as a knowledge of foreign language) it was an element, which has been discarded in literature from many lists of the most important elements of the intercultural competences, example: Deardorff, D. (2009). *Ibidem*.

French by the foreign visitors of the campus and knowledge of foreign languages by the students, academic and administrative staff of the Paris IV.

For the question: “*Would you like to go to study abroad during some period?*” most of the answers from the interviewees were positive. Among those who gave negative answer, the justifications were as followed:

- “*I do not know the foreign language enough to go to study abroad.*”
- “*I will be not able to cope economically with the stay abroad.*”
- “*My grades are not good enough to be accepted.*”
- “*Because of family reasons.*”
- “*Some of my colleagues had problems with the acceptance of the exams, which they passed abroad and they have to pass them again here. I do not want to do the exams twice.*”
- “*I wanted to go to Hungary, but my teacher discourage me mentioning the problems which I can have with local language.*”
- “*I was discouraged because it was said to me, that my grades are not good enough to apply for the mobility (...), anyway I applied ... and I am very happy, I am going next year as an Erasmus to a Nordic country.*”
- “*I wanted to go to Russia, but I am still in license, and they told me that I cannot do it at this level of study. So I am going to study there during the whole summer holiday by myself without university involvement.*”¹²⁶

Below are some of the opinions based on the students and Erasmus Coordinators' perceptions, how the students of the Paris IV could be encouraged (or what discourages them) to have a period of study abroad:

- Academic staff, professors should/could encourage international mobility during classes, say about advantages of studying at a foreign university.
- Erasmus Coordinators should/could encourage international mobility during their own class (it was observed that many of their own students did not know about his/her role as an Erasmus coordinator).
- Coordinator should give the feeling of a trusted person – *personne de confiance* (for national as well as international students).
- Study abroad is not just for the students with the highest grades (often the best students at home, suffer stronger cultural shock abroad),¹²⁷ motivation should be strongly appreciated.
- Existence of a myth that the French students do not like to go abroad can discourage them to do so. This opinion has been heard from administrative and academic staff.¹²⁸ During informal interviews, it was not heard any direct opinion from the student about that he/she would not like to go abroad; however, it was said by the students that, “*this is opinion of others, that we do not like to go abroad*” (they are not able to say whose opinion it is).
- Do not discourage to go to a country where the English is just the lectures' language and another language is used in that country.
- More linguistic support (matter mentioned by domestic and international students).

¹²⁶ Informal conversational interviews with students were held on different campuses of the Paris-Sorbonne University (campus of: Sorbonne central campus, *Malesherbes*, *Clignancourt*, *Institut d'Art et d'Archéologie*, *Institut d'Etudes Ibériques*; from March 2014 – October 2014).

¹²⁷ Opinions shared by the Erasmus Coordinator during informal interviews.

¹²⁸ Some opinions from the interviews of the administrative and academic staff: “*The French students they do not like to go abroad.*”

- There are also opinions that some academic staff discourage international mobility by saying that, “*the best university is Paris IV and going abroad is waste of time,*” “*the best city is Paris, there is no need to go anywhere else.*”
- Opinions about problems with exchange of the grades after return from an international mobility.
- Opinions about problems with the recognition of some of the exams which had been passed abroad.

3.10. Conclusions of the Chapter 3

The purpose of this chapter was to outline the organizational culture of the *Service des relations internationales* of one of the oldest, prestigious, and traditional universities in Europe – Paris-Sorbonne. Moreover, to see how national culture impacts organizational culture of this office and its performance.

Centralization in social organization runs throughout the history of France. The impact of this cultural element can be observed in the Paris IV's chosen strategy in response to the global challenges. The approach to organized international activities through centralization (not decentralization) can be recognized through the functioning of the international affairs of the SU, visualized in the *organigramme* of the University Paris IV, and finally, seen on the level of the *Service RI* (Figure 18, p. 59).

Since its outset in the XIIth century, the Sorbonne hosted international students. Shortly after the Sorbonne Declaration with fulfillment of the Bologna process' requirements, the first office that managed international students mobility was established. Since that moment, the Service has passed different steps of development: it was recognized with the name of the *Pôle des Relations Internationales*, and nowadays it is recognized in the environment of the Sorbonne as the *Service des Relations Internationales*. During last years, the number of students in mobility increased, on the other hand, the budget of the Service RI was decreased almost by half, and the number of staff was limited as well.

In this chapter, a reflective approach towards the position of the *Service RI* in the Paris IV's organizational charter and towards its name (“*Service*”) in comparison with other members of the SU was used. Findings showed that no other member of the SU (except Paris IV) uses the name of the “*Service*” for the establishment/office in charge of the international relations of the institution. The perspective of the organizational charts of the SU university members showed that *Directions des Relations Internationales* (Paris VI), or *Directeur aux Relations Internationales* (UTC) are closer to the *President's* figure than it is in the case of the Paris IV.

Organizational culture of the *Service RI* is impacted by the centralization strategy of the Paris IV. Furthermore, the *Service RI* performs within a mix of the Zeus Culture, Apollo culture and elements of the Athena culture. This mix of cultures helps to develop good practices, related specially to administrative management of the international mobility as well as good practices in collaboration with the Erasmus Coordinators, and maintenance of the partnerships with the offices of international affairs of foreign universities. At this traditional university focused on human sciences, where the myth of Sorbonne is very present, the main mission of the *Service RI* consists on executing its

international policy, mainly through mobility of the students under the umbrella of: the European Erasmus program, international Conventions and Agreements, PLI, collaboration with the Sino-French Institute of Renmin University of China, and SUNRISE project. The *Service RI* is also in charge of the granting and distribution of the domestic scholarships that support international mobility, collaborating for some of these actions with the *Parismus Association* and Students' Union of the Paris IV.

In this chapter, for the first time, the roles of the *Professeur délégué aux Relations Internationales* at the *Service RI*, and in the development of international relations of the Paris IV and Sorbonne Universités were shortly described. The role of the *Chef du Service RI*, as well as the roles and duties of the personnel of the Service were outlined. Furthermore, for the first time, the achievements of the *Service RI* in the years 2004-2014 were listed. Apart of those already mentioned, among most significant should be highlighted: better visibility of the Service RI within the Paris IV, complete use of the application MOVEON, dematerialization of records and dossiers of candidature in line (2009), organization of the Winter Classes (with Brazil), and organization of the Summer University in 2011; management of the mobility under of the PLI program, and SUNRISE project, and others. Because of that performance, the increase of international mobility in general, and domestic students in particular (respectively: 23% and 26% since 2012) classified **Paris-Sorbonne 10th** in the top-ten **French universities most dynamic in the Erasmus Program (2014)**. Moreover, the initiative of good practices in the transparency related to the implementation of international policy at the Paris-Sorbonne University – through this Report should be highlighted.

The design of the Website (*Service RI* has only French version) of the *Service RI* is user friendly and easy to navigate. It contains a brief view on culture of the mythic Sorbonne (the *Service RI* is part of it), and on the directions of international policy of the Paris IV, but principally, it gives useful information for domestic and incoming students who would like to take their period of study abroad.

The closest collaborators of the *Service RI* are faculty, who are carrying out the role of the Erasmus Coordinators (27 faculty, 2013/2014). Most of them have had international experience in their stay abroad (in many cases they were born and grew up out of France), and now they are responsible for the domestic and international students taking their mobility period abroad. Erasmus Coordinators' duties are often limited to the administrative issues related with mobility; however, some of the coordinators developed many good practices which help to improve quality of an academic mobility, and to decrease cultural shock related to it.

The Service RI has internal and external evaluation. Furthermore, the faculty of Paris IV and students perceive its performance and collaboration with as: “*excellent, efficient*” and as “*one of the best in the Paris IV.*” Often, professionalism and good organization of the *Service RI* were highlighted. Students appreciated the *Service RI's* efficiency in relation to the administrative issues; however, they observed that, often, their needs related to international mobility are beyond administrative matters. The international students mentioned the need of more pedagogical support.

At the end of this chapter, some ideas of the Erasmus Coordinators and domestic students of the Paris IV about *how the participation of the French students in international mobility could be increased*, were presented (pages 67-69).

4. INTERNATIONAL MOBILITY OF THE STUDENTS IN THE FRAMEWORK OF ERASMUS PROGRAM AND CONVENTIONS FROM 2005/2006 TO 2013/2014

In this chapter, statistics related to international mobility of the students (incoming and outgoing), managed by the Service RI of the Paris IV will be presented. Firstly, general overview on the international mobility from 2005/2006 to 2013/2014 will be brought. Furthermore, more detailed statistics taking into consideration country (origin and destination of mobility), scientific discipline and level of study (at Paris IV) for the period from 2009/2010 to 2013/2014 will be presented. In the part of “*Conclusions*”, general tendencies and characteristics (based on the statistics) of the student international mobility managed by the Service RI will be presented.

International mobility of the students in the Paris IV, taking into account **the European Higher Education Area (EHEA)**, takes place mainly through **Erasmus program**; however, the mobility in this area is also managed within the frameworks of the **Conventions and agreements** with some European universities (such as: German, Polish, and in last years Spanish and Italian universities), and that will be visualized in the statistics below.

Erasmus program (from 2014 Erasmus+)¹²⁹ gives opportunities to international exchanges between the Paris IV and universities from: Germany, Austria, Bulgaria, Denmark, Finland, Hungary, Iceland, Italy, Ireland, Norway, Netherlands, Poland, Portugal, Romania, Spain, the United Kingdom, Greece, Belgium, Sweden, Switzerland, Czech Republic, and Turkey.

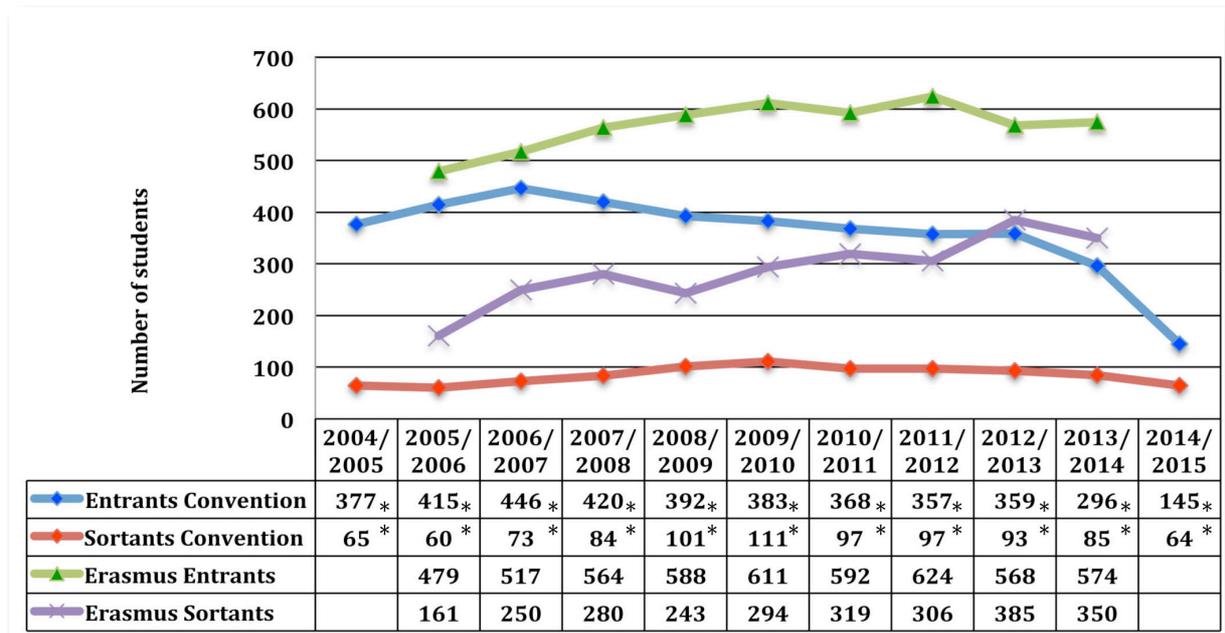
Mobility of the students between the Paris IV and the **Anglo-Saxon countries** (such as Australia, Canada, the United States, New Zealand), **Africa, Asia, Middle East, and Latin America** is organized mostly through **bilateral Conventions and agreements**.

International Conventions and Agreements give an opportunity of scientific and educational exchanges between the Paris IV and universities from: Germany, Argentina, Australia, Brazil, Canada, Chile, China, South Korea, Croatia, Spain, the USA, Israel, India, Japan, Lebanon, Mexico, New Zealand, Paris, Peru, Poland, Russia, Singapore, Taiwan, Thailand and Vietnam (See the Annex 7 for more specific data about universities).

The Chart 16 shows a general view on the student mobility within Erasmus program and Conventions (only Conventions with the Anglo-Saxon countries) from 2004 to 2014. **Increase in the number of the domestic students in international mobility** can be observed through both - **Erasmus program and conventions**. A significant decrease in the number of the incoming students - through conventions - from the Anglo-Saxon countries has been noticed (from 446 students in 2006/2007 to 296 students in 2013/2014).

¹²⁹ See more about the Erasmus program at the page 56 of this Report.

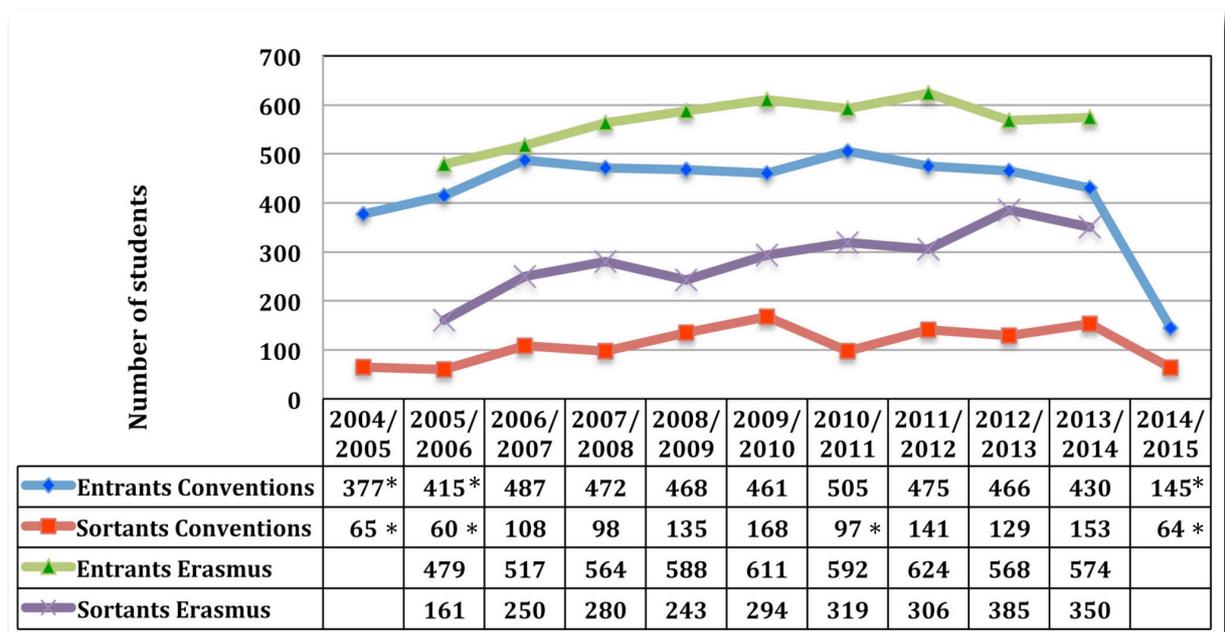
Chart 16: Students mobility in Erasmus and Conventions (only Anglo-Saxon countries*) for the period 2004/2005-2014/2015



Note: * Only Anglo-Saxon countries.

Sources: Own elaboration on the bases of the statistics brought by the Service RI of the Paris IV.¹³⁰

Chart 17: Students' mobility through the Erasmus program and international Conventions for the period 2004/2005-2014/2015



Note: * Only Anglo-Saxon countries.

Sources: Own elaboration on the bases of the statistics brought by the Service RI of the Paris IV.

¹³⁰ * With the “*” has been noticed mobility through the international Conventions which consider only exchanges with the Anglo-Saxon countries. Additionally should be pointed out, that data for the academic year 2014/2015 were delivered in the first semester, because of that, they did not consider all exchanges (with Anglo-Saxon countries) for the full period 2014/2015.

Participation of the students in the **mobility through Erasmus** program (during last 10 years) has been gradually increasing, for both - national and international students. However, **the growth** has been much more significant in the case of **domestic students** (from **161** in 2005/2006 to **385** in 2012/2013 students). On the other hand, a slow decrease in the number of the domestic participants in this program was noticed in 2013/2014 (35 students less) comparing to previous academic year (Chart 17).

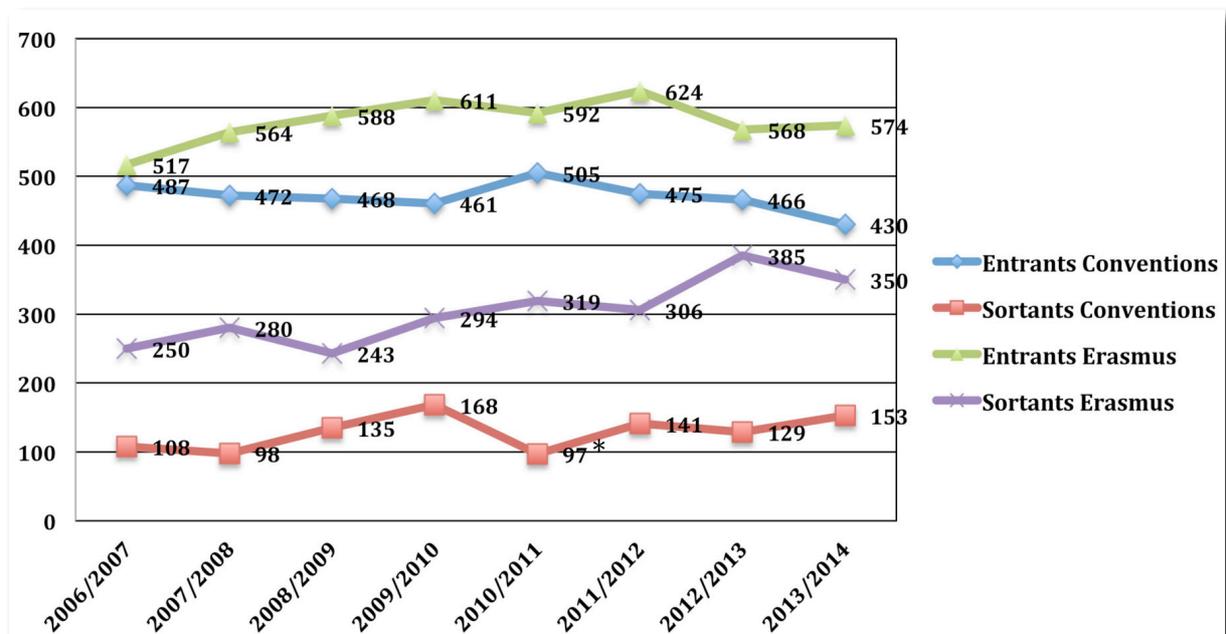
For many years, the numbers of **incoming Erasmus** students had been growing gradually till 2011/1012 (624 students). Since 2012/2013, decreasing tendency has been noticed within this group (2013/2014 - 574 incoming students).

During last 10 years, the number of **incoming** students (through **Conventions**) has been gradually **decreasing** (from 487 in 2006/2007 till 430 in 2013/2014), with exception of the year 2010/2011 when the Paris IV hosted 505 international participants.

Taking into consideration the referred period (2004-2014), a **growing tendency** in relation to **outgoing students**, with destinations managed by the framework of international Conventions, can be observed. With a closer look could be seen the peak of the number of outgoing students in 2009/2010 (178 students), afterwards the numbers have been lower, with a slightly growing tendency (153) in 2013/2014.

In conclusion, it could be said that tendency related to international mobility is going towards the Paris IV's international policy objectives related to reciprocity.

Chart 18: Students mobility in the framework of the Erasmus program and international Conventions from 2006/2007 to 2013/2014



Note: With the "*" has been noted numbers that took into consideration only Anglo-Saxon countries.

Sources: Own elaboration on the bases of the statistics brought by the Service RI of Paris IV.

As can be appreciated above (Chart 18), during last 8 years, the biggest groups of students are **incoming students in Erasmus** program (624 in 2011/2012), however, their number slightly has decreased during last 2 years. Second group (according to the number of students) in mobility are **incoming students through Conventions and agreements**, but their number has been slowly decreasing (475 in 2011/2012 dropped down to 430 in 2013/2014).

Third group in mobility are domestic students who chose as a destination country the EHEA (Erasmus program). In 2013/2014 (350 participants) their number was higher than in 2011/2012, but lower than one year earlier (2012/2013). The smallest number of mobile students represents **domestic students** taking their study at a partner university through **Conventions and agreements** in different parts of the world (in 2013/2014 it was 153 students).

More detailed statistics about mobility of students managed by the Service RI of the Paris IV will be presented below.

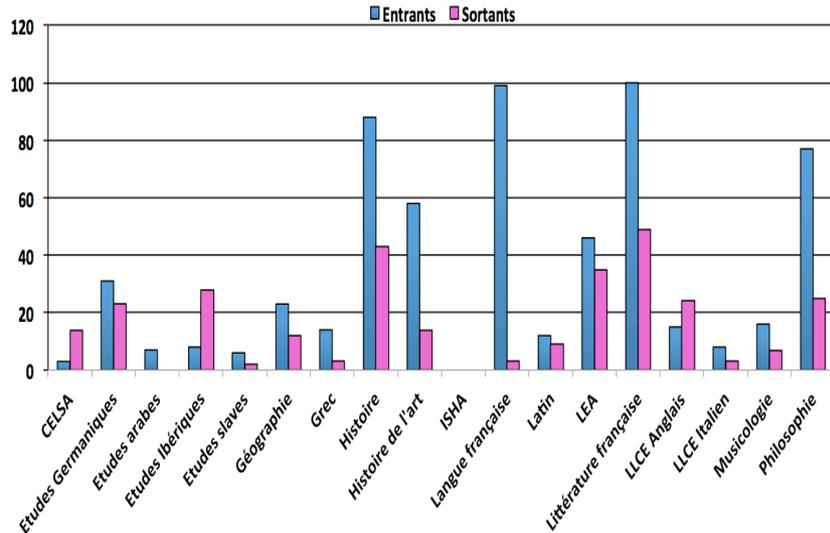
MOBILITY OF STUDENTS IN ERASMUS PROGRAM AND INTERNATIONAL CONVENTIONS at Paris IV (2009/2010)

Mobility of the students in Erasmus taking into consideration scientific fields¹³¹

Table 2: Mobility of students in Erasmus program – distribution through the scientific fields

Discipline	2009-2010	
	Entrants	Sortants
CELSA	3	14
Etudes Germaniques	31	23
Etudes arabes	7	0
Etudes Ibériques	8	28
Etudes slaves	6	2
Géographie	23	12
Grec	14	3
Histoire	88	43
Histoire de l'art	58	14
ISHA	0	0
Langue française	99	3
Latin	12	9
LEA	46	35
Littérature française	100	49
LLCE Anglais	15	24
LLCE Italien	8	3
Musicologie	16	7
Philosophie	77	25
TOTAL	611	294

Chart 19: Mobility of students in Erasmus (2009/2010). Scientific field.



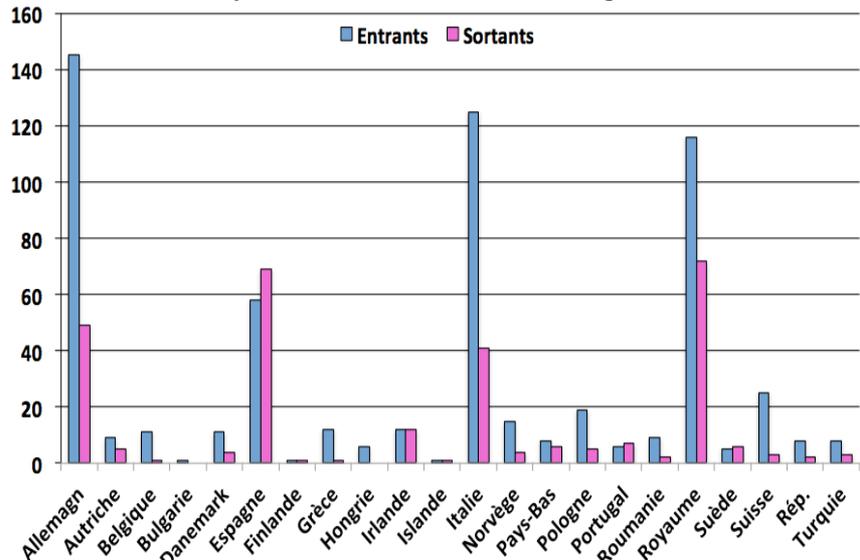
Sources: Elaboration according to the statistics from the *Service des Relations Internationales* of Paris IV.

Mobility of the students in Erasmus Program - country of origin and destination¹³²

Table 3: Mobility of students in Erasmus (2009/2010) - country of origin and destination

Pays	2009-2010	
	Entrants	Sortants
Allemagne	145	49
Autriche	9	5
Belgique	11	1
Bulgarie	1	0
Danemark	11	4
Espagne	58	69
Finlande	1	1
Grèce	12	1
Hongrie	6	0
Irlande	12	12
Islande	1	1
Italie	125	41
Norvège	15	4
Pays-Bas	8	6
Pologne	19	5
Portugal	6	7
Roumanie	9	2
Royaume Uni	116	72
Suède	5	6
Suisse	25	3
Rép. Tchèque	8	2
Turquie	8	3
TOTAL	611	294

Chart 20: Mobility of students in Erasmus - origin and destination.



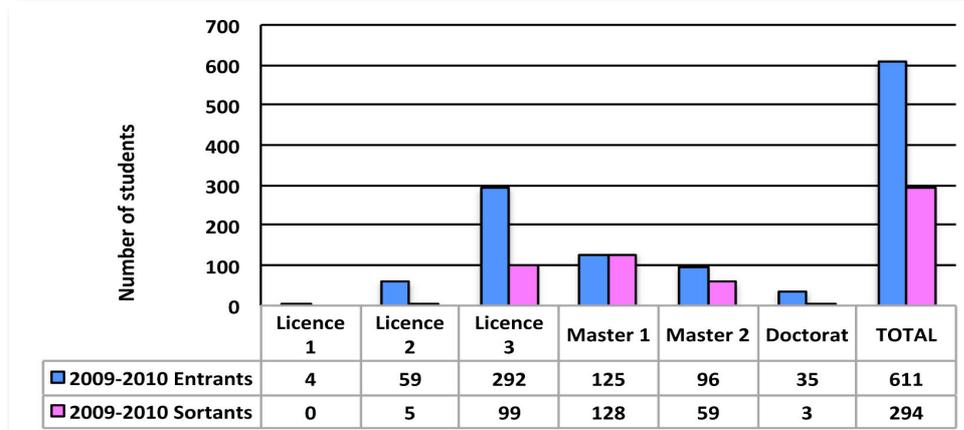
Sources: Elaboration according to the statistics from the *Service des Relations Internationales* of Paris IV.

¹³¹ In 2009/2010 the biggest number of domestic students who have chosen period of study abroad came from the fields: French literature (49 students) and History (43 students). The *LLCE Anglais* and Iberic Studies as well as CELSA sent more students than had incomers. At Paris IV the French language, French literature, History, Philosophy and *Histoire de l'Art* were the most attractive for foreign students.

¹³² The biggest number of incoming students in 2009/2010 came from Germany, Italy, the UK and Spain. The French students as a country of destination chose the same countries (the United Kingdom, Spain, Germany, Italy, Ireland).

Mobility of the students in Erasmus Program according to the level of study (2009/2010)

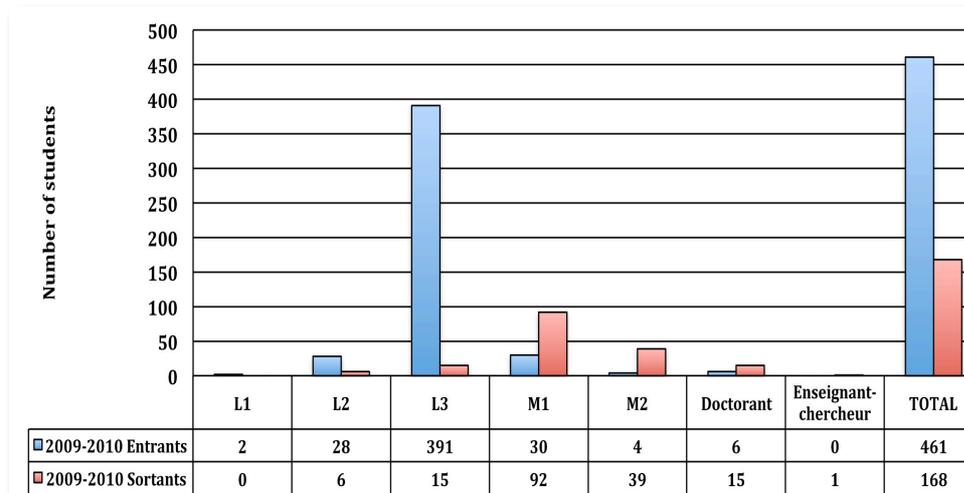
Chart 21: Mobility of the students in Erasmus Program according to the level of study



Sources: Elaboration according to the statistics from the *Service des Relations Internationales* Paris IV.

Mobility of the students in the frameworks of international Conventions taking into consideration level of study 2009/2010*¹³³

Chart 22: Mobility of the students in Conventions according to the level of study



Sources: Elaboration according to the statistics from the *Service des Relations Internationales* Paris IV.

Mobility of the students in the frameworks of international Conventions taking into consideration collaboration with Anglo-Saxon countries - 2009/2010*¹³⁴

Table 4: Mobility of the students in the framework of Conventions - data for Anglo-Saxon countries

Flux	2009/2010
Entrants	383
Sortants	111

Sources: Elaboration according to the statistics from the *Service RI of the* Paris IV.

¹³³ * Elaboration according to the data brought by the Service RI of the Paris IV.

¹³⁴ * Elaboration according to the data brought by the Service RI of the Paris IV.

Mobility of the students in Conventions taking into consideration scientific disciplines 2009/2010*¹³⁵

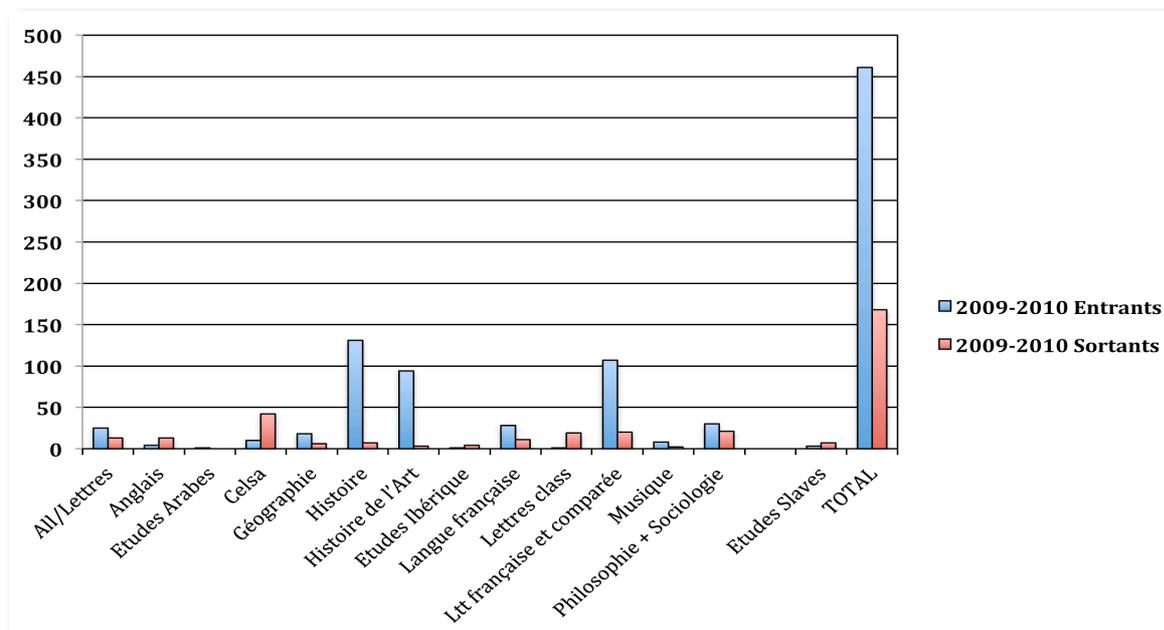
Table 5: Mobility in conventions –incoming students

Discipline	2009-2010
	Entrants
All/Lettres	25
Anglais	4
Etudes Arabes	1
Celsa	10
Géographie	18
Histoire	131
Histoire de l'Art	94
Italien	1
Langue française	28
Lettres class	1
Ltt française et comparée	107
Musique	8
Philosophie + Sociologie	29
Polonais/lettres	3
TOTAL	461

Table 6: Mobility in conventions - outgoing students

Discipline	2009-2010
	Sortants
All/Lettres	13
Celsa	42
Etudes Ibérique	4
Etudes Slaves	7
Géographie	6
Histoire	7
Langue française	11
LEA	16
Lettres Modernes	1
Ltt française et comparée	20
LLCE	2
Etudes Anglophone	13
Histoire de l'Art	3
Philosophie +Sociologie	21
Musicologie	2
TOTAL	168

Chart 23: Mobility of the students in the framework of international Conventions – distribution in scientific disciplines: outgoing and incoming students (2009/2010)



Source: Own elaboration based on the data brought by the Service RI.

¹³⁵ * Elaboration according to the data brought by the Service RI of the Paris IV.

Mobility of the students in the framework of international Conventions (2009/2010) taking into consideration country of origin (incoming students) and destination (outgoing students), and level of the study

Table 7: International mobility of students in Conventions - distribution by the country of origin and destination (domestic students)

Country	2009-2010	
	Entrants	Sortants
Allemagne	24	13
Argentine	2	7
Australie	4	6
Brésil	23	4
Canada	20	24
Chili	1	4
Chine		3
Corée du Sud	13	1
Croatie	2	1
Etats-Unis	358	80
Israël	2	0
Japon	0	1
Liban	0	4
Mexique	2	4
Nouvelle-Zélande	1	0
Pérou	0	1
Pologne	2	4
Russie	2	3
Singapour	3	6
Taiwan	2	1
TOTAL	461	168

Table 8: International mobility of students in Conventions - distribution by the level of study

Level of study	2009-2010	
	Entrants	Sortants
L1	2	0
L2	28	6
L3	391	15
M1	30	92
M2	4	39
Doctorant	6	15
Enseignant-chercheur	0	1
TOTAL	461	168

Sources: Elaboration according to the statistics from the *Service RI of the Paris IV*.

Conclusions

In the period 2009/2010, the Service RI was responsible for management of 1534 active mobilities.¹³⁶ **The Paris IV hosted twice more incoming students than the French students sent abroad.** Among incoming students (1072), 611 were Erasmus participants and 461 the Conventions incomers; domestic students going abroad mostly chose Erasmus program (294 participants) and 168 students experienced international mobility through Conventions.

Most of the international mobility was managed in the framework of the European education program – Erasmus (905 students). Significant number of participants (629) experienced their study abroad through the international Conventions. Most of the international Conventions have been signed between the Paris IV and the countries outside of the European Higher Education Area (EHEA, followers of the Bologna Process and Copenhagen Process), with some exceptions like Germany and Poland.¹³⁷

According to the data brought by the Service RI of the Paris IV, among the Faculties (UFR), which sent the biggest number of the students abroad should be mentioned: Littérature Française (20 students through Conventions and 49 through

¹³⁶ *Active mobility*, it is a term used here to highlight administrative responsibility for the students who are currently in move. Additionally the Service RI during the same period prepares the documentation for the mobility participants in the next academic year.

¹³⁷ Principal framework of international scientific collaboration among members of the European Higher Education Area (EHEA) has been given by the Erasmus Program, however, some universities from that area, especially those which have a big demand of international mobility use also Conventions and international agreements (case of the German and Polish universities).

Erasmus), *CELSA* (42 students through conventions + 14 Erasmus), *LEA*¹³⁸ (16 students through conventions + 35 Erasmus), *Philosophy and Sociology* (21 participants through conventions + 25 Erasmus); *Histoire* (43 Erasmus), *Etudes Ibériques* (28 Erasmus), *LLCE Anglais* (24 Erasmus) and *Etudes Germaniques* (23 Erasmus), etc.

Among the Faculties (UFR), which mostly had been chosen by the foreign students can be mentioned: *Littérature Française* (107 students through Conventions and 100 through Erasmus), *Histoire* (88 Erasmus and 131 Conventions), *Histoire de l'Art* (58 Erasmus and 94 Conventions), *Langue Française* (99 through Erasmus and 28 through Conventions), *Philosophie* (77 Erasmus and 30 Conventions), *Etudes Germaniques* (31 Erasmus), etc. As it could be observed, the most demanded Faculties (UFR) are also those which actively sent their students abroad.

The choice outgoing students do with **destination** of the country is strongly related with the wish of improvement of foreign language skills; among most demanded countries in 2009/2010 were: English speaking counties - the USA (80 outgoing students), the UK (72), Spain (69), Germany (49), Italy (41). The biggest disproportion between incoming and outgoing students was observed in the case of the USA (385 incoming students). Big number of incoming mobility students came from the German universities (145 Erasmus +24 Conventions), Italy (125 Erasmus) and the UK (116 Erasmus).

Taking into consideration level of study, the biggest number of domestic students went abroad in the Master 1 (128 within Erasmus, 92 in Conventions), followed by Licence 3 (99 Erasmus students, 15 Conventions), Master 2 (59 Erasmus, 39 Conventions), and at the level of doctorate (3 Erasmus, 15 Conventions). In the case of oversea students, most of them were enrolled in the Licence 3 (292 Erasmus, 391 Convention) – it did not mean that their level of study at home university was the same, very often they were from Master level at their home institutions.¹³⁹ Furthermore, they attended Master 1 (125 Erasmus, 30 Conventions), Master 2 (96 Erasmus, 4 Conventions), Licence 2 (35 Erasmus, 28 Conventions) and at the level of doctorate were 41 foreign students (35 Erasmus and 6 through Conventions).

In the period 2009/2010, 195 students (84 through Erasmus, 111 through Conventions) of the Paris IV went to an Anglo-Saxon country, while 511 students (128 though Erasmus and 383 through Conventions) came from there; the biggest number of overseas students was from the USA (358 students).

¹³⁸ LEA – *Langues étrangères appliquées* – Applied linguistic.

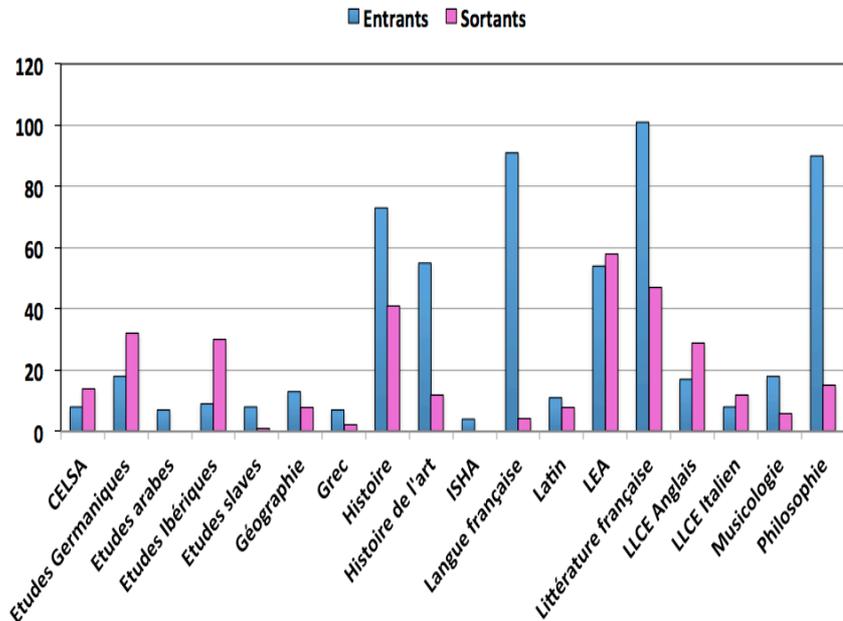
¹³⁹ Information collected during interviews on the campus of the Paris IV.

MOBILITY OF STUDENTS IN ERASMUS PROGRAM AND INTERNATIONAL CONVENTIONS at Paris IV (2010/2011) *

Table 9: Mobility of students in Erasmus - taking into consideration scientific disciplines

Discipline	2010-2011	
	Entrants	Sortants
CELSA	8	14
Etudes Germaniques	18	32
Etudes arabes	7	0
Etudes ibériques	9	30
Etudes slaves	8	1
Géographie	13	8
Grec	7	2
Histoire	73	41
Histoire de l'art	55	12
ISHA	4	0
Langue française	91	4
Latin	11	8
LEA	54	58
Littérature française	101	47
LLCE Anglais	17	29
LLCE Italien	8	12
Musicologie	18	6
Philosophie	90	15
TOTAL	592	319

Chart 24: Mobility of the students in Erasmus- scientific discipline

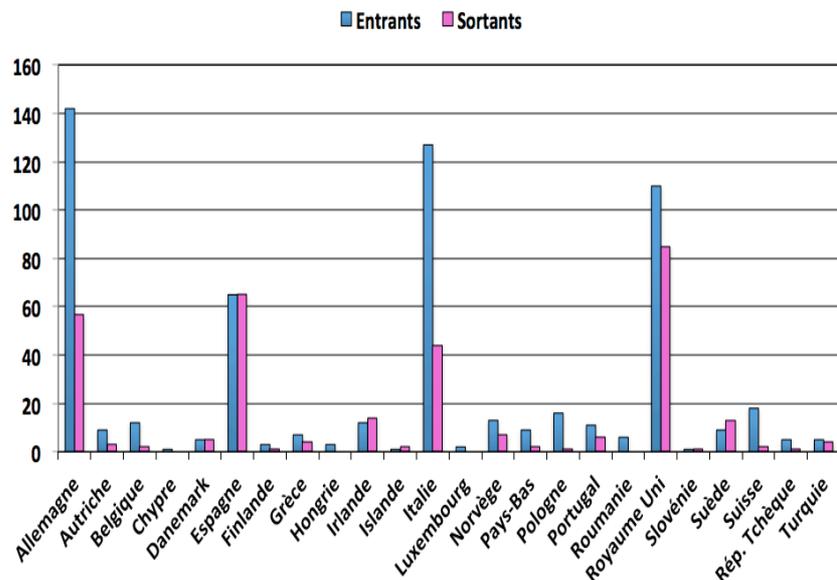


Mobility of students in Erasmus Program taking into consideration country of origin and destination (2010-2011)*

Pays	2010-2011	
	Entrants	Sortants
Allemagne	142	57
Autriche	9	3
Belgique	12	2
Chypre	1	0
Danemark	5	5
Espagne	65	65
Finlande	3	1
Grèce	7	4
Hongrie	3	0
Irlande	12	14
Islande	1	2
Italie	127	44
Luxembourg	2	0
Norvège	13	7
Pays-Bas	9	2
Pologne	16	1
Portugal	11	6
Roumanie	6	0
Royaume Uni	110	85
Slovénie	1	1
Suède	9	13
Suisse	18	2
Rép. Tchèque	5	1
Turquie	5	4
TOTAL	592	319

Table 10: Country of origin and destination in Erasmus mobility

Chart 25: Distribution of the students according to their origin (incoming and outgoing)



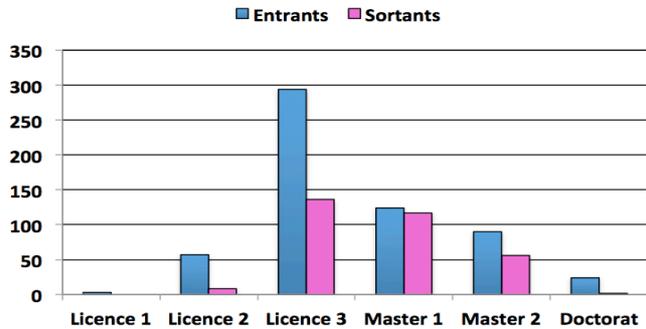
* Sources: Elaboration according to the statistics from the Service des Relations Internationales of Paris IV.

Mobility of the students in Erasmus Program – according to the level of study (2010/2011)

Table 11: Students' mobility in Erasmus – according level of study

Niveau d'études	2010-2011	
	Entrants	Sortants
Licence 1	3	0
Licence 2	57	8
Licence 3	294	136
Master 1	124	117
Master 2	90	56
Doctorat	24	2
TOTAL	592	319

Chart 26: Students' mobility in Erasmus – according to level of study



Sources: Elaboration according to the statistics from the *Service RI* of the Paris IV.

Table 12: Mobility of the students in the framework of Conventions - Anglo-Saxon countries

Flux	2010/2011
Entrants	368
Sortants	97

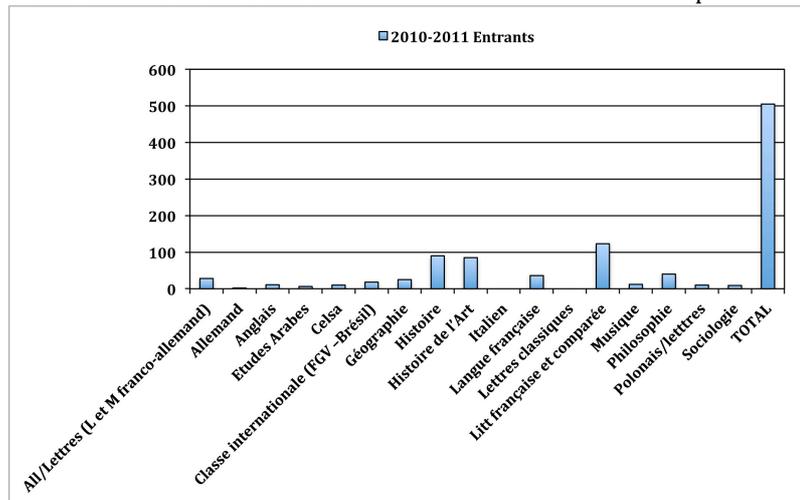
Sources: Elaboration according to the statistics from the *Service des Relations Internationales* of Paris IV.

Incoming students in international Conventions (2010/2011)*

Table 13: Incoming students in the framework of international Conventions – according to the scientific discipline 2010-/2011.¹⁴⁰

Discipline	2010-2011
	Entrants
All/Lettres (L et M franco-allemand)	28
Allemand	2
Anglais	11
Etudes Arabes	6
Celsa	10
Classe internationale (FGV –Brésil)	18
Géographie	25
Histoire	90
Histoire de l'Art	85
Italien	0
Langue française	36
Lettres classiques	0
Litt française et comparée	123
Musique	12
Philosophie	40
Polonais/lettres	10
Sociologie	9
TOTAL	505

Chart 27: Incoming students in the framework of the international Conventions at the Paris IV – distribution in scientific discipline.



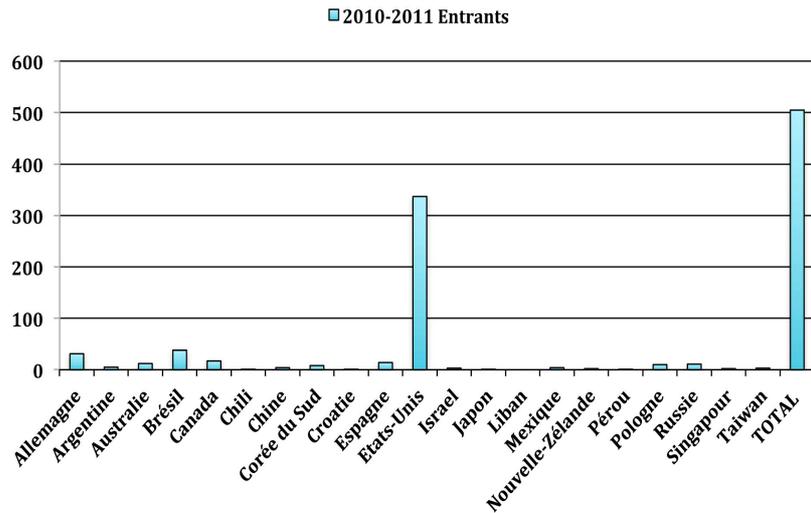
¹⁴⁰ Data brought by the Service RI of the Paris IV, elaborated by the author of the Report. The statistics related to the international mobility through Conventions for the period 2010/2011 are limited to the incoming students.

* Source: *Ibidem*.

Table 14: Incoming students in the framework of international Conventions – according to country of origin 2010-/2011

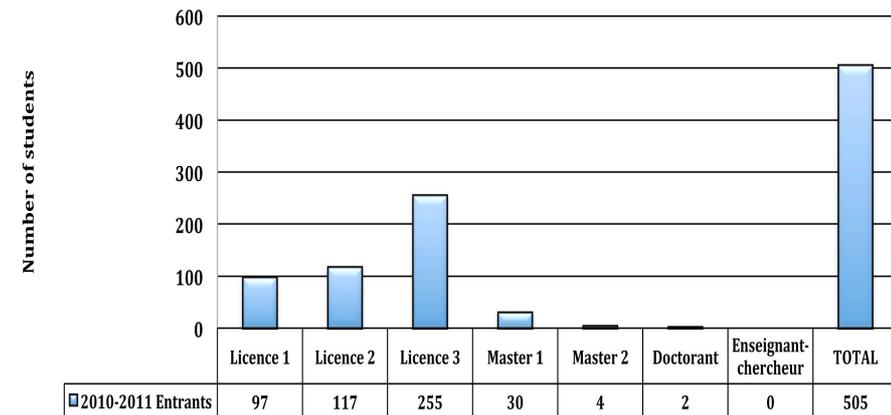
Country of origin	2010-2011
	Entrants
Allemagne	31
Argentine	5
Australie	12
Brésil	38
Canada	17
Chili	1
Chine	4
Corée du Sud	8
Croatie	1
Espagne	14
Etats-Unis	337
Israël	3
Japon	1
Liban	0
Mexique	4
Nouvelle-Zélande	2
Pérou	1
Pologne	10
Russie	11
Singapour	2
Taiwan	3
TOTAL	505

Chart 28: Incoming students in the framework of the international Conventions at Paris IV – distribution according to country of origin



Source: Elaboration according to the statistics from the Service des Relations Internationales Paris IV.

Chart 29: Incoming students in the framework of the international Conventions at Paris IV – distribution according to level of study (2010-2011)



Source: Elaboration according to the statistics from the Service des Relations Internationales of Paris IV.

Conclusions: in the period 2010/2011 the Service RI was responsible for management of 1513 ¹⁴¹ active mobilities* (counted without *sortants* within the framework of

¹⁴¹ 1513 participants of the active mobility managed by the Service RI of the Paris IV in 2010/2011 (counted: incoming and outgoing students in the Erasmus Program, as well as outgoing students, who chose the Anglo-Saxon destinations through Conventions; the number does not take into consideration outgoing students through all international Conventions.

international Conventions; however *sortants* through Conventions with Anglo-Saxon countries were taken into consideration). Most of the international mobility was managed in the framework of the European education program – Erasmus (911 students), 6 students more than in the previous year. Significant number of participants experienced their study abroad through the international Conventions (602).¹⁴² **The Paris IV hosted more incoming students than the French students have been sent abroad; however, this disproportion was improved (Erasmus group) in favor of domestic students, comparing with previous year: incoming students: 1097, where 592 students were Erasmus participants and 505 Conventions incomers; among domestic students going abroad most chose Erasmus program (319) and 97 students experienced international mobility in the Anglo-Saxon countries through Conventions. Spain was the country with which the Paris IV started international exchange through Conventions.**

Following the data brought by the Service RI of the Paris IV, among the Faculties (UFR), which sent the biggest number of the students abroad should be mentioned: LEA¹⁴³ send more students than in the previous year (58 Erasmus students), Littérature Française (47 Erasmus), Histoire (41 Erasmus), Etudes Germaniques (32 Erasmus), Etudes Ibériques (30 Erasmus), LLCE Anglais (29 Erasmus) and a bit less than a year anterior - Philosophy (15 participants through Erasmus).

Among the Faculties (UFR), which mostly had been chosen by the foreign students can be mentioned: Littérature Française (a bit more than in the previous year, 123 students through Conventions and 101 through Erasmus), Histoire (73 Erasmus and a bit less than the year before - 90 through Conventions), Histoire de l'Art (55 Erasmus and a bit less than a year before - 85 through Conventions), Langue Française (91 through Erasmus and a bit more than the year before - 36 through Conventions), Philosophie (90 Erasmus and 40 Conventions), Etudes Germaniques (18 Erasmus and 40 through Conventions), etc. As it could be observed the most demanded Faculties (UFR), are also these, which actively sent their students abroad.

The UFR ISHA¹⁴⁴ and Etudes Arabes have not sent any Erasmus abroad, and they are also among the UFRs, which have the smallest number of incoming students (through Erasmus 4 students at ISHA; 7 Erasmus and 6 through Conventions in Etudes Arabes).

Destination of outgoing students is strongly related with the wish of improvement foreign language skills, among most demanded countries in 2010/2011, like in previous year were: English speaking counties - the USA, the UK (85 Erasmus), Spain (65 Erasmus), Germany (57 Erasmus), Italy (44 Erasmus). The biggest disproportion between incoming and outgoing students was observed in the case of the USA and Erasmus exchanges with Italy (127 entrants, 44 *sortants*) and Germany (142 entrance, 57 *sortants*).

In 2010/11 the biggest number of outgoing students (Erasmus) was enrolled in Licence 3 and Master 1, while incoming students attended mostly Licence 3, Licence 2 and Licence 1.

* *Active mobility* – understood here, as a number of students in move. See more, p. 86.

¹⁴² It is not full number of international mobilities through Conventions managed by the Service RI. Among mobilities through Conventions in case of outgoing students, just Anglo-Saxon destinations were counted. See more explanation related to this issue above.

¹⁴³ LEA – *Langues étrangères appliquées* – Applied linguistic.

¹⁴⁴ UFR ISHA – *UFR Institut des Sciences Humaines Appliquées*.

MOBILITY OF STUDENTS IN ERASMUS PROGRAM AND INTERNATIONAL CONVENTIONS at Paris IV (2011/2012)

Mobility of the students taking into consideration Erasmus Program and Conventions – according to scientific discipline (2011/2012)

Table 15: Students' mobility in Erasmus – according to scientific discipline

Discipline	Entrants	Sortants
Etudes arabes et hébraïques	8	1
Anglais	13	37
Etudes germaniques	9	8
CELSA	10	11
Etudes ibériques	9	26
Etudes Slaves	13	3
Histoire	80	41
Histoire de l'art et archéologie	61	12
Italien et Roumain	3	4
Géographie et Aménagement	18	7
Latin	7	8
Grec	10	
Langue française	36	1
Littérature française et comparée	87	51
LEA	51	52
Musique et Musicologie	13	6
IUFM	6	7
Etudes scandinaves	1	10
Philosophie et Sociologie	79	21
TOTAL	624	306

Table 16: Students' mobility in Conventions according to scientific discipline

Discipline	Entrants	Sortants
All/Lettres	44	7
Anglais	7	14
Celsa	8	53
Espagnol	1	0
Etudes Arabes	2	0
Etudes Slaves	3	1
Géographie	24	7
Histoire	82	10
Histoire de l'Art	97	5
Italien	1	0
Langue française	31	15
LEA	0	5
Latin	1	0
Ltt française et comparée	106	14
Musique	12	0
Philosophie	35	9
Polonais/lettres	3	0
Sociologie	18	0
Total	475	141

Source: Elaboration according to the statistics from the *Service des Relations Internationales Paris IV*.

Mobility of students in the framework of the Erasmus Program and Conventions at the Université Paris-Sorbonne – according to country of origin (incoming students) and destination (outgoing students) - (2011/2012)

Table 17: Students' mobility in **Erasmus** – according to country of origin

PAYS	2011/2012	
	Entrants	Sortants
Allemagne	131	41
Autriche	11	4
Belgique	15	0
Bulgarie	4	1
Danemark	4	6
Espagne	80	69
Finlande	2	1
Grèce	5	0
Hongrie	5	0
Irlande	16	15
Italie	125	40
Luxembourg	1	0
Norvège	5	4
Pays Bas	6	6
Pologne	18	3
Portugal	11	7
Roumanie	13	1
Royaume Uni	125	90
Suède	8	9
Suisse	26	1
Rep Tchèque	9	3
Turquie	4	4
Slovénie	0	1
TOTAL	624	306

Table 18: Students' mobility in **Conventions** – according to country of origin

PAYS	Entrants	Sortants
Allemagne	44	7
Argentine	3	5
Australie	7	4
Brésil	22	3
Canada	19	19
Chili	0	1
Chine	4	3
Corée du sud	13	4
Croatie	0	0
Espagne	6	5
Etats-Unis	328	62
Israël	2	0
Inde	0	1
Japon	1	1
Liban	0	2
Mexique	2	4
Nouvelle-Zélande	3	1
Paris	0	11
Pérou	0	1
Pologne	3	2
Russie	14	1
Singapour	4	4
Taiwan	0	0
Vietnam	0	0
TOTAL	475	141

Sources: Elaboration according to the statistics from the *Service des Relations Internationales* of Paris IV.

Mobility of the students taking into consideration Erasmus Program and international Conventions at the Université Paris-Sorbonne - according to the level of study (2011/2012)

Table 19: students in Erasmus mobility – according level of study

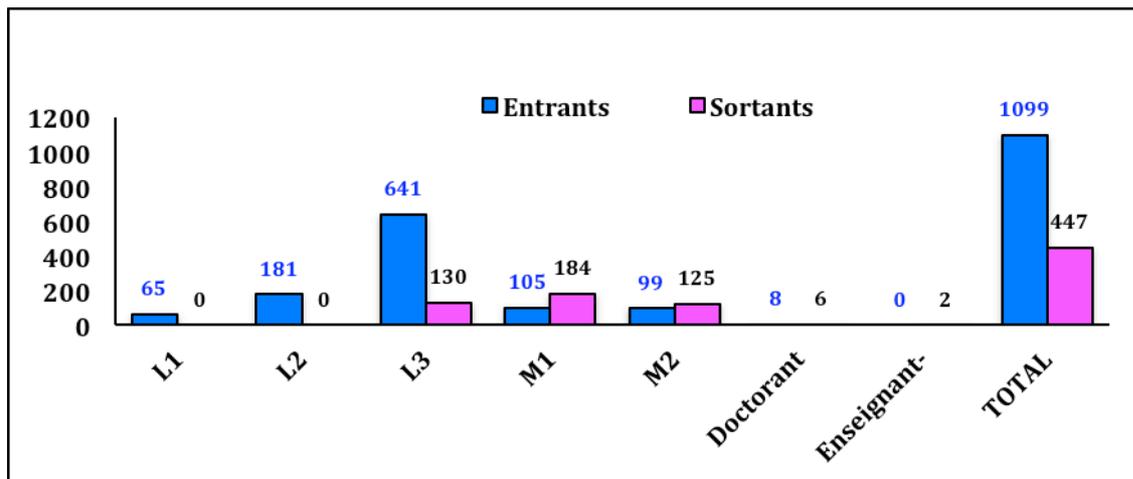
Niveau	Entrants	Sortants
Licence 1	0	0
Licence 2	62	0
Licence 3	400	122
Master 1	72	115
Master 2	84	69
Doctorat	6	0
TOTAL	624	306

Table 20: Students mobility in Conventions – according level of study.

Niveau	Entrants	Sortants
L1	65	0
L2	119	0
L3	241	8
M1	33	69
M2	15	56
Doctorant	2	6
Enseignant-chercheur	0	2
TOTAL	475	141

Sources: Elaboration according to the statistics from the *Service des Relations Internationales* of Paris IV.

Chart 30: Distribution of the students in mobility (Erasmus + Conventions) according to the level of study (2011/2012)



Sources: Elaboration according to the Statistics from the *Service des Relations Internationales* Paris IV.

Conclusions: in the period 2011/2012 the Service RI was responsible for management of 1546 active mobilities.¹⁴⁵ The Paris IV **continued to host twice more incoming students than the French students sent abroad**. Among the UFRs most active in the international students exchanges were those related to literature, linguistic, history and philosophy. The IUFM started to be visible in international exchanges (7 outgoing and 6 incoming students).

Among incoming students (1099), 624 students were Erasmus participants and 475 Conventions incomers; among domestic students going abroad most chose Erasmus program (306, less than previous year) and 141 students experienced international mobility through Conventions (a bit less than previous years).

¹⁴⁵ *Active mobility*, it is a term used here to highlight administrative responsibility for the students who are currently in move (incoming and outgoing students). Additionally the Service RI during the same period prepares the documentation for the mobility participants in the next academic year.

The Service RI most of the international mobility managed in the framework of the European education program – Erasmus (930 students). Significant number of participants, however, less than in previous years experienced their study abroad through the international Conventions (616). Most of the international Conventions were signed between the *Université Paris IV* and the countries outside of the European Higher Education Area (followers of the Bologna Process and Copenhagen Process), with some exceptions like Germany, Poland and Spain.¹⁴⁶

According to the data brought by the Service RI, among the Faculties (UFR), which sent the biggest number of the students abroad in 2011/2012 should be mentioned: ***Littérature Française et comparée*** (14 students through Conventions and 51 through Erasmus; this UFR accepted the biggest number of foreign students: 106 in Conventions and 87 Erasmus), CELSA (53 through Conventions and 11 Erasmus), LEA,¹⁴⁷ which sent more students than number of incoming students to this UFR (5 students through Conventions + 52 Erasmus; LEA accepted 51 incoming Erasmus), Histoire (41 Erasmus and 10 Conventions), Anglais (37 Erasmus, 14 through Conventions), Philosophy and Sociology (21 Erasmus, 9 conventions) and Etudes Ibériques (26 Erasmus), etc.

The UFR, which accepted the biggest number of foreign students were: ***Littérature Française et comparée*** (as mentioned above), Histoire (80 Erasmus, 82 Conventions), Histoire de l'Art et Archéologie (61 Erasmus, 97 Conventions), Philosophie et Sociologie (79 Erasmus, 53 Conventions), LEA and Langue Française (36 Erasmus, 31 Conventions). The UFR Etudes Scandinaves and CELSA sent more students abroad than had accepted of incoming students.

In the 2011/2012, preferable **destinations of the** students of the Paris IV, similarly as it was in previous years, were countries, whose atmosphere can help to improve foreign language skills; among most demanded were: English speaking countries - the UK (90, it was more than in previous years), the USA (62 outgoing students, it was less than in previous years), Spain (74, more than in previous years), Germany (48), Italy (40). The biggest disproportion between incoming and outgoing students continued to be in the case of the USA (328 incoming students). Big numbers of incoming students were also from the German universities (131 Erasmus +44 Conventions), Italy (125 Erasmus) and the UK (125 Erasmus).

Taking into consideration level of study, the biggest number of domestic students went abroad in the **Master 1** - however, it was less than in previous years (115 within Erasmus, 61 in Conventions); Licence 3 - they were more than previous years (122 Erasmus students, 8 Conventions), Master 2 (69 Erasmus, 56 Conventions), and at the level of doctorate (3 Erasmus, 15 Conventions). In the case of overseas students, most of them were enrolled in the Licence 3 (400 Erasmus, 241 Convention). Furthermore, they attended Master 1 (72 Erasmus, 33 Conventions), Master 2 (84 Erasmus, 15 Conventions), Licence 2 (62 Erasmus, 199 Conventions) and in doctorate were 8 foreign students, much less than in previous years (6 Erasmus and 2 through Conventions).

2 *Enseignant-chercheurs* from the Paris IV went abroad through Conventions.

¹⁴⁶ Principal framework of international scientific collaboration among members of the European Higher Education Area (EHEA) has been given by the Erasmus Program, however, some universities from that area, especially those which have a big demand of international mobility use also Conventions and international agreements (case of the German, Polish and Spanish – since 2010 - universities).

¹⁴⁷ LEA – *Langues étrangères appliquées* – Applied linguistic.

MOBILITY OF STUDENTS IN ERASMUS PROGRAM AND INTERNATIONAL CONVENTIONS at the Paris IV (2012/2013)*

Mobility of the students through Erasmus Program and Conventions – according to country of origin (2012/2013)

Table 21: Mobility of students in Erasmus

Pays	Flux	2012/2013
Allemagne	Entrants	126
	Sortants	64
Autriche	Entrants	13
	Sortants	7
Belgique	Entrants	14
	Sortants	2
Bulgarie	Entrants	2
	Sortants	2
Chypre	Entrants	0
	Sortants	2
Danemark	Entrants	9
	Sortants	4
Espagne	Entrants	59
	Sortants	63
Finlande	Entrants	2
	Sortants	1
Grèce	Entrants	11
	Sortants	2
Hongrie	Entrants	6
	Sortants	0
Irlande	Entrants	6
	Sortants	20
Islande	Entrants	2
	Sortants	1
Italie	Entrants	105
	Sortants	43
Luxembourg	Entrants	2
	Sortants	0
Norvège	Entrants	12
	Sortants	7
Pays-Bas	Entrants	6
	Sortants	8
Pologne	Entrants	15
	Sortants	7
Portugal	Entrants	11
	Sortants	3
Roumanie	Entrants	7
	Sortants	1
Royaume-Uni	Entrants	117
	Sortants	128
Slovénie	Entrants	2
	Sortants	1
Suède	Entrants	10
	Sortants	9
Suisse	Entrants	24
	Sortants	0
République Tchèque	Entrants	4
	Sortants	6
Turquie	Entrants	3
	Sortants	4
TOTAL	Entrants	568
	Sortants	385

*Sources: Elaboration according to the Statistics from the Service des Relations Internationales of the Université Paris IV.

Table 22: Mobility of students in Conventions

Pays	Flux	2012/2013
Allemagne	Entrants	25
	Sortants	5
Argentine	Entrants	1
	Sortants	6
Australie	Entrants	5
	Sortants	5
Brésil	Entrants	24
	Sortants	6
Canada	Entrants	19
	Sortants	15
Chili	Entrants	1
	Sortants	3
Chine	Entrants	13
	Sortants	1
Corée du sud	Entrants	10
	Sortants	0
Espagne	Entrants	6
	Sortants	2
Israël	Entrants	0
	Sortants	2
Italie	Entrants	2
	Sortants	0
Japon	Entrants	1
	Sortants	0
Liban	Entrants	2
	Sortants	3
Mexique	Entrants	3
	Sortants	0
Nouvelle-Zélande	Entrants	1
	Sortants	1
Pérou	Entrants	2
	Sortants	1
Pologne	Entrants	6
	Sortants	0
Russie	Entrants	10
	Sortants	5
Singapour	Entrants	1
	Sortants	2
USA	Entrants	334
	Sortants	72
TOTAL	Entrants	466
	Sortants	129

Mobility of students taking into consideration Erasmus Program and Conventions at the Paris IV – according to UFR - faculty (2012/2013)

Table 23: Students mobility in Erasmus – UFR participation

UFR	Flux	2012/2013
Art et archéologie	Entrants	53
	Sortants	14
Musique et Musicologie	Entrants	12
	Sortants	9
Anglais	Entrants	22
	Sortants	49
Etudes arabes et hébraïques	Entrants	3
	Sortants	0
Etudes germaniques et nordiques	Entrants	15
	Sortants	28
Etudes ibériques	Entrants	10
	Sortants	22
Etudes slaves	Entrants	7
	Sortants	5
Italien et roumain	Entrants	7
	Sortants	3
LEA	Entrants	58
	Sortants	59
Grec	Entrants	12
	Sortants	0
Langue française	Entrants	96
	Sortants	4
Latin	Entrants	8
	Sortants	9
Littérature française et comparée	Entrants	96
	Sortants	54
Géographie et Aménage.	Entrants	16
	Sortants	6
Histoire	Entrants	62
	Sortants	63
ISHA	Entrants	3
	Sortants	0
Philosophie et Sociologie	Entrants	76
	Sortants	34
CELSA	Entrants	7
	Sortants	21
IUFM	Entrants	5
	Sortants	5
Total	Entrants	568
	Sortants	385

Table 24: Students mobility in Conventions – UFR participation

UFR	Flux	2012/2013
Art et archéologie	Entrants	95
	Sortants	1
Musique et Musicologie	Entrants	5
	Sortants	2
Anglais	Entrants	17
	Sortants	12
Etudes arabes et hébraïques	Entrants	
	Sortants	1
Etudes germaniques et nordiques	Entrants	25
	Sortants	5
Etudes ibériques	Entrants	0
	Sortants	2
Etudes slaves	Entrants	6
	Sortants	3
Italien et roumain	Entrants	1
	Sortants	0
LEA	Entrants	1
	Sortants	6
Grec	Entrants	2
	Sortants	0
Langue française	Entrants	30
	Sortants	12
Latin	Entrants	0
	Sortants	0
Littérature française et comparée	Entrants	109
	Sortants	11
Géographie et Aménag.	Entrants	15
	Sortants	1
Histoire	Entrants	97
	Sortants	9
ISHA	Entrants	11
	Sortants	0
Philosophie et Sociologie	Entrants	47
	Sortants	6
CELSA	Entrants	5
	Sortants	57
IUFM	Entrants	0
	Sortants	1
Total	Entrants	466
	Sortants	129

Sources: Elaboration according to the Statistics from the *Service des Relations Internationales* Paris IV.

Mobility of students taking into consideration Erasmus Program and Conventions – according to the level of study (2012/2013)

Table 25: Mobility of students in **Erasmus** - level of the study in Paris IV

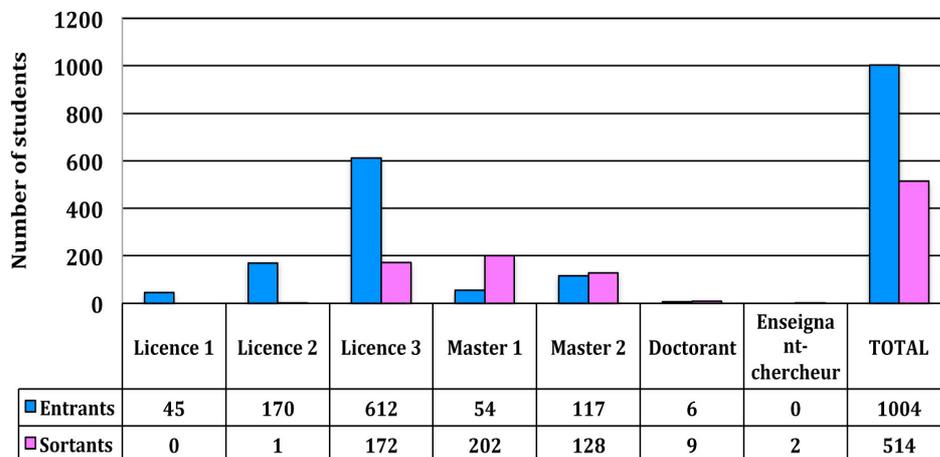
Niveau	Flux	2012/2013
L2	Entrants	42
	Sortants	0
L3	Entrants	359
	Sortants	166
M1	Entrants	27
	Sortants	126
M2	Entrants	104
	Sortants	89
D	Entrants	6
	Sortants	4
Total	Entrants	538
	Sortants	385

Table 26: Mobility of students - **Conventions** - level of the study in Paris IV

Niveau	Flux	2012/2013
L1	Entrants	45
	Sortants	0
L2	Entrants	128
	Sortants	1
L3	Entrants	253
	Sortants	6
M1	Entrants	27
	Sortants	76
M2	Entrants	13
	Sortants	39
D	Entrants	0
	Sortants	5
Enseignant-chercheurs	Sortants	2
Total	Entrants	466
	Sortants	129

Sources: Elaboration according to the Statistics from the *Service des Relations Internationales* Paris IV.

Chart 31: Mobility of the students (Erasmus + Conventions) distribution according to the level of study at the Paris-Sorbonne University (2012/2013)



Sources: Own elaboration according to the Statistics from the *Service des Relations Internationales* Paris IV.

Conclusion: in the period 2012/2013 the Service RI was responsible for management of 1548 active mobilities,¹⁴⁸ where 1034 were incoming students and 514 outgoing students. The Paris IV **continued to host twice more incoming students than the French students sent abroad, however, this disproportion was improved in favor of domestic students, comparing with previous years.** Among the UFRs

¹⁴⁸ *Active mobility*, it is a term used here to highlight administrative responsibility for the students who are currently in move (incoming and outgoing students). Additionally the Service RI during the same period prepares the documentation for the mobility participants in the next academic year.

most active in the international students exchanges were those related to history, CELSA, linguistic, literature and philosophy and sociology.

Most of the international mobility was managed in the framework of the European education program – Erasmus (953 students). Significant number of participants, however, less than in previous years experienced their study abroad through the international Conventions (595). Most of the international Conventions are signed between the Paris IV and the countries outside of the European Higher Education Area.

Among incoming students (1034), 568 were Erasmus participants and 466 Conventions incomers; among domestic students going abroad most chose Erasmus program (385, 79 more than previous year) and 129 students experienced international mobility through Conventions (a bit less than previous years).

According to the data brought by the Service RI, among the Faculties (UFR) which sent the biggest number of the students abroad in 2012/2013, should be mentioned: ***Histoire*** (63 Erasmus and 9 Conventions), ***CELSA*** (57 through Conventions and 21 Erasmus) more than year before, ***LEA***¹⁴⁹ (59 Erasmus, 6 Conventions), ***Littérature Française et comparée*** (11 students through Conventions and 54 through Erasmus; this UFR like in previous year accepted the biggest number of foreign students: 109 in Conventions and 96 Erasmus), ***Anglais more than previous year*** (49 Erasmus, 12 through Conventions), ***Philosophy and Sociology*** more than previous year (34 Erasmus, 7 conventions), and Etudes Ibériques (22 Erasmus and 2 through Conventions), etc.

The UFR, which accepted the biggest number of foreign students were: ***Littérature Française et comparée*** (as mentioned above), ***Histoire*** (62 Erasmus, 97 Conventions), ***Histoire de l'Art et Archéologie*** (53 Erasmus, 95 Conventions) less than the year before, ***Philosophie et Sociologie*** (76 Erasmus, 47 Conventions) less than the year before, ***LEA*** (Erasmus 58, Conventions 1), and ***Langue Française*** (96 Erasmus, 30 Conventions) more than the year before. The UFR ***CELSA***, ***Anglais***, Etudes Ibériques and ***LEA*** sent more students abroad than had accepted of incoming students.

In the 2012/2013 preferable **destinations** of the students of the Paris IV, similarly as it was in previous years, were countries, which atmosphere can help to improve foreign language skills; among most demanded were: English speaking countries - the UK (128, it was more than in previous years), the USA (72 outgoing students, it was 10 more than in previous year), Spain (65, less than in previous year), Germany (69, more than the year before), Italy (43, a bit more than the year before). The biggest disproportion between incoming and outgoing students continued to be in the case of the USA (334 incoming students). The biggest numbers of incoming students were from the German universities (126 Erasmus +25 Conventions), Italy (105 Erasmus) and the UK (117 Erasmus), nevertheless, in all these cases the numbers were lower than in previous years.

Taking into consideration level of study, the biggest number of domestic students went abroad in the **Master 1** (202 students, more than year before), **Licence 3** (130 student), **Master 2** (128 students), and at the level of doctorate (9), in all last 3 cases there were less participants than in previous year. In the case of overseas students, most of them were enrolled in the Licence 3 (612, less than the year before). Furthermore, Licence 2 (170 students), Master 2 (117 students), Master 1 (54 students, less than in

¹⁴⁹ LEA – *Langues étrangères appliquées* – Applied linguistic.

the previous year), and in doctorate were 6 foreign students, 2 less than in previous year. 2 Enseignant-chercheurs from the Paris IV went abroad through Conventions.

MOBILITY OF STUDENTS IN ERASMUS PROGRAM AND INTERNATIONAL CONVENTIONS (2013/2014)

Mobility of students taking into consideration Erasmus Program and Conventions – distribution by country (2013/2014)

Table 27: Erasmus participants

Pays	Flux	2013/2014
Allemagne	Entrants	118
	Sortants	61
Autriche	Entrants	10
	Sortants	6
Belgique	Entrants	15
	Sortants	1
Bulgarie	Entrants	3
	Sortants	0
Chypre	Entrants	1
	Sortants	0
Danemark	Entrants	12
	Sortants	8
Espagne	Entrants	52
	Sortants	54
Finlande	Entrants	2
	Sortants	0
Grèce	Entrants	8
	Sortants	3
Hongrie	Entrants	1
	Sortants	1
Irlande	Entrants	12
	Sortants	17
Islande	Entrants	2
	Sortants	0
Italie	Entrants	94
	Sortants	39
Luxembourg	Entrants	1
	Sortants	0
Norvège	Entrants	6
	Sortants	3
Pays-Bas	Entrants	12
	Sortants	8
Pologne	Entrants	20
	Sortants	2
Portugal	Entrants	9
	Sortants	7
Roumanie	Entrants	9
	Sortants	2
Royaume-Uni	Entrants	144
	Sortants	114
Slovénie	Entrants	1
	Sortants	1
Suède	Entrants	14
	Sortants	10
Suisse	Entrants	18
	Sortants	1
Tchèque, République	Entrants	7
	Sortants	4
Turquie	Entrants	3
	Sortants	8
TOTAL	Entrants	574
	Sortants	350

Sources: elaboration according to the statistics from the Service des Relations Internationales of the Paris IV.

Table 28: Conventions participants

Pays	Flux	2013/2014
Allemagne	Entrants	43
	Sortants	12
Argentine	Entrants	4
	Sortants	12
Australie	Entrants	4
	Sortants	7
Brésil	Entrants	31
	Sortants	6
Canada	Entrants	14
	Sortants	17
Chili	Entrants	2
	Sortants	7
Chine	Entrants	13
	Sortants	1
Corée du sud	Entrants	8
	Sortants	3
Espagne	Entrants	5
	Sortants	2
Israël	Entrants	0
	Sortants	0
Italie	Entrants	2
	Sortants	0
Japon	Entrants	1
	Sortants	0
Liban	Entrants	0
	Sortants	0
	Entrants	7
	Sortants	0
Mexique	Entrants	1
	Sortants	1
Nouvelle-Zélande	Entrants	1
	Sortants	1
Pérou	Entrants	1
	Sortants	4
Pologne	Entrants	5
	Sortants	2
Russie	Entrants	10
	Sortants	5
Singapour	Entrants	3
	Sortants	4
Thaïlande	Entrants	0
	Sortants	3
USA	Entrants	276
	Sortants	57
TOTAL	Entrants	430
	Sortants	153

Mobility of the students taking into consideration Erasmus and Conventions – distribution through the Faculty (UFR) - 2013/2014

Table 29: Erasmus Participants – distribution through the level of study.

UFR	Flux	2013/2014
Art et archéologie	Entrants	52
	Sortants	8
Musique et Musicologie	Entrants	24
	Sortants	4
Anglais	Entrants	23
	Sortants	49
Etudes arabes et hébraïques	Entrants	3
	Sortants	0
Etudes germaniques et nordiques	Entrants	14
	Sortants	23
Etudes ibériques	Entrants	3
	Sortants	27
Etudes slaves	Entrants	9
	Sortants	0
Italien et roumain	Entrants	4
	Sortants	3
LEA	Entrants	49
	Sortants	43
Grec	Entrants	11
	Sortants	0
Langue française	Entrants	100
	Sortants	3
Latin	Entrants	12
	Sortants	4
Littérature française et comparée	Entrants	100
	Sortants	59
Géographie et Aménagement	Entrants	10
	Sortants	14
Histoire	Entrants	65
	Sortants	60
ISHA	Entrants	15
	Sortants	10
Philosophie	Entrants	65
	Sortants	25
CELSA	Entrants	6
	Sortants	18
ESPE	Entrants	9
	Sortants	0
Total	Entrants	574
	Sortants	350

Table 30: Participants of mobility through Conventions – level of study.

UFR	Flux	2013/2014
Art et archéologie	Entrants	55
	Sortants	7
Musique et Musicologie	Entrants	4
	Sortants	7
Anglais	Entrants	7
	Sortants	11
Etudes arabes et hébraïques	Entrants	2
	Sortants	5
Etudes germaniques et nordiques	Entrants	41
	Sortants	11
Etudes ibériques	Entrants	0
	Sortants	12
Etudes slaves	Entrants	10
	Sortants	7
Italien et roumain	Entrants	0
	Sortants	4
LEA	Entrants	1
	Sortants	3
Grec	Entrants	0
	Sortants	0
Langue française	Entrants	21
	Sortants	7
Latin	Entrants	0
	Sortants	0
Littérature française et comparée	Entrants	107
	Sortants	6
Géographie et Aménagement	Entrants	16
	Sortants	7
Histoire	Entrants	91
	Sortants	15
ISHA	Entrants	8
	Sortants	5
Philosophie	Entrants	54
	Sortants	13
CELSA	Entrants	3
	Sortants	33
ESPE	Entrants	0
	Sortants	0
Total	Entrants	430
	Sortants	153

Sources: Elaboration according to the Statistics from the Service des Relations Internationales of Paris IV.

Mobility of students taking into consideration Erasmus and international Conventions - distribution through the levels of study - 2013/2014

Table 31: Participants of mobility through Erasmus Program

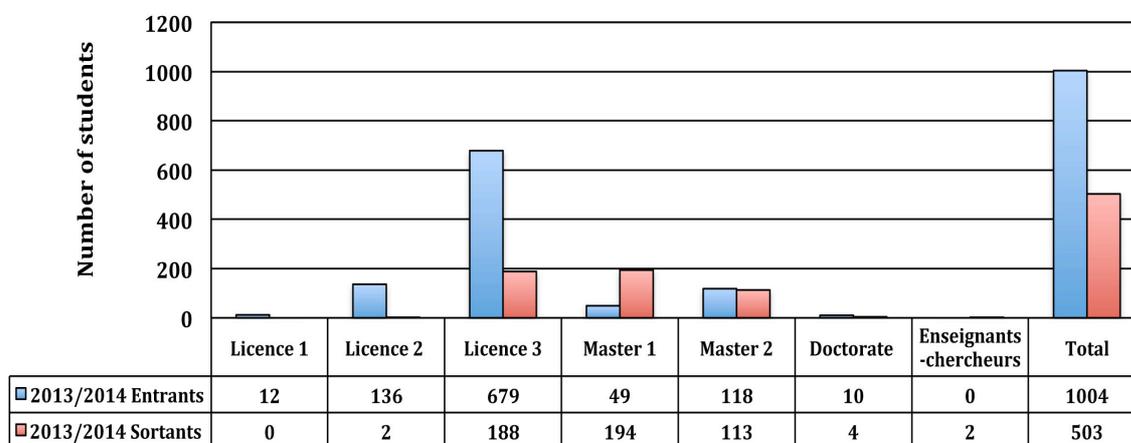
Niveau	Flux	2013/2014
L2	Entrants	54
	Sortants	1
L3	Entrants	392
	Sortants	178
M1	Entrants	25
	Sortants	105
M2	Entrants	94
	Sortants	66
D	Entrants	9
	Sortants	0
Total	Entrants	574
	Sortants	350

Table 32: Participants of mobility through international Conventions

Niveau	Flux	2013/2014
L1	Entrants	12
	Sortants	0
L2	Entrants	82
	Sortants	1
L3	Entrants	287
	Sortants	10
M1	Entrants	24
	Sortants	89
M2	Entrants	24
	Sortants	47
D	Entrants	1
	Sortants	4
Enseignants-chercheurs	Entrants	0
	Sortants	2
Total	Entrants	430
	Sortants	153

Sources: Elaboration according to the Statistics from the *Service des Relations Internationales* of Paris IV.

Chart 32: Mobility of students (Erasmus + Conventions) according to the level of study at University Paris-Sorbonne, during the year 3013/2014



Sources: Own elaboration according to the Statistics from the *Service des Relations Internationales* Paris IV.

In conclusion, during the period 2013/2014 the Service RI was responsible for management of 1507 active mobilities,¹⁵⁰ where 1004 were incoming students (30 less than in than previous year) and 503 outgoing students (41 less than in the previous year). The Paris IV **continued to host almost twice more incoming students than the French students sent abroad**. However, **taking into consideration the reciprocity approach in international policies of the Paris IV, this disproportion was improved significantly in favor of domestic students, comparing with previous**

¹⁵⁰ *Active mobility*, it is a term used here to highlight administrative responsibility for the students who are currently in move (incoming and outgoing students). Additionally the Service RI during the same period prepares the documentation for the mobility participants in the next academic year.

years. Among the UFRs most active in the international students exchanges were those related to history, literature, linguistic, CELSA and philosophy and sociology.

Most of the international mobility was managed in the framework of the European education program – Erasmus (927 students). Significant number of participants, experienced their study abroad through the international Conventions (583), nevertheless, in both cases the numbers of participants were smaller than in previous years. Most of the international Conventions were signed between the Paris IV and the countries outside of the European Higher Education Area (such as: Argentina, Australia, Brazil, Canada, Chile, China, South Korea, Israel, Japan, Lebanon, Mexico, New Zealand, Peru, Russia, Singapore, Thailand and USA); however, this year also some Italian universities started their collaboration through Conventions, like in previous years some German, Polish and Spanish universities did.

Among incoming students (1004), 574 were Erasmus participants (6 more than previous year) and 430 Conventions incomers (33 less than in previous year); among domestic students going abroad, most of them chose Erasmus program (350 outgoing; 35 less than previous year) and 153 students experienced international mobility through Conventions (24 students more than previous year).

According to the data brought by the Service RI, among the Faculties (UFR), which sent the biggest number of the students abroad in 2013/2014 should be mentioned: like in previous year ***Histoire*** (60 Erasmus and 15 Conventions), ***Littérature Française et comparée*** (6 students through Conventions and 60 through Erasmus; this UFR like in previous years accepted the biggest number of foreign students: 107 in Conventions and 100 Erasmus), ***Anglais*** almost same number like in previous year (49 Erasmus, 11 through Conventions), ***CELSA*** (33 through Conventions and 18 Erasmus) less than year before, ***LEA***¹⁵¹ less than the previous year (43 Erasmus, 3 Conventions), ***Etudes Ibériques*** more than the previous year (27 Erasmus and 12 through Conventions), ***Philosophy and Sociology*** less than previous year (25 Erasmus, 13 Conventions) and others.

The UFR, which accepted the biggest number of foreign students were: ***Littérature Française et comparée*** (as mentioned above), ***Histoire*** - 3 participants less than previous year (65 Erasmus, 91 Conventions), ***Langue Française*** - 5 participants less than previous year (100 Erasmus, 21 Conventions), ***Philosophie et Sociologie*** (65 Erasmus, 54 Conventions) less than the year before, ***Histoire de l'Art et Archéologie*** - less than previous years (52 Erasmus, 55 Conventions), ***LEA*** less participants than the previous year (Erasmus 49, Conventions 1).

The UFR ***CELSA***, ***Anglais*** and ***Etudes Ibériques*** sent more students abroad than had accepted of incoming students. The UFR Greek has not sent any student for international exchange since 2011/2012, on the other hand, this UFR participated actively in receiving foreign students (11 Erasmus participants in 2013/2014).

¹⁵¹ LEA – *Langues étrangères appliquées* – Applied linguistic.

In 2013/2014 the ESPE¹⁵² had been noted first time in the statistic related to the international mobility managed by the Service. The ESPE accepted 9 Erasmus students, however, ESPE did not have any outgoing participants.

In the 2013/2014 period, preferable **destinations of the students** of the Paris IV, similarly as it was in previous years, were countries, which culture and environment can help to improve foreign language skills; among most demanded were: English speaking countries - the UK (114 outgoing students, it was less than in previous year), the USA (57 outgoing students, it was 15 less than in previous year), Spain (56, less than in previous years), Germany (73, more than the previous year), Italy (39, a bit less than the year before). The biggest disproportion between incoming and outgoing students continued to be in the collaboration with the USA (276 incoming students). The biggest numbers of incoming students were from the German universities (118 Erasmus +43 Conventions), the UK (144 Erasmus) – in both cases more than in previous year, and Italy less than previous year (94 Erasmus, 2 Conventions).

In 2013/2014, looking at the destination countries, the Paris IV had more outgoing students than incoming one to: Ireland, Turkey, Argentina, Canada, Peru, Singapore and Thailand (see Table 28).

Taking into consideration level of study, the biggest number of domestic students went abroad – similarly to previous year - in the **Master 1** (194 students; however less than the year before), Licence 3 (188 student; more than previous year), Master 2 (113 students; less than previous year), and at the level of doctorate 4 students.

In the case of overseas students, most of them were enrolled in the Licence 3 (679, more than the year before). Furthermore, Licence 2 (136 students; less than the year before), Master 2 (118 students), Master 1 (49 students; less than in the previous year), and in doctorate were 10 foreign students, 4 more than in previous year.

2 *Enseignant-chercheurs* from the Paris IV went abroad through Conventions.

The number of the Brazilian students increased to 31 (24 participants in previous year) as a consequence of the collaboration through PLI program. 6 French students went to Brazil.

According to the statistics for the year 2013/2014, the total number of students in the international mobility managed by the Service RI was 1507. 574 students came in the Paris-Sorbonne in the framework of the Erasmus program and 430 students came though other kind of conventions and agreements. In order to take a period of study abroad most of the **domestic students** choose EHEA (**Erasmus program, 350 participants**), and **conventions were used by 153 students**. Most of the domestic students used mobility in the Licence 3 (though Erasmus and conventions) as well as in the Master 1 and Master 2. However, incoming students have mostly inscribed in the Licence 3.

¹⁵² L'ESPE - Ecole Supérieure du Professorat et de l'Education de Paris.

Conclusions for the Chapter 4: taking into consideration the number of students in international mobility (Erasmus and Conventions) managed by the Service RI of the Université Paris IV in the period from 2004/2005 to 2013/2014, it can be observed:

- Till 2010/2011 an increasing tendency among the incoming students, and since 2011/2012 decreasing numbers of incoming students; on the other hand, very slowly **increasing tendency among the domestic students choosing a period of study abroad** can be noticed. Nevertheless, the number of domestic students - participants of international mobility is almost twice lower in comparison to the group of incoming students. This situation - if properly managed - can be very enriching for the domestic students of the Paris IV. The international students are a source of diversity, experiences, perspectives and opportunities for linguistic and intercultural encounters for all these domestic students, who could not go with their mobility.
- The **principal destinations of the domestic students of the Paris IV** are: the US (through Conventions), the United Kingdom (Erasmus), Germany (Erasmus and Conventions), Spain (mostly Erasmus), Italy (through Erasmus), Canada (Conventions), etc.
- The biggest number of international students is coming to the Université Paris-Sorbonne from: the US (Conventions), the United Kingdom (Erasmus), Germany (Erasmus and Conventions), Italy, Spain (Erasmus), and other countries.
- Increasing number of incoming students, especially from Brazil, in the framework of international program collaboration (PLI) with the Sorbonne Universités has been noticed.
- **The UFR which have sent the biggest number of domestic students abroad** are: Histoire (Erasmus + Conventions), *Littérature Française et comparée* (Erasmus), CELSA (Erasmus + Conventions), *Anglais, LEA, Etudes Germaniques et Nordiques* (Erasmus + Conventions), Etudes Ibériques, Philosophy, Sociology and others.
- The principal faculties which have been chosen by foreign students to study at the Paris IV are: *Littérature Française et comparée, Langue Française, Histoire, Art et Archéologie, Philosophie* and others.
- **The domestic students have done their international mobility** mostly at the level of: Master 1 and Master 2.
- The international students have done their mobility at Paris IV mostly at the level of: Licence 3, Licence 2 and Master 1.
- Mobility of **students at doctoral level** (managed by the Service RI) is very limited, especially numbers related to the domestic students: **4** PhD students in 2013/2014 (10 incoming *doctorants* in the same academic year), **9** PhD students in 2012/2013 (6 incoming *doctorants* in the same period), **6** PhD students in 2011/2012 (8 incoming *doctorants* in the same period), **2** PhD students in 2010/2011 (24 incoming students), **3** PhD students in 2009/2010 (while 35 incoming *doctorants* in the same academic year).

Significant decrease in the number of international students (mobility) in the level of doctoral study has been noticed.

Mobility of the academic staff managed by the *Service RI* is very limited. 2 enseignants-chercheurs of the Université Paris-Sorbonne have been going with mobility period each year since 2011/2012 to 2013/2014.

The tendency related to **international mobility of students** managed by the Service RI has been matching the Paris IV international policy objectives related to **reciprocity**.

5. INTERNATIONAL MOBILITY OF THE ACADEMIC AND ADMINISTRATIVE STAFF AT THE UNIVERSITÉ PARIS-SORBONNE (PERSPECTIVE ON THE MOBILITY MANAGED BY THE SERVICE RI)

This chapter will present some overview (based on qualitative and quantitative data) on the international mobility of the academic and administrative staff managed by the *Service RI* at the Paris IV. Data related to the organization of international events managed by the *Service de la Recherche* at Paris IV from 2011-2014 will be presented. Finally, statistical data related to the visiting professors/*lecteurs* at the Paris IV will be brought (not managed by the *Service RI*).

5.1. International mobility of the academic staff of the Université Paris-Sorbonne Paris IV (general view on the participation in Erasmus program and Conventions)

Mobility of the academic staff

International mobility of the academic staff through the international programs such as Erasmus has not have any participants (neither incoming nor outgoing participants) during last years.

International mobility of the academic staff in the framework of the Conventions and agreements, managed by the *Service RI*, is very limited. In the last few years (period from 2011 to 2014) two participants per year took the opportunity to have international academic experience.

The Report of the AERES from October 2013¹⁵³ on the performance of the Université Paris-Sorbonne Paris IV mentioned “*drastic fall of number of possibility of exchange within Erasmus, the lack of interest in the exchange and or budgetary reasons limitations of possibility of invitations of foreign professors.*” These arguments were also pointed out during recent informal conversational interviews on the campus. On the other hand, around 11% of the teachers-researchers (135) of total faculty have a foreign nationality, which “*confirmed the attractiveness of the university and capacity of recruitment abroad*”.¹⁵⁴

5.2. International congresses, international symposiums (on the campus) with participation of the Université Paris-Sorbonne Paris IV

The number of international seminars/colloques at the Paris-Sorbonne University has been increasing constantly during the last few years (from 63 international events organized in 2011 to 100 international events organized in 2014).

Number of international *colloques* in the Université Paris-Sorbonne Paris IV:

- 2011: 63 per year
- 2012: 83 per year
- 2013: 93 per year
- 2014: 100 per year.

¹⁵³ AERES, (2013), *Rapport d'évaluation de l'Université Paris-Sorbonne*, Octobre 2013.

¹⁵⁴ *Ibidem*, p. 24.

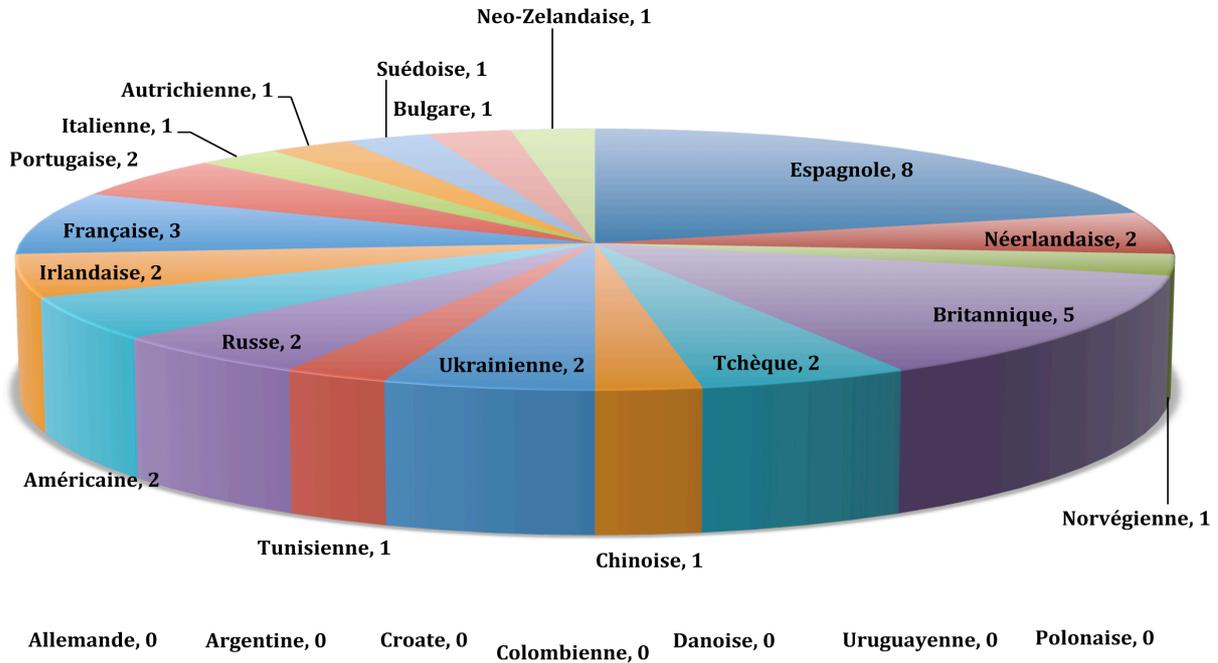
The numbers presented above have been based on the spreadsheets used by the *Service de la Recherche* to follow the contracts upon which these *colloques* have been financed. A *colloque* is different from a *journée d'étude*, where the second one is funded by a research team without the *Service de Recherche* intervention. All *colloques* are supposed to involve foreign speakers, as a requirement to be recognized, and supported economically as an international event. The number of *colloques* actually held in the *Université Paris-Sorbonne* might slightly differ from the spreadsheet. Furthermore, the way the data was recorded in the spreadsheet seems to slightly vary from year to year, but this variation does not impair the global relevance of the data.¹⁵⁵

Further research and data related to the participation of the faculty of the Paris IV in the international conferences abroad (as participants and as speakers) are needed and could be an additional valuable information about involvement of the *Université Paris-Sorbonne* in the international scientific discourse, collaboration, and international visibility.

5.3. Visiting faculty/*lecteurs* at the Université Paris-Sorbonne Paris IV (stay not managed by the *Service RI*)

Data related to visiting professors/*lecteurs* were collected specially for this report. Usually the *Service RI* does not have any statistics related to this issue.

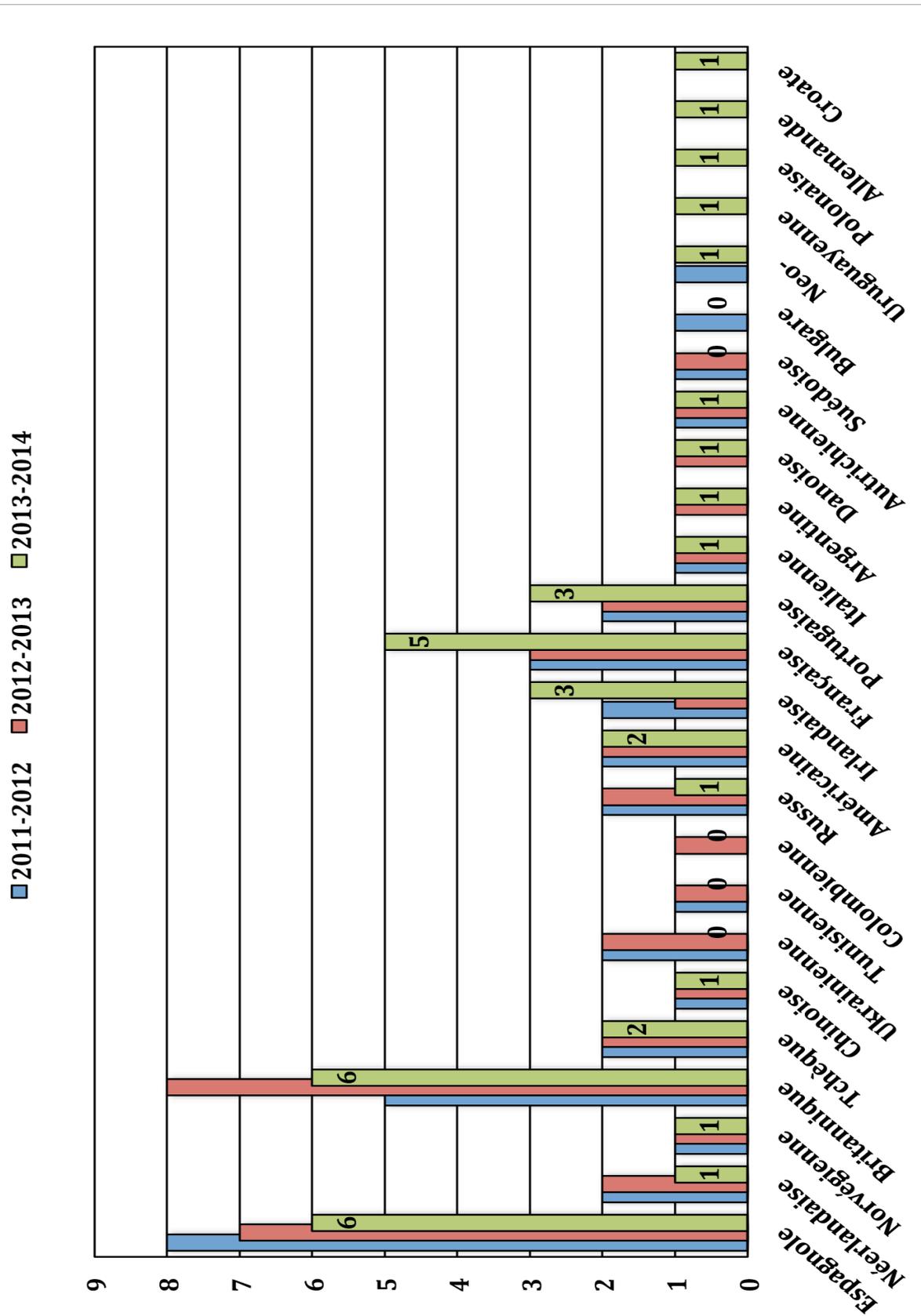
Chart 33: Number of visiting *lecteurs* at the Paris IV in 2011/2012



Sources: Own elaboration based on the data brought by the *Service RI* of the Paris IV.

¹⁵⁵ Data received from the *Service de Recherche* of the Université Paris-Sorbonne Paris IV.

Chart 36: Visiting professors/*lecteurs* at the Université Paris-Sorbonne Paris IV during the period from 2011/2012 to 2013/2014 (stay not managed by the Service RI)



Sources: Own elaboration based on the data brought by the Service RI of the Paris IV.

Conclusions: In the period 2011-2014, the *Université Paris-Sorbonne Paris IV* hosted professors/*lecteurs* from such countries as: Germany, Spain, Netherlands, Great Britain, Turkey, China, Ukraine, Tunisia, Russia, Ireland, France, Portugal, Italy, Austria, Switzerland, Bulgaria, New Zealand, USA, Argentina, Croatia, Colombia, Denmark, Uruguay and Poland. The general numbers of visiting faculty were stable and represented: 38 in 2011/2012, 40 in 2012/2013 and 40 visiting faculty in 2013/2014.

The biggest numbers of visiting faculty came each year from **Spain**, however, it has been decreasing each year (8 in 2011/2012, 7 in 2012/2013 and 6 in 2013/2014).

On the other hand, increasing tendency could be observed among the group of visiting scholars from the **Great Britain** (5 in 2011/2012, 8 in 2012/2013 and 6 in 2013/2014). Increasing tendency has been noticed also among the **French** born visiting faculty (3 in 2011/2012, 3 in 2012/2013 and 5 in 2013/2014). English native speakers from **Ireland** also are among the scholars mostly coming to the Paris IV (in numbers they represent: 2 in 2011/2012, 1 in 2012/2013 and 3 in 2013/2014).

During these 3 years, increasing differentiation among numbers of visiting professors/*lecteurs* can be noticed especially in case of Poland, Germany, Croatia and Uruguay. On the other hand, comparing with previous years, in 2013/2014 the Paris IV has not had the visiting faculty from: Bulgaria, Colombia, Ukraine, Tunisia and Sweden.

It could be valuable to have also data related to the numbers and tendencies of the Paris IV's faculty taking their visiting academic positions abroad. Further qualitative and quantitative research on this issue is recommended.

5.4. International mobility of the administrative staff of the *Université Paris-Sorbonne* (mobility managed by the Service RI)

Mobility of the administrative staff of the *Service des Relations Internationales*

International mobility among the administrative staff of the *Service des Relations Internationales* of the Paris IV is very limited. It is mostly related with the limitations of budget as well as with accumulation of work, that in case of someone's mobility would be not person to perform it. The strategy of the *Service RI* related to this issue is to allocate the funding in the important visits with the purpose of building and maintaining international relationships done by the *Professeur délégué aux Relations Internationales*. A few (less than 3) international meetings/conferences with the participation of the administrative staff of the *Service RI* had place in the last 5 years (including academic year 2013/2014).

Mobility of the administrative staff of the Paris IV

International mobility of the administrative staff of the Paris-Sorbonne University (Paris IV) is very limited. Taking into account the Erasmus program or international conventions, or any other kind of program which could be managed by the *Service RI*, the mobility of the administrative staff is = 0.

On the other hand, should be highlighted, that the mobility of administrative staff, which had place (for example: some of the administrative staff responsible for the management of the Doctorate *cotutelle*), had a very positive impact on the future international collaboration.¹⁵⁶

¹⁵⁶ Information gathered during meetings and informal conversational interviews with the administrative staff and the staff responsible for the Doctoral *cotutelle* of the Paris IV.

5.5. Conclusions

This chapter presented general overview on the mobility of the academic and administrative staff managed by the *Service RI* of the *Université Paris-Sorbonne*. General overview on the number of international events organized on the campus (2011-2014) and managed by the *Service de la Recherche*, as well as data related to visiting faculty/*lecteurs* at the Paris-Sorbonne have been presented.

Qualitative and quantitative data showed limited academic and administrative mobility at the Paris IV (perspective till 2014). In case of academic staff 's mobility through the Erasmus program, there was no participant (neither outgoing nor incoming). In case of international mobility through Conventions and agreements (period 2011-2014), two participants per year took an opportunity to have international academic experience. Lack of interest in exchange, lack of time, budgetary reasons, and limitations of possibility of invitations of foreign faculty are mentioned among main reasons of this situation.

In case of the administrative staff of the *Service RI*, and administrative staff of the Paris IV in general (taking into consideration mobility managed by the *Service RI*), participation in the international exchange is very limited. Because of budgetary reasons, and limited number of administrative staff of the *Service RI*, budget is allocated to the strategic visits done by the *Professeur délégué aux relations internationales*. No international mobility among administrative staff of the Paris IV had place.

Referring to the organization of the international congresses and symposiums (on the campus) with participation of the *Université Paris-Sorbonne* managed by the *Service de la Recherche* (period 2011-2014), an increase of the number of this kind of events can be noticed (63 in 2011 and about 100 in 2014). The university provides financial support for the organization of the international events.

Finally, statistical data related to the visiting professors/*lecteurs* at the Paris IV were presented. The *Service RI* does not manage this international academic collaboration, and the information was gathered specifically for this Report. The faculty came from all continents. The numbers of visiting faculty were stable and represented: 38 faculties in 2011/2012, 40 in 2012/2013, and 40 visiting faculty in 2013/2014.

The biggest numbers of visiting faculty came from **Spain**; however, it has been decreasing each year. On the other hand, increasing tendency could be observed among the group of visiting scholars from the **Great Britain**. Increasing tendency has been noticed also among the **French** born visiting faculty, and English native speakers from **Ireland**. During those 3 years increasing differentiation among numbers of visiting *lecteurs* can be noticed, especially in case of Poland, Germany, Croatia, and Uruguay.

It could be valuable to have also data related to the numbers and tendencies of the Paris IV's faculty taking their visiting academic positions abroad. Further qualitative and quantitative research on this issue is recommended. Moreover, further research and collection of data related to the participation of the faculty of the Paris IV in the international conferences abroad are needed. It could be additional valuable information about involvement of the Paris-Sorbonne in the international scientific discourse, collaboration and international visibility.

6. CHOSEN SERVICES RESPONSABLE FOR THE MANAGEMENT OF THE INTERNATIONAL COLLABORATION THROUGH RESEARCH AT THE UNIVERSITÉ PARIS-SORBONNE PARIS IV¹⁵⁷

Apart from the *Service RI*, other services of the Paris IV are responsible for the implementation of the international policy of the university. Among them should be mentioned the *Service de la Recherche*, in charge of the management of the Research and its international dimension, as well as the *Bureau Europe* of the Sorbonne Université. The purpose of this chapter is to outline actions that strengthen internationalization of the Research at Paris IV. Quantitative analysis related with international doctoral cotutelle at Paris IV will be presented. Principal objectives and performance of the *Bureau Europe* – centralization strategy focused on the internationalization of the Research of the members of the SU, will be drafted. State of participation (till 3 October 2014) of the Paris IV's researchers in the international research through collaboration with the *Bureau Europe* will be mentioned.

6.1. Actions of the internationalization of research at the Université Paris IV

Research of the Université Paris-Sorbonne in numbers represents:

- 630 *enseignants-chercheurs* (including 230 professors) and 1800 *doctorants*
- *enseignants-chercheurs* are spread in 40 *équipes de recherche* (15 associated with the CNRS).¹⁵⁸

In order to encourage international dimension, transdisciplinarity, and innovation giving added value to the research, some strategic elements (*Promotion of the initiative of excellence*) have been introduced:

- Creation of 15 Labex,
- Economical support for the organization of international scientific events and publications,
- PUPS – Presses de l'Université Paris-Sorbonne 4,¹⁵⁹
- Creation of *Bureau Europe* – in order to help and encourage especially non experienced researchers in preparation of international research projects in the European framework programs.¹⁶⁰
- Position of *chargé des contrats de recherche* – it was created in order to help to the researchers in administrative issues related with management of the international research projects.
- *International cotutelles* of the PhD projects.

¹⁵⁷ Research on the practices related with international dimensions of the Research at the Université Paris-Sorbonne is recommended. During informal conversational interviews with the administrative staff of the different university's services, the need of descriptive information and statistical data related to the *Service de la Recherche* and other services of the Paris IV, has been highlighted. The "transparency" and "easy flow" of information among different services has been mentioned as "very required".

¹⁵⁸ *Guide de l'étudiant Paris-Sorbonne 2013/2014*. p. 12.

¹⁵⁹ PUPS <http://pups.paris-sorbonne.fr>.

¹⁶⁰ Some additional information about the Bureau Europe and its performance will be presented further in this chapter.

6.2. *Service des Doctorats - International cotutelles in the Université Paris-Sorbonne Paris IV (from 2011/2012 to 2013/2014)*

Doctoral programs are periods of work and creativity that offer to young researchers a real professional experience. Candidates learn the art of research while researching in an international context.

The irreversible internationalization of higher education programs has spurred France's doctoral departments - and their parallel structures abroad - to develop programs for the joint supervision of doctoral research and dissertations. Such programs carry the advantages of bilateral scientific cooperation, and the participation of two expert advisers allow to shape and guide the original work of doctoral candidates.

International or European *Cotutelle* operates under the terms of a formal agreement governing all facets of a candidate's doctoral program, from admission and enrollment to the defense of the dissertation, and the award of one or more Doctoral Degrees.¹⁶¹

International doctoral *Cotutelles* at Paris IV are managed by the *Service des doctorants*, which collaborates with seven Doctoral Schools of this university. Among Doctoral Schools (*Ecole Doctorale*) of the *Université Paris-Sorbonne* can be listed:

- *ED I: Mondes anciens et médiévaux*
- *ED II: Histoire moderne et contemporaine*
- *ED III: Littérature Française et comparée*
- *ED IV: Civilizations, Cultures, Littératures et Sociétés*
- *ED V: Concepts et langages*
- *ED VI: Histoire de l'Art et Archéologie*
- *ED VII: École Doctorale de Géographie de Paris: Espaces, Sociétés, Aménagement.*

In October 2014, 335 *doctorants*¹⁶² (out of the total number of *doctorants* 1800)¹⁶³ were enrolled in an international doctorate *cotutelle* at the Université Paris-Sorbonne Paris IV.

Taking into consideration period from 2011/2012 to 2013/2014 - 204 international *cotutelles* were conducted. Analyzing distribution of the students (*cotutelle*) according to the scientific disciplines (doctoral schools) at Paris IV, can be observed: *Concepts et langages* (57 students in 3 years), *Civilisation, cultures, Littératures et Sociétés* (47 students in 3 years), *Littérature Française et comparée* (34 students in 3 years), *Mondes antiques et médiévaux* (24 students in 3 years), *Histoire moderne et contemporaine* (20 students in 3 years), *Histoire de l'Art et Archéologie* (18 students in 3 years) and *Géographie* (4 students in 3 years). It was documented below in the Table 33, and Chart 35.

¹⁶¹ Campus France. International *Cotutelle* of thesis.

http://ressources.campusfrance.org/catalogues_recherche/diplomes/en/cotutelle_en.pdf. [Accessed 12.12.2015].

¹⁶² Data gathered during conversational interviews in the *Service des Doctorats* of the Paris IV (October, 2014).

¹⁶³ *Guide de l'étudiant Paris-Sorbonne 2013/2014*. p. 12.

Taking into consideration the participation of the PhD students in international/ European *cotutelle*, the case of the **Ecole Doctorale IV** (*Civilisations, cultures, littératures et sociétés*) of the Paris IV will be presented: in June 2014, **238** students (total: national and international) have been enrolled in PhD courses in that School. In this group - 104 were international students, and among them only 8 were enrolled in *cotutelle* supervision. According to the origin of the students in international *cotutelle*: only 2 of them were French students, and 6 of them were foreign students taking their part of study at the Paris IV. ¹⁶⁴

Chart 37: Distribution of students in the international doctoral *cotutelle* according to scientific discipline; (2011-2014) – Université Paris-Sorbonne Paris IV

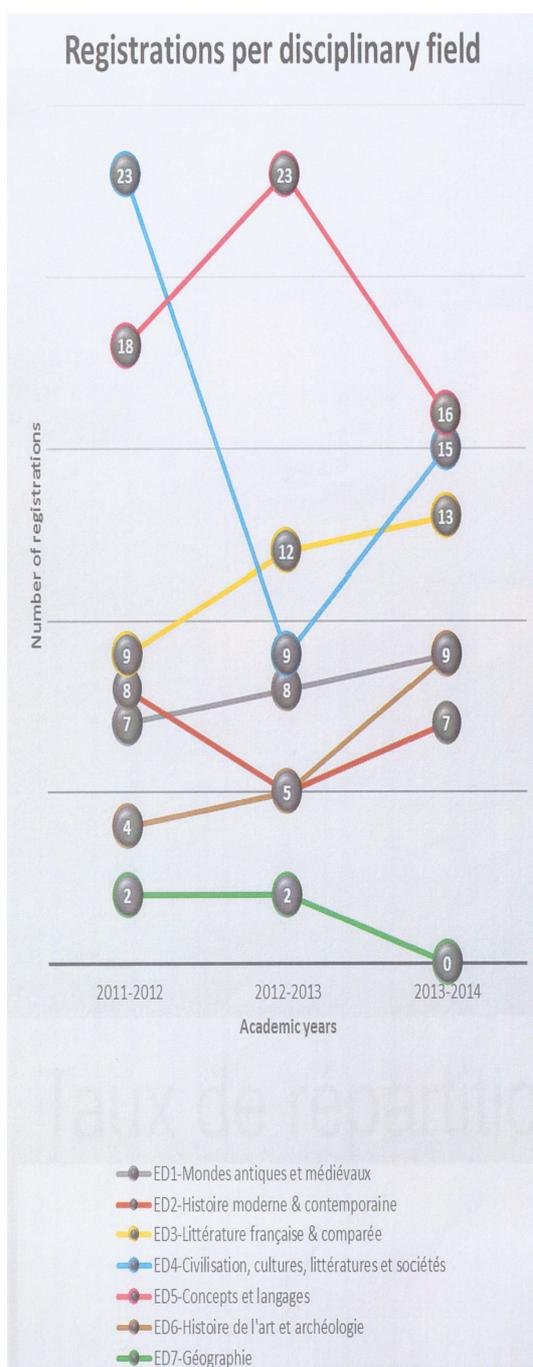


Table 33: Distribution of students in international doctoral *cotutelle* according to scientific discipline (2011-2014)

Champs disciplinaires concernés	Année universitaire 2011-2012	Année universitaire 2012-2013	Année universitaire 2013-2014	Total par champ disciplinaire (nombre)	Total par champ disciplinaire (pourcentage)
Mondes antiques et médiévaux	7	8	9	24	11,76%
Histoire moderne et contemporaine	8	5	7	20	9,80%
Littérature française et comparée	9	12	13	34	16,66%
Civilisation, cultures, littératures et sociétés	23	9	15	47	23,05%
Concepts et langages	18	23	16	57	27,94%
Histoire de l'art et archéologie	4	5	9	18	8,82%
Géographie	2	2	0	4	1,96%
Total par année (nombre)	71	64	69	204	
Total par année (pourcentage)	34,80%	31,37%	33,83%		

Sources: Statistics elaborated by the Office responsible for the international *cotutelle* of the *Service de la Recherche* of the Université Paris-Sorbonne Paris IV.

¹⁶⁴ Data gathered during conversational interviews in the *Ecole Doctorale IV* of the Paris IV (June, 2014).

Chart 38: Registration rate of the students involved in the international doctoral *cotutelle* – distribution by year and discipline in the Université Paris-Sorbonne Paris IV

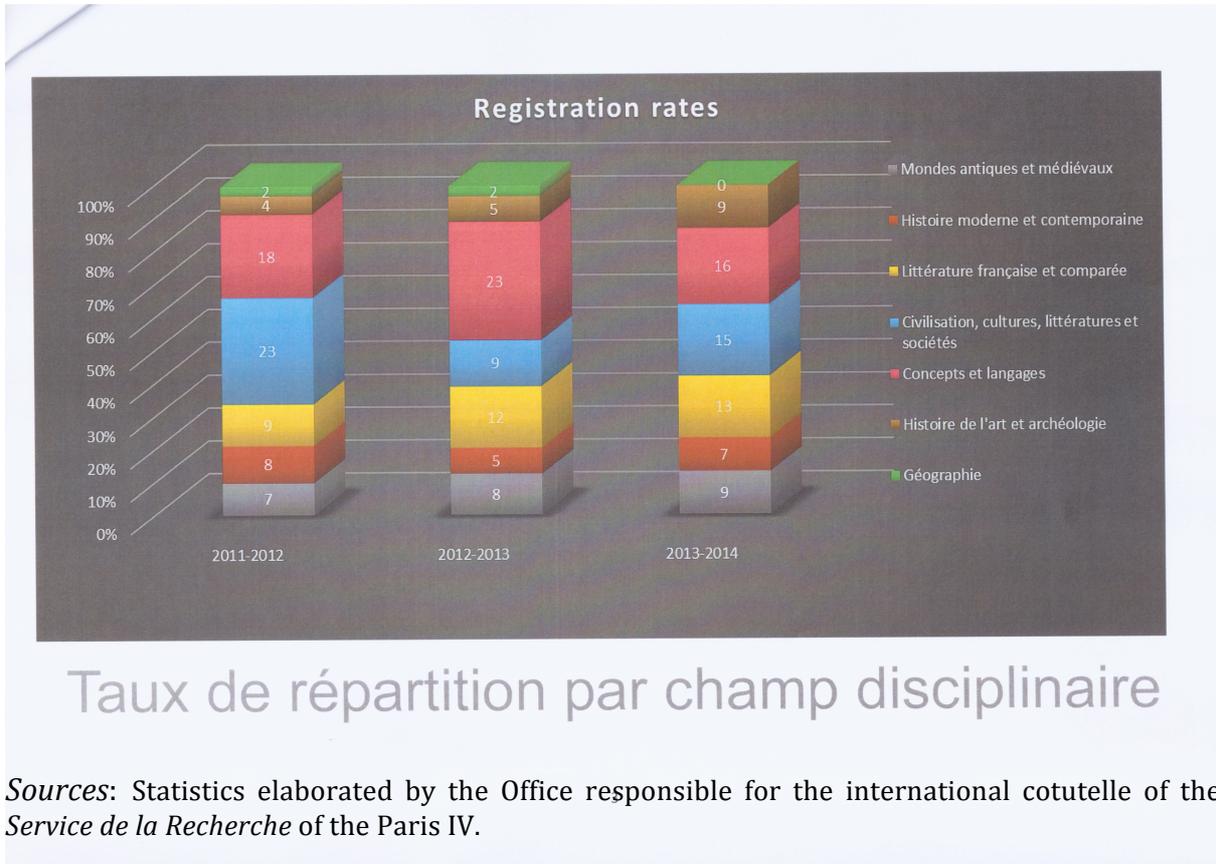


Table 34: Students involved in the international doctoral *cotutelle* – distribution by year and partner country of the Université Paris-Sorbonne Paris IV

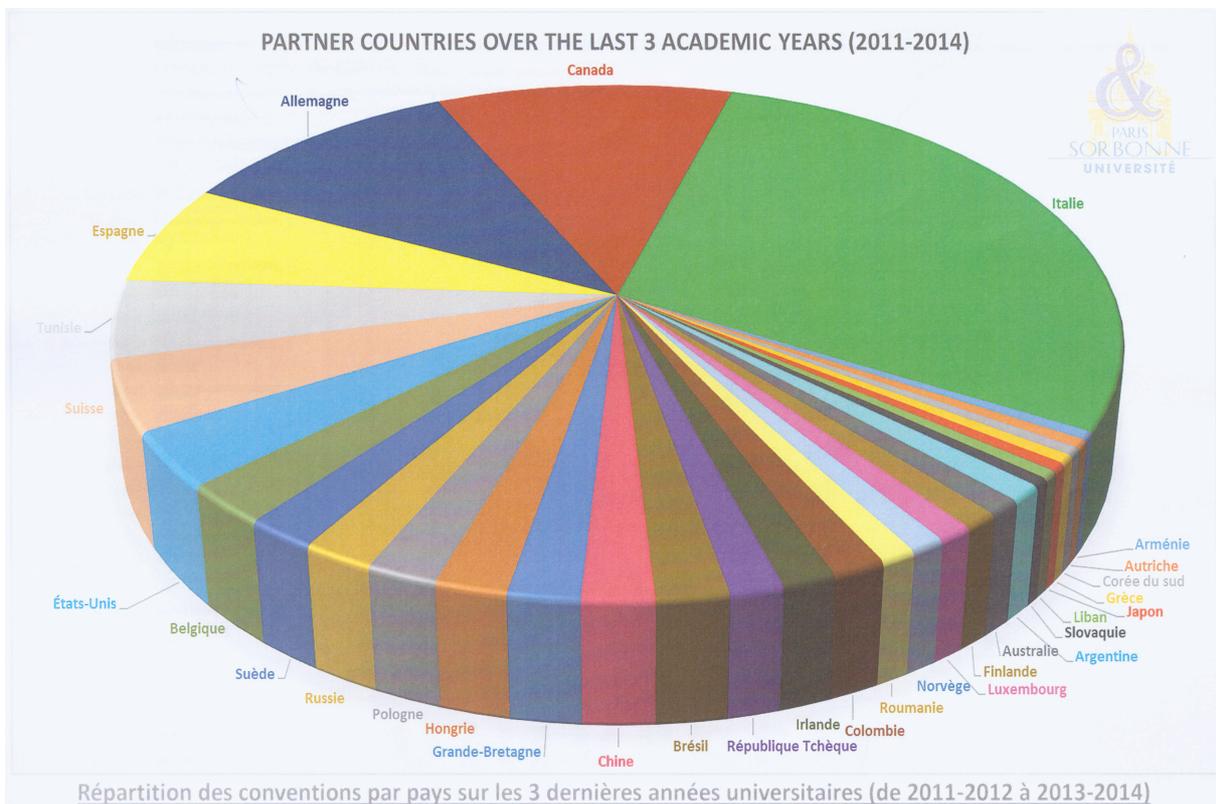
Pays partenaire	Année universitaire 2011-2012	Année universitaire 2012-2013	Année universitaire 2013-2014	Total par pays partenaire (nombre)	Total par pays partenaire (%)
Allemagne	5	9	8	22	10,78%
Argentine	0	2	0	2	0,98%
Arménie	0	0	1	1	0,49%
Australie	0	0	2	2	0,98%
Autriche	0	1	0	1	0,49%
Belgique	3	0	2	5	2,45%
Brésil	1	3	0	4	1,96%
Canada	10	6	7	23	11,27%
Chine	1	1	2	4	1,96%
Colombie	0	1	2	3	1,47%
Corée du sud	0	1	0	1	0,49%
Espagne	3	3	7	13	6,37%
États-Unis	3	2	2	7	3,43%
Finlande	0	1	1	2	0,98%
Grande-Bretagne	3	0	1	4	1,96%

SERVICE DES RELATIONS INTERNATIONALES DE L'UNIVERSITÉ PARIS-SORBONNE PARIS IV

Grèce	1	0	0	1	0,49%
Hongrie	1	2	1	4	1,96%
Italie	25	14	20	59	28,92%
Irlande	0	1	2	3	1,47%
Japon	0	1	0	1	0,49%
Liban	1	0	0	1	0,49%
Luxembourg	0	2	0	2	0,98%
Norvège	0	1	1	2	0,98%
Pologne	2	0	2	4	1,96%
République Tchèque	1	1	1	3	1,47%
Roumanie	2	0	0	2	0,98%
Russie	1	3	0	4	1,96%
Slovaquie	1	0	0	1	0,49%
Suède	0	2	2	4	1,96%
Suisse	4	2	3	9	4,41%
Tunisie	3	5	2	10	4,90%
Total	71	64	69	204	Environ 100%

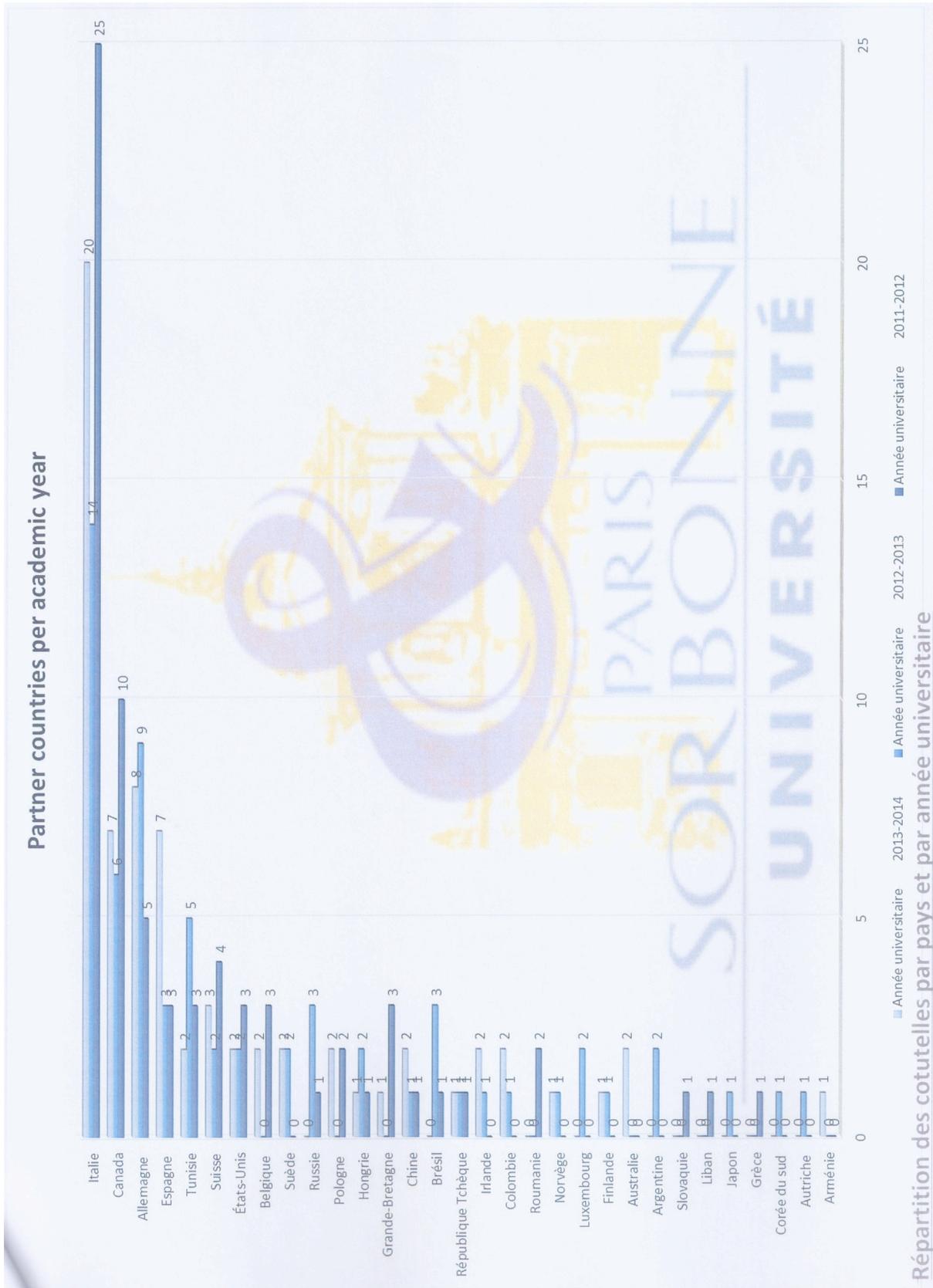
Sources: Statistics elaborated by the Office responsible for the international *cotutelle* of the *Service de la Recherche* of the Université Paris-Sorbonne Paris IV.

Chart 39: Partner countries in the international doctoral *cotutelle* over 3 academic years (2011-2014) – distribution of international conventions in the Université Paris-Sorbonne Paris IV



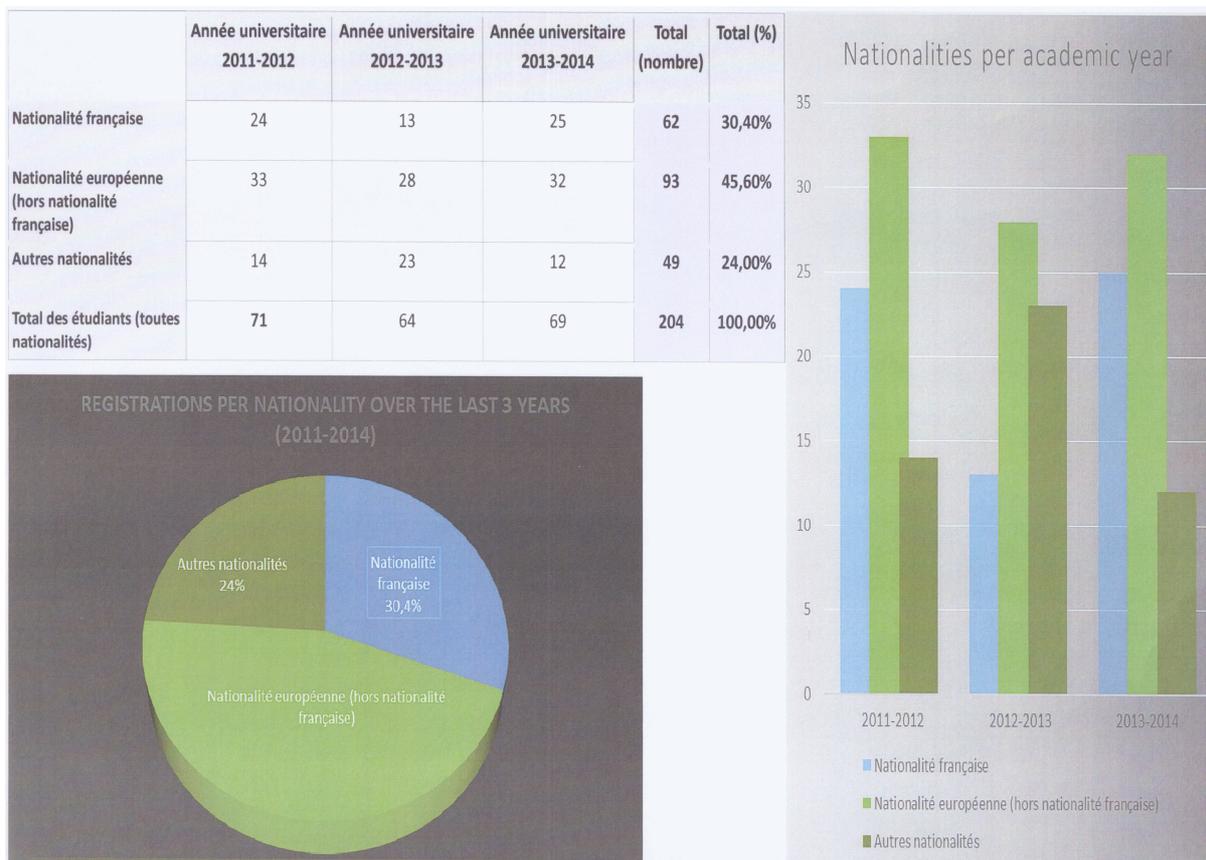
Sources: Statistics elaborated by the Office responsible for the international *cotutelle* of the *Service de la Recherche* of the Université Paris-Sorbonne Paris IV.

Chart 40: Partner countries in the international doctoral *cotutelle* over 3 academic years (2011-2014) – distribution of international Conventions in the Université Paris-Sorbonne Paris IV



Sources: Statistics elaborated by the Office responsible for the international *cotutelle* of the *Service de la Recherche* of the Paris IV.

Chart 41: Nationality of the students enrolled in the international *cotutelle* at the Université Paris-Sorbonne Paris IV (2011-2014)



Sources: Statistics elaborated by the Office responsible for the international *cotutelle* of the *Service de la Recherche* of the Paris IV.

Statistical data showed above have been gathered on the basis of the list of admission in the *cotutelle* in 2011/2012, 2012/2013, and 2013/2014 (Chart 39). The biggest number represents the European participants (counted without the French students: in 2011/2012 - **33** participants, in 2012/2013 - **28** students, and in 2013/2014 - **32** students). Second group, according to the country of origin, were the **French students** (**24** in 2011/2012, **13** in 2012/2013, and **25** in 2013/2014); and the third one with decreasing tendency - the international students (country of origin - outside of Europe: **14** students in 2011/2012, **23** in 2012/2013, and only **12** in 2013/2014).

Table 34 and Chart 39 show that the Paris IV had 204 doctoral students enrolled in the international *cotutelle* from 2011/2012 to 2013/2014. The biggest number of doctoral *cotutelle* during those three years was in collaboration with the Italian (59 participants), Canadian (23), German (22), Spanish (13), Tunisian (10), Swiss (9) and the USA (7) universities. Less active collaboration in the framework of the international *cotutelle* could be noticed with: Belgium (5 participants); China, Brazil, Great Britain, Poland, Hungary, Russia, Sweden (4 participants per country); Colombia, Czech Republic, Ireland (3 participants per country); Argentina, Australia, Finland, Luxemburg, Norway (2 participants per country); and Armenia, Austria, South Korea, Slovakia, Lebanon, Japan, and Greece (1 participant per country).

Further research (quantitative and qualitative) on the international dimension of the research through international and European PhD *cotutelle* in the Université Paris-Sorbonne Paris IV is recommended.

6.3. Bureau Europe – Internationalization of Research of the members of the SU

Sorbonne University created the *Bureau Europe*, with the objective to make all its members individually and collectively more visible in the research programs of the European Union. The increase in contractual activity with the European institutions is done through sharing of knowledge and skills to become collectively more efficient. Special attention is given to the international dimension of the research at the Paris IV.

This approach is developed to increase the expertise of the community in the experiences that the *Bureau Europe* creates. In this way everyone benefits from the expertise of the best practices, collective and individual problems can be discussed so that everyone can optimally support its research community by the European funding.

In order to reach these objectives, the Office¹⁶⁵ organizes monthly round tables based on themes identified by all partners (examples: dematerialization, calculation of productive hours, Open Access, Open Data, third partners, etc.). These meetings allow to the experts in the field and more novices to meet, exchange and learn through the process.

Meanwhile, the *Bureau Europe* serves with constant consultations about possibility of participation in international research projects as well as writing of the proposals. The Office organizes trainings open to all members of the Sorbonne University, faculty and staff. Thus, the Office has organized 9 trainings, which have met over 370 persons of all member institutions around the following themes:¹⁶⁶

- Digitalization in the framework of the European research funding Horizon 2020
- Securing European funding and intellectual property
- Writing a winner ERC (European Research Council) proposal
- Writing the impactful part of the projects H2020.

Main sources available to the community of the *Sorbonne Universités* through the Bureau Europe are:

- joint training for researchers, faculty members and / or administrative staff sharing good practices in periodic roundtables;
- awareness raising/sensibilisation, information and communication to different academic communities;
- support of meetings for the preparation and writing of collaborative projects.

In relation to the collaboration between *Bureau Europe* and researchers of the Paris IV, some steps forward (mostly focused on sensibilisation, face-to-face appointments and round tables) have taken place. However, the internationalization of the research at Paris IV is not institutionalized. Lack of statistics and organized data related to the international dimension of the research at the Paris IV makes the

¹⁶⁵ Office – understood here as the *Bureau Europe*.

¹⁶⁶ Sorbonne Universités, *Bureau Europe*: <http://www.sorbonne-universites.fr/actions/recherche/ouverture-international/bureau-europe.html>. [Accessed 12.12.2015].

transparency, and communication about these issues difficult. It is due to the organizational culture of the Paris-Sorbonne as well as the culture promoted between the Sorbonne's researchers and their international scientific partners. Nevertheless, according to the information gathered during interviews (with faculty and administrative staff), the international scientific collaborations between researchers of the Paris IV and foreign universities have been developed and actively maintained. This state of affairs related to the lack of quantitative evaluation¹⁶⁷ of the research is appreciated by many faculty, and perceived as an academic freedom so much needed for creative results at work.

For the date October 3rd 2014, the *Bureau Europe* could inform about some of the international research projects with participation of the faculty of the Université Paris-Sorbonne Paris IV:¹⁶⁸

- 1 international collaborative project (H2020)
- 2 Maria Curie Skłodowska Scholarships
- 4 European projects managed by the CNRS.

6.4. Conclusions

Implementation of international dimension in Higher Education and Research requires holistic organizational and pedagogical strategy. At the Paris-Sorbonne University, the *Service RI* is responsible for the management of international mobility of students (mostly in Licence and Master, on the doctoral level in very limited number), faculty, and administrative staff under the umbrella of the European program – Erasmus, and international academic Conventions and Agreements.

The purpose of this chapter was to outline actions that strengthen internationalization of the Research at Paris IV. Because of that, it has been focused on the performance of chosen services that are in charge of the implementation of the university's international policy in the research area. Among them should be mentioned the *Service des doctorants*, the position of the *Chargé des contrats de recherche* (both related with *Service de la recherche*), and the *Bureau Europe* (of Sorbonne Université).

The biggest change which has been noticed, during last years, in the traditional French Université Paris-Sorbonne in the area of Research it is a movement towards "*research's americanization and institutionalization*".¹⁶⁹ Replying to those challenges, the research policy of the Paris IV is based on the synergy of three key areas: the disciplines of Literature and Human Sciences (from classic to most recent), Languages and Civilizations, and the application of digital methodology to the Humanities and Science of Languages.¹⁷⁰ Moreover, culture of the institutionalization of the international collaboration through research has been introducing by policies and actions of the SU.

¹⁶⁷ French managerial culture prefers qualitative over quantitative information. Rajot, J. (1993). France. In Edit: R. B. Peterson. *Managers and national culture. A global perspective*. Quorum books. London. ISBN:0-89930-602-0. P.77.

¹⁶⁸ Data brought (during informal interview) by the *Bureau Europe* on October 3rd 2014. It should be pointed out that, more international projects with participation of the Paris IV's faculty, about which the *Bureau Europe* has not been informed, can exist.

¹⁶⁹ Information based on the informal interviews with the staff of the *L'école doctorale IV of the Paris IV (June 2014)*.

¹⁷⁰ Data gathered from: 1) institutional Website of the *Université Paris-Sorbonne. La Recherche*. <http://www.paris-sorbonne.fr/la-recherche/> [Accessed 15.12.2015]; 2) *Guide de l'étudiant 2013/2014*, p. 108.

Furthermore, the participation in the SU alliance encourages international dimension, transdisciplinarity, and innovation in research of the Paris IV. Through the project of the *Promotion of the initiative of Excellence*, some elements of organizational strategy have been introduced, such as: creation of 15 Labex; economical support for the organization of international scientific events and publications (increase of those events was noted); creation of new elements of the Paris IV landscape (PUPS and *Bureau Europe*) to help and encourage especially non experienced researchers in preparation of international research projects in the European framework programs, and to improve SU members international visibility; position of *Chargé des contrats de recherche*, and encouragement to participation in the international *cotutelles* of the PhD projects, etc.

International *cotutelles* of the PhD students from seven Doctoral Schools of the Paris IV are managed by the *Service des doctorats*. According to the data brought by this *Service*, 204 students (period 2011/2012 – 2013/2014) out of total number of 1800 doctoral students of the Paris IV were preparing their research under international supervision. Most of the international research collaboration through a supervision of a doctoral thesis was done by: ED V: *Concepts et langues* (57 students in 3 years), ED IV: *Civilisation, cultures, littératures et sociétés* (47 students in 3 years), ED III: *Littérature Française et comparée* (34 students in 3 years), ED I: *Mondes antiques et médiévaux* (24 students in 3 years), ED II: *Histoire moderne et contemporaine* (20 students in 3 years), and ED VI: *Histoire de l'Art et Archéologie* (18 students in 3 years). The smallest number of young researchers in the international cotutelle was noted in *ED VII: Géographie* (4 students in 3 years).

Among young researchers in international *cotutelle* (2011-2014), the biggest number represents the European participants (103); second group, according to the country of origin, were the French students (62), and the third one with decreasing tendency in 2013/2014 were the international students with country of origin outside of Europe (49 students).

The most active research collaboration through international doctoral *cotutelle* (2011/2012- 2013/2014) was observed between the Paris IV and the Italian, Canadian, German, and Spanish universities. The Tunisian, Swiss and American universities were more present in this kind of collaboration than for example Great Britain, Ireland, China, Brazil or Lebanon (see more details p. 108-111).

SU created the *Bureau Europe*, with the objective to centralize organization of the international research, and make all its members individually and collectively more visible in the EU's research programs. To reach these objectives, the Bureau organizes monthly round tables based on themes identified by all partners. It gives an opportunity to have meeting of more experienced and new researchers who wish to participate in the international research projects. The Office organizes trainings open to all members of the SU, faculty and staff, and helps in the preparation of the research proposal.

Development of the culture of transparency in execution of the international policy of the Paris IV, clear communication on mission, vision, and strategies related with international dimension of Research in Paris IV and SU, is recommended. Further research (quantitative and qualitative) on the internationalization efforts and its impact on the knowledge generation and population of the *Université Paris-Sorbonne* is recommended.

7. EXECUTIVE SUMMARY

Considering the global perspectives on the higher education and research, three trends characterized their changes in the last decades: *transnationalization*, *multipolarization* and *diversification*.¹⁷¹ They are closely related with mobility. Referring to the **mobility**, we are talking about 4 millions of international students today, and the number is expected to be higher than 7,5 millions in 2025. Among the countries that welcomed most of the foreign students in 2015 were: the USA, the UK, China, Germany (+ 7% in 2015) and **France** (+ 1% in 2015). Because of that, it is not surprising that global and international education - related so strongly with students mobility - impacted also the shape of the French education as well as French scholars perspectives related to their professional formation and career development. According to the 2015 *Open Door Data*¹⁷² the **students with French origin occupied the 3rd place** (after English and German) among the number of the European students going to the USA and these trends continue to grow (students of French origin in the USA: 8,302 in 2013/2014 and 8.743 in 2014/2015).¹⁷³ Already in 2012, according to the UNESCO figures, **France was the third most popular host country** among international students, hosting some 271 000 students. France, therefore, attracts 6.8% of all students enrolled outside their country, which situated the country in the role of a key player in the internationalization process. The French Higher Education (HE) system has many assets, but it must overcome major challenges in order to maintain its market share in ever more competitive international environment.

Remembering about the global context of the higher education and research presented above, this report (ethnographic, quantitative and qualitative study) had as a principal objective to show the **role of the Service RI in the implementation of the international policy** of one of the oldest and prestigious European universities – the Paris-Sorbonne Paris IV.

The Université Paris-Sorbonne (Paris IV) is a university placed in the very international context of Paris city and **is finding its own way** to respond to the challenges of the globalization. This university is finding itself in the framework of European requirements, French policies and its own historical heritage. It neither moves fast in the Anglo-Saxon way of internationalization (what has been strongly taken as a pattern by the Asian universities) nor the concept of the "*internationalization at home*" (case of many American, Australian and Nordic universities) can be observed here. The practices of massification in the policy of internationalization (which can be observed for example in some Spanish and Asian universities, etc.) are not among its objectives. However, the **reciprocity** has been chosen as a key factor of its policy. The university is in a constant process of changes, and as a part of the COMUE, is slowly becoming more

¹⁷¹ France Stratégie (2013), '*Quelle France dans dix ans ?*', An introduction to the governmental seminar, 19th August 2013, <http://www.strategie.gouv.fr/publications/france-dix-ans>. [Accessed 12.12.2015].

¹⁷² *Open Doors Report* <http://www.iie.org/opendoors>. (*Open Doors*, supported by a grant from the Bureau of Educational and Cultural Affairs at the U.S. Department of State, is a comprehensive information resource on international students and scholars studying or teaching at higher education institutions in the United States, and U.S. students studying abroad for academic credit at their home colleges or universities).

¹⁷³ The trends to have a period of study outside of the country, by American students continue to grow; in recent years the favorite destination of the American students is Europe; and France gathers 2013/2014 = 17, 220 students and 2014/2015 = 17,597 students, which places it in the 4th place (after the UK, Italy and Spain) as a host country to the Americans. *Open Doors Report*. [Online]. Available: <http://www.iie.org/opendoors>. [Accessed 12.12.2015].

dynamic, interdisciplinary, and more visible internationally. Often it is forgotten that the first document of the Bologna Process (1999), which has been preparing the European universities for transparency, recognition of the qualifications and massive mobilities within Academia, was signed firstly in Sorbonne (1998, Sorbonne Declaration).

The Paris IV is a case of educational institution with a rich historical and scientific background, and with a high scientific prestige, which has been created during centuries. This prestige has become mythical within its own population as well as among the stakeholders at national and international level. It has been also visualized in the World Reputation Ranking where the Université Paris-Sorbonne Paris IV has been placed on the 51-60 positions (2015) and previously on the 71-80 positions (2013, 2014).

Taking into consideration the global changes and the duty a university has towards the society, the Paris-Sorbonne University promotes **reciprocity, exchange, and portage** in the approach to international collaboration in the area of Higher Education and Research. This University has mostly chosen program strategies towards internationalization. Moreover, an organization strategy - through the participation in the Sorbonne University alliance - has been planned to be more and more visible in the future. The digitalization, development of collaborative skills in diverse environment and transdisciplinarity with the involvement of the international dimension (through foreign language training, international mobility and collaboration in international transdisciplinary projects) compose the principal lines of the innovation and strategic development of the Sorbonne Universités, and of the Université Paris-Sorbonne Paris IV as its active member.

On the campus, the Paris IV international policy is introduced into the practice mostly by administrative establishments such as: *Service des Relations Internationales*, *Maison de la Recherche*, *Service de la Recherche*, *Service des Doctorats*, *Bureau Europe (collaborative entity of the COMUE focused on the internationalisation of the research)* and others. However, this report has been focused mainly on the *Service des RI* and its nearest context. The statistical data about international doctoral *cotutelle (2011-2014)* were made available by the *Service des Doctorats*, and the quantitative analysis of the international visiting faculty (2011-2014) at Paris IV has been presented.

The international policy of the institution is immersed into the European framework of the Bologna Process as well as national policies given by the French Ministry of Education. The Bologna requirements have been accomplished, what can be observed in the academic formation divided into *Licence 1*, *Licence 2*, *Licence 3*, Master 1, Master 2 and 3 years doctoral studies. The ECTS credits are in use. However, the teacher-centered education dominates in the traditional Paris IV's culture.

The principal objective of the international policy of the Université Paris-Sorbonne is **reciprocity** in relation to international exchange of the students, researchers, knowledge, and experiences. The international mobility managed by the *Service RI* (in the framework of Erasmus Program and other bilateral Conventions and Agreements) reflects this tendency. When analyzing the period from 2005/2006 to 2013/2014, a slow decrease of the number of incoming students has been observed. On the other hand, a small increase of the number of domestic students choosing a period of study abroad should be mentioned. Currently, the *Service RI* is responsible for 1503

(2014) students in mobility (domestic + incoming students).¹⁷⁴ The *Service RI* is also in charge of the management of the mobility of the Brazilian and Chinese participants of the transdisciplinary international programs, as well as SUNRISE project, organized under the Sorbonne Universités' umbrella. It is a numerous group having into consideration the small number of staff working in this office and the challenges related to their duties. It is important to point out that, because of an efficient management of the international mobility by the *Service RI*, the **University Paris-Sorbonne** classified **10th** in the top-ten **French universities most dynamic in the Erasmus Program** (2014).

International mobility of the academic staff of the Paris IV (in the framework of Erasmus and Conventions) is very limited (2 persons per year); no administrative staff went on international mobility (managed by the *Service RI*) in the last years.

In relation to the organizational culture of the *Service RI*, its stakeholders (students and professors, mostly Erasmus coordinators) have found it "very efficient," "well organized," "exemplary for other offices of the Université Paris-Sorbonne." On the other hand, domestic students and incoming students mentioned its activity as sometimes limited to administrative functions.¹⁷⁵

High power distance, high individualism and high uncertainty avoidance (dimensions of the French culture) are strongly present in the traditional campus of the *Université Paris-Sorbonne Paris IV*. Those elements could influence a cultural shock, which has been noticed among both: domestic students (during their international mobility), and incoming students. Other reasons (which have been observed on the campus during "chains of informal conversational interviews") of this important cultural issue, which impacts strongly academic performance and future perception of other countries, their citizens and other cultures, are: lack of efficient support in pedagogical matters when needed, problems with accommodation in Paris, stereotypes, at times negative attitude toward use of English language in an international mobility, problems with acceptance of some of the exams which have been passed abroad, an unsatisfying change of grades after return from international mobility, opinions of the academic staff that "the best education can be received at Paris IV and going to study abroad is waste of time," repetition of the myth that the "French students do not like to go abroad,"¹⁷⁶ etc.

In relation to the **international collaborations in research**, the characteristic of the Paris IV's international dimension is that it has not been institutionalized unlike many other universities (such as the Paris VI University). However, "traditionally the collaborations were extensive from team to team and between researchers but - because of the high French individualism - they were difficult to assess globally and presented a clear lack of visibility."¹⁷⁷

However, according to the information gathered during interviews, with

¹⁷⁴ More details about international mobility of incoming and domestic students can be found in this Report in the chapter related to mobility (p. 71-97).

¹⁷⁵ More information about this matter can be found in the Report (p. 65).

¹⁷⁶ During field research at different campuses of the Paris IV, the author has never heard this kind of opinion from the students; however, often it has been mentioned by the administrative and the academic staff. Furthermore, the statistics about the origin of international students in academic mobility mention France on the 6th position; example UNESCO Institute for Statistics <http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx>.

¹⁷⁷ Information gathered during informal interview on the campus.

academic as well as administrative staff, the international collaborations between faculties, professors and researchers of the Paris IV and foreign universities have been developed and actively maintained. This organizational culture, impregnated deeply by national culture, is appreciated by many faculty, and perceived as an academic freedom so needed for creative results at work.

Taking into consideration recent international trends in Academia, one of the best instruments of visibility of the international research collaborations are articles, which have been published in international impact factor journals. This matter is recognized; on the other hand, faithfulness to the traditional humanistic approach towards publications (books, other publications especially in French language) is very appreciated at the Paris-Sorbonne. Nevertheless, some needs of Academic English courses for the faculty, in order to help them in polishing foreign language skills so required for efficient publishing (especially in English), have been highlighted.

The international visibility of the Paris IV through the international rankings is limited, due to its specialization in Human Sciences. Deeper analysis of the visibility of the Paris IV and other university members of the Sorbonne Universités in the most important international rankings (2014, 2015) was presented in this Report.

The investigation on the presence of the international dimension in the communication channels of the Université Paris-Sorbonne [institutional Website, Wikipedia, Facebook, Twitter, YouTube, *Guide de l'étudiant Paris-Sorbonne* (2013/2014-2014/2015)] also has been presented, and some observations have been pointed out. Online image of the Paris-Sorbonne is very important, especially in the context of so many Parisian's Sorbonnes.

In order to improve practices of the *Service RI*, additional economical resources, and personnel are needed. A clearly stated "mission and vision" of the *Service RI*, as well as the clarification of the "name" related to this office¹⁷⁸ as an establishment of the Paris IV, could be convenient. It would help in the development of the ownership of the ideas associated with the international policy of the Paris IV, especially among administrative staff, and this would help to overcome limitations developed by the bureaucratic culture. Furthermore, good practices of transparency on practices and communication among the different administrative services and the offices of the Université Paris-Sorbonne Paris IV have been required by different stakeholders of the campus (administrative staff, faculty and students). Sharing good practices in the supervision of the outgoing and incoming students, developed by some of the Erasmus coordinators, could improve considerably the quality and outcomes of the international mobility of these two groups.

Furthermore, for the development of *intelligent internationalization*, research on the implementation of the international policy in education/training and research as well as its outcomes at the Université Paris-Sorbonne Paris IV is recommended.

¹⁷⁸ For further explanations about this issue see p. 47-49 of this Report.

Future of the Université Paris-Sorbonne (perspective from April 2016)

The phase of the organizational changes at the Paris-Sorbonne and its environment created by the PRES, the COMUE and Sorbonne Universités - in which the author of this Report had an opportunity to participate, observe and analyze - is finishing. Since April 2016, the Université Paris-Sorbonne (and its *Service des Relations Internationales*) got into the process of construction of a new pluridisciplinary, global University Sorbonne-Paris of Sciences, Humanities and Medicine with strong international vocation, fusing previously created structures.¹⁷⁹ In fact, the project of a new university was known already in 2015, or even it had been mentioned in earlier ideas, but the renewal of the IDEX Super in 2016 has given the decisive impulse to the construction of that new university for the year 2018.

The experiences and links which were developed during last years of collaboration between Université Paris-Sorbonne (Paris IV) and Université Pierre et Marie Curie (Paris VI) will serve to the deeper fusion of these excellent Parisian universities.

Although the word "fusion" is present in the speech about a future new university, the Presidents of both institutions (Barthélémy Jobert and Jean Chambaz) emphasized that they will build a new university "{(...)}"*construire ensemble une nouvelle université*".¹⁸⁰ The Presidents mentioned that the word "fusion" is not the most adequate one for this stage of change because this "*merger project does not consist in the disappearance of the parties into the whole, but it consists in the maintenance of the parties within a new framework.*"¹⁸¹

The principal objective of the new global Université *Sorbonne-Paris de Sciences, Humanités et Médecine* {Sorbonne-Paris of Sciences, Humanities and Medicine (in English), Sorbonne-Paris de Ciencias, Letras y Medicina (in Spanish)} is to create a big institution with pluridisciplinary research, strong international vocation and education of international level.

The next evaluation of the changes with the IDEX Super will take place in two years (2018) and it will take into consideration the work done for the creation of the "*nouvelle université*" in Paris.

Ethical considerations

The author does not have any conflict of interests. All data collected during the informal conversational interviews as well as through questionnaires are anonymous. The investigator ensured that all participants of the study received full disclosure of the nature of the study, the risks, benefits and alternatives, with an extended opportunity to ask questions.

Limitations of this Report

Limitations of this Report are related mostly to the number of participants among students, faculty and administrative staff population.

¹⁷⁹ Information gathered during meeting on the campus of the Université Paris-Sorbonne, July 2016.

¹⁸⁰ "Les présidents des universités Pierre-et-Marie-Curie et Paris Sorbonne - Paris 4 préfèrent souligner qu'ils vont "c" "*construire ensemble une nouvelle université*". "Nous n'employons pas le mot fusion car notre projet ne consiste pas en la disparition des parties en un tout, mais au maintien des parties dans un nouvel ensemble", explique Jean Chambaz, à la tête de l'UPMC." EducPros.fr <http://www.letudiant.fr/educpros/actualite/universite-l-upmc-et-paris-sorbonne-sur-la-route-de-la-fusion.html>. [Accessed 15.07.2016].

¹⁸¹ Ibidem.

8. BIBLIOGRAPHY

- AERES, (2013). Rapport d'évaluation de l'université Paris-Sorbonne, Octobre 2013.
- AERES, (2009). Rapport d'évaluation de l'université Paris-Sorbonne, Novembre 2009. [Online] <http://www.studyrama.com/IMG/pdf/AERES-S1-Paris4-2.pdf> [Accessed 15/11/2015].
- Academic Ranking of World Universities. [Online] <http://www.shanghairanking.com> [Accessed 15/11/2015].
- Adato, M (2012) "Combining quantitative and qualitative methods for program monitoring and evaluation: Why are mixed methods designs best?" in Lopez-Acevedo, G; Krause, P & Mackay, K (editors) Building better policies: The nuts and bolts of monitoring and evaluation systems. World Bank.
- Allport, G. W. (1954). *The nature of s*. Cambridge, MA: Addison-Wesley.
- Bourdieu, P. (1980). *Le sens pratique*. Paris: editions de Minuit.
- Bureau Europe Sorbonne Université. [Online] <http://www.sorbonneuniversites.fr/actions/recherche/ouverture-a-international/bureau-europe.html> [Accessed 15/11/2015].
- Booksteis, F.L., Seidler H., Martin F., & Winckler G. (2010). Too much noise in Times Higher education Rankings. Volume 85, Issue 1, pp. 295-299. [Online] <http://link.springer.com/article/10.1007%2Fs11192-010-0189-5#page-1> [Accessed 15/11/2015].
- Campus Communication, L'Agence de Communication de l'enseignement supérieur et de la recherche Paris/Nentes. [Online] <http://www.campuscommunication.fr/2014/07/classement-des-universites-sur-youtube-2014/> [Accessed 15/11/2015].
- Chafee, E. E. (1985). From concept of strategy: From business to higher education. *Higher education: Handbook of theory and research*, Vol. 1 (pp. 133-171). New York: Agathon Press.
- Charles, N., Delphe, Q. & Michelet, J. (2015). France Stratégie. Investir dans l'internationalisation de l'enseignement supérieur. Raport Janvier 2015. [Online] http://www.strategie.gouv.fr/sites/strategie.gouv.fr/files/atoms/files/fs_rapport_internationalisation_enseignement_12022015_web.pdf [Accessed 15/11/2015].
- Deardorff, D. K. (Ed.). (2009). *The SAGE Handbook of Intercultural Competence*. Thousand Oaks, CA.: SAGE Publications. Inc. ISBN: 9781412960458.
- Douglas, T. J. (2012). Institutional Strategy. In: N. Bastedo Edit. *The organization of higher education. Managing colleges for the new era*. The John Hopkins University Press, Baltimore.
- EducProf.fr. [Online] <http://www.letudiant.fr/educpros/actualite/universite-l-upmc-et-paris-sorbonne-sur-la-route-de-la-fusion.html> [Accessed 15.07.2016].
- Engels, T. C. E., Ossenblok, T. L. B. & Spruyt, E. H. J. (2012). Changing publication patterns in the social sciences and Humanities, 2000-2009, *Scientometrics*, DOI 10.1007/s11192-012-0680-2. [Online] <https://www.ecoom.be/sites/ecoom.be/files/downloads/Engels%20et%20al%20>

[changing%20pub%20patterns%20SSH%20Scientometrics%202012.pdf](#) [Accessed 15/11/2015].

- Hall, E. T. & Hall, M. R. (1990). Understanding cultural differences. Intercultural Press, Inc. ISBN: 0-933662-84-X.
- Handy, C. B. (1985). Understanding Organizations, 3rd. Edn. Harmondsworth, Middlesex, England, Penguin Books Ltd.
- Handy, C. B. & Aitken, R. (1986). Understanding schools as organizations. The Chaucer Press, Ltd. Suffolk, Great Britain.
- Hazelkorn, E. (2011). Globalization and the Reputation Race in Rankings and the Reshaping of Higher Education: the Battle for World Class Excellence. Palgrave MacMillan.
- Hazelkorn, E. (2013). How Rankings are Reshaping Higher Education. In: Climent, V., Michavila, F. and Ripolles, M. (eds). *Los Rankings Univeritarios*. Mitos y Realidades.
- Hazelkorn, E. (2013). Europe Enters the College Rankings Game. Could the EU's new U-Multirank someday challenge U.S. News? *The Washington Monthly*. [Online] http://www.washingtonmonthly.com/magazine/september_october_2013/feature/s/europe_enters_the_college_rank046894.php?page=all [Accessed 15/11/2015].
- Hofstede, G. H. (1980). Culture's Consequences. International Differences in Work Related Values. Beverly Hills, Calif.: Sage Publications.
- Hofstede, G., Hofstede, G. & Minkov, M. (2010). Culture and Organizations. Software of the mind.
- Huntington, S. P. (1996). The Clash of Civilizations and the Remaking of World Order. New York: Simon and Schuster.
- Initiative d'excellence "SUPER" Index Sorbonne Université. [Online] http://media.enseignementsup-recherche.gouv.fr/file/IDEX_2/58/6/IDEX2_-_SUPER_206586.pdf [Accessed 15/11/2015].
- Johnson, B. & Christensen, L. (2004). Educational Research. Quantitative, Qualitative, and Mixed Approaches. Pearson Education, Inc. ISBN 0-205-36126-9.
- Kedge Business School. [Online] <http://www.kedgebs.com/en/campus-list/suzhou-campus> [Accessed 15/11/2015].
- Keller (1983). Academic Strategy: the management revolution in American higher education. Baltimore: John Hopkins University Press.
- Knight, J. (2004). Internationalization remodeled: Definition, approaches, and rationales. *Journal of Studies in International Education*, Vol. 8, No. 1, pp. 5-31.
- Knight, J. (1999). Quality and Internationalisation in Higher Education. Paris: OECD.
- Knight, J. (2003). Updated internationalization definition. *International Higher Education*, Vol. 33, pp. 2-3.
- Knight, J., & de Wit, H. (1995). Strategies for Internationalisation of Higher Education: Historical and Conceptual Perspectives. In H. de Wit, *Strategies for Internationalisation of Higher Education – A Comparative Study of Australia, Canada, Europe and the United States of America* (pp. 5-32). Amsterdam: European Association for International Education.

- Krip, D. L. (2003). Shakespeare, Einstein and the bottom line. Cambridge, MA: Harvard University Press.
- La Chancellerie des Universités de Paris. [Online] <http://www.sorbonne.fr/en/the-sorbonne/history-of-the-sorbonne/la-fondation-de-la-sorbonne-au-moyen-age-par-le-theologien-robert-de-sorbon/> [Accessed 15/11/2015].
- LERU. [Online] <http://www.leru.org/index.php/public/activities/> [Accessed 15/11/2015].
- Léon, A. & Roche, P. (2003). Histoire de l'enseignement en France. Presses universitaires de France. ISBN 2-13-053706-5.
- Master of International Brand Management – Luxury. [Online] <http://luxeruc.org> [Accessed 15/11/2015].
- Ministère de l'Éducation Nationale, de l'enseignement supérieur et de la recherche, Plan Campus. [Online] <http://www.enseignementsup-recherche.gouv.fr/cid56024/l-operation-campus-plan-exceptionnel-en-faveur-de-l-immobilier-universitaire.html> [Accessed 15/11/2015].
- Minot, J. (1991). L'Histoire des Universités Françaises. Paris, PFU.
- Paris-Sorbonne Université, International Division. [Online] http://www.paris-sorbonne.fr/IMG/pdf/La_Brochure_des_Relations_Internationales_International_Relations_Division.pdf [Accessed 15/11/2015].
- Peterson, R. B. Edit. (1993). Managers and national culture. A global perspective. Quorum Books, Westport, ISBN: 0-89930-602-0.
- Pussier, B. & Marinson, S. (2012). The Elephant in the Room. Power, Politics, and Global Rankings in Higher Education. In: N. M. Bastedo (Ed.), The Organization of Higher Education. Managing Colleges for a New Era. Baltimore: The Johns Hopkins University Press.
- Pôle des Relations Internationales (2006). Etudiants Erasmus Guide d'accueil, 2006/2007. [Online] Université Paris-Sorbonne (Paris IV). https://www.msm.uni-due.de/fileadmin/Dateien/ISMA/Informationsmaterial/Europa/Frankreich/Paris/Erasmus_Guide_2006.pdf [Accessed 15/11/2015].
- Salami, J. (2009). The challenge of establishing world-class universities. Washington, DC: World Bank.
- Sanz, N & Bergan, S. (eds.) (2006). The heritage of the European universities. 2nd edition. Council of Europe Publishing, Strasbourg Cedex. ISBN-13: 978-92-871-6121-5.
- Sorbonne Joint Declaration, Joint declaration on harmonization of the architecture of the European higher education system. (1998). [Online] http://www.ehea.info/Uploads/Declarations/SORBONNE_DECLARATION1.pdf [Accessed 15/11/2015].
- Sorbonne Universités, Un contexte, une ambition. [Online] <http://www.sorbonne-universites.fr/sites/sorbonne/files/Sorbonne%20Universités-Présentation%2010%20pages-Septembre%202013.pdf> [Accessed 15/11/2015].
- Sorbonne Universités, Plan Campus (2012). [Online] <http://www.sorbonne->

universites.fr/sites/sorbonne2012.7enligne.local/files/Plan_Campus%2009102012-1.pdf [Accessed 15/11/2015].

- Statuts de l'Université Paris-Sorbonne. [Online] <http://www.paris-sorbonne.fr/IMG/pdf/statuts-valides-CA-16-05-14.pdf> [Accessed 14/ 5/2014].
- Statuts de la Communauté d'Universités et d'Établissements Sorbonne Universités, [Online] <http://www.sorbonne-universites.fr/sites/sorbonne/files/Statuts%20ComUE%20V11%20statuts%20Sorbonne%20universites%20%20version%20du%2027%20mai%202014.pdf> [Accessed 15/11/2015].
- Stiglitz, J. E. (2003). *Globalization and Its Discontents*. New York: W.W. Norton, 2002. Print. ISBN 0-393-05124-2.
- Stuart, D. L. (1995). Reputational rankings: Background and development. *New Directions for Institutional Research*, 88, 13-20.
- Rajot, J. (1993). France. In Edit: R. B. Peterson. *Managers and national culture. A global perspective*. Quorum books. London. ISBN:0-89930-602-0. P.77.
- Renault, A. (2000). "*The role of universities in the democratic European culture*". In *Concept of democratic citizenship*. Council of Europe Publications, ISBN 92-871-44-52-4, December 2000.
- Rojot, J. (1993). France. In: R. B. Peterson (ed.), *Managers and national culture. Global perspective*. Quorum Books, Westport, ISBN: 0-89930-602-0.
- The Institute of International Education, *Open Door Report*. 2015 "*Fast Fact*". [Online] <http://www.iie.org/opendoors> [Accessed 15/11/2015].
- Université Paris-Sorbonne, Pôle de Relations Internationales, International Relations Division. (2008). [Online] http://www.paris-sorbonne.fr/Files/ri/1Brochure_Bilingue_avec_couverture_et_photos.pdf [Accessed 15/12/2014].
- University Ranking by Academic Performance (URAP). [Online] <http://www.urapcenter.org/2014/index.php> [Accessed 15/11/2015].
- UNESCO Institute for Statistics. [Online] <http://www.uis.unesco.org/Education/Pages/international-student-flow-viz.aspx> [Accessed 15/11/2015].
- van der Vende, M. (2008). *Rankings and Classifications in Higher Education: A European Perspective*. In: J. C. Smart (ed.), *Higher Education: Handbook of Theory and Research*. Springer Science + Business Media B.V. 2008.
- Wisniewska L. (2011). *Research on professional practice: internationalization of university campuses and its formative impact on the development of intercultural competences among professionals*. Master thesis. Høgskolen i Akershus. [Online] <https://oda.hio.no/jspui/handle/10642/971> [Accessed 15/11/2015].
- Wit, H. de. (2002). *Internationalization of higher education in the United States of America and Europe. A Historical, Comparative and Conceptual Analysis*. Center for International Higher Education and the Program in Higher Education, Boston College. Chestnut Hill, Massachusetts. ISBN 9-78-1-60752-066-5.

ANNEXES

ANNEX 1

“Questionnaire about impact of international projects on formation for cultural diversity” spread among Erasmus coordinators and administrative staff of the Service RI of the Paris IV. One of the questionnaires of the ISAIAS project.

QUESTIONNAIRE ABOUT IMPACT OF INTERNATIONAL PROJECTS ON FORMATION FOR CULTURAL DIVERSITY

The objective of this questionnaire is to determine in which measure the participation in international education program – ERASMUS - have helped you to develop matters listed below:

QUESTIONS ABOUT YOUR BACKGROUND	
Sex: Woman	Man
Age: _____	
Professional situation: - Researcher (and lecturer)_____ - Technician/ Administrative staff_____ - Others (specify) _____	
QUESTIONS ABOUT YOUR EXPERIENCES DURING COLABOARTION WITH INTERNATIONAL PROGRAM	
1. How long have you been working with Erasmus project? ___ months, ___ years	
2. Do you participate in any international events related to Erasmus project? (Workshops, conferences, congress, etc.) _____% (approximately “%” of the proposed events). If your answer is positive, please indicate the sort of events you participated in: a) Obligatory: international conferences_____, international workshops_____, others _____ b) Not obligatory: international meetings _____, others? (please, mention what)_____	
3. Has the participation in Erasmus project (as a coordinator/administrative staff) required from you longer stay abroad? _____, If your answer is affirmative – How long did you stay abroad? _____,	
4. Would you like to go abroad for study or work? _____ Why? _____ Where _____ NO _____ Why? _____	
5. How often do you meet with your Erasmus (incoming) students?	
6. How often do you meet with your Erasmus (outgoing) students?	
7. Are you participating in any international research project? (If the answer is positive, please mention the scientific field of the project and the countries of your partners).	
8. For me the biggest difficulty in relationship with foreign classmates/faculty/colleagues is caused by _____	

On a scale from 1= Strongly disagree, 2= Disagree, 3= Agree, 4= Strongly agree, how much do you disagree/agree with the following statements?

	1	2	3	4
1. My participation in Erasmus program has given me the opportunity to understand better other's (foreigners) world views.				
2. It has helped me to develop cultural self-awareness (to understand the way in which my culture has influenced my identity and my worldview).				
3. It has improved my capacity for cultural self-assessment.				
4. My participation in Erasmus program has improved my capacity for adaptation to culturally different and new environments.				
5. It has increased my interest in people from other cultures.				

6. It has increased my interest in intercultural learning (for example learning how to negotiate with people from different cultures).				
7. It has improved my capacity to <u>listen</u> people from other cultures.				
8. It has improved my capacity to <u>observe</u> people from other cultures.				
9. It has improved my capacity to <u>collect</u> information (to listen and to observe) in an intercultural environment.				
10. It has improved my ability to adapt to different forms of intercultural communication and different learning styles.				
11. My participation in Erasmus program has helped me to become more flexible with people from other culture.				
12. It has helped me to improve my abilities to analyze, interpret and relate information brought in different cultural contexts (process information).				
13. It has helped me to improve my abilities to <u>analyze</u> information related to different cultures.				
14. It has helped me to improve my abilities to <u>interpret</u> information related to different cultures.				
15. It has helped me to improve my abilities to <u>relate</u> information related to different cultures.				
16. My participation in Erasmus program has helped me to take part of an intercultural group where I had opportunity to respect ways of expressions of each member, becoming more tolerant.				
17. It has helped me to understand better my own culture.				
18. It has improved my understanding of culture of others'				
19. It has increased my respect for other cultures.				
20. My participation in Erasmus program has increased my cultural empathy -The capacity to identify with the feelings, thoughts and behavior of individuals from different cultural backgrounds.				
21. It has helped me to understand the impact of culture on the social and historical contexts.				
22. My participation in Erasmus program has helped me to become more flexible with analysis of matters looking at them from different cultural perspectives (emic- from my cultural perspective and etic – from others cultural perspectives).				
23. It has improved my sociolinguistic competences (awareness of relation between language and meaning in social context).				
24. It has helped me to understand better the value of cultural diversity (mindfulness toward cultural diversity).				
25. It influenced prejudices and stereotypes.				
26. It allowed discovery and increased my curiosity toward cultural diversity.				
27. It has changed my point of view about cultural community where I belong.				
28. It has helped me to learn through interaction with foreigners.				
29. My participation in Erasmus program has helped me to know more and understand more culture and traditions of foreign colleagues.				
30. Intercultural competences are needed in my work.				

Please share with us any additional thoughts you may have:

Thank you very much for responding. If you have any questions about this study or would like to learn about our findings, please contact Lidia Wisniewska at liliw@interia.pl .

ANNEX 2

Questionnaire "Etudiants partant dans le cadre d'une convention. Questionnaire de retour." The questionnaire has been prepared by Madame Alexandra Magne, the coordinator of the exchange program with North America and Oceania (*Service des Relations Internationales*) at Paris-Sorbonne University.



ETUDIANTS PARTANT DANS LE CADRE D'UNE CONVENTION

QUESTIONNAIRE DE RETOUR

ANNÉE 2013 / 2014

Vous venez d'effectuer un séjour dans le cadre d'un programme d'échange. Vos impressions nous intéressent et permettent de mieux informer les prochains partants. Merci de retourner ce questionnaire au Pôle des Relations Internationales de Paris- Sorbonne.

- Nom :
- Prénom :
- Discipline :
- Niveau :
- Durée du séjour : du .../.../..... au .../.../.....
- Lieu :

I- INFORMATIONS GENERALES
<ul style="list-style-type: none">• 1-1 Avez-vous obtenu des informations suffisantes pour la préparation de votre séjour ?
<ul style="list-style-type: none">• 1-2 De quelle utilité vous ont été ces informations ?

<ul style="list-style-type: none">• 1-3 Avez-vous rencontré des difficultés administratives ou pédagogiques à l'université en France ou dans le pays d'accueil ?
<ul style="list-style-type: none">• 1-4 Avez-vous rencontré d'autres difficultés administratives (à l'Ambassade, à la banque, auprès de votre assurance...)?
<ul style="list-style-type: none">• 1-5 Une fois sur place, avez-vous reçu un soutien adéquat de la part de l'établissement d'accueil pendant la durée de votre séjour ?

<p><u>II- LOGEMENT ET INFRASTRUCTURE</u></p>
<ul style="list-style-type: none">• 2-1 Dans quel type de logement avez-vous habité ? 1 : résidence universitaire 2 : partage d'un appartement ou d'une maison avec d'autres étudiants 3 : logement indépendant 4 : autres (précisez) :
<ul style="list-style-type: none">• 2-2 Comment avez-vous trouvé ce logement ? 1 : services de logement universitaires 2 : amis/famille 3 : autres(précisez) :.....
<ul style="list-style-type: none">• 2-3 Si vous étiez sur un campus, le logement était-il satisfaisant ?

<ul style="list-style-type: none">• 2-4 Si vous avez séjourné hors campus, avez-vous une adresse à conseiller à de futurs étudiants ?
<ul style="list-style-type: none">• 2-5 Avez-vous d'autres adresses à communiquer (restaurant, banque, bibliothèque, librairie, sorties...) :
<ul style="list-style-type: none">• 2-6 Comment avez-vous jugé l'accès aux bibliothèques et aux matériels d'études :

III- COÛTS
<ul style="list-style-type: none">• 3-1 Quel a été le montant de votre budget mensuel (en euros) ?
<ul style="list-style-type: none">• 3-2 Avez-vous bénéficié d'une bourse ? 1 : oui 2 : non
<ul style="list-style-type: none">• 3-3 Si oui, dans quelles proportions cette bourse a-t-elle couvert vos besoins ?
<ul style="list-style-type: none">• 3-4 Si oui, quand l'avez-vous reçue (en combien de versements) ?

<ul style="list-style-type: none"> • 3-5 Disposiez-vous d'autres sources de financement ? 1 : bourse d'Etat 2 : famille 3 : prêt privé 4 : autres (précisez) : Montant mensuel total provenant de ces autres sources :
<ul style="list-style-type: none"> • 3-6 Avez-vous dû vous acquitter de frais divers au sein de l'établissement d'accueil ? 1 : oui 2 : non • Si oui, veuillez indiquer le type et le montant des frais acquittés :
<ul style="list-style-type: none"> • 3-7 Quel a été votre budget consacré à l'achat de livres ?

<p><u>IV- EXPERIENCE UNIVERSITAIRE</u></p>
<ul style="list-style-type: none"> • 4-1 Avez-vous passé des examens ? 1 : oui 2 : non
<ul style="list-style-type: none"> • 4-2 Votre période d'études à l'étranger bénéficiera-t-elle d'une reconnaissance académique totale? 1 : oui 2 : non 3 : précisez :
<ul style="list-style-type: none"> • 4-3 Comment évaluez-vous les bénéfices de votre période d'études sur le plan universitaire :
<ul style="list-style-type: none"> • 4-4 Quel a été votre degré d'intégration aux étudiants locaux au sein de l'établissement d'accueil? Merci d'en donner un exemple.

<ul style="list-style-type: none">• 4-5 Si vous étiez assistant de langue, comment avez-vous perçu cette expérience avec vos étudiants ?
<ul style="list-style-type: none">• 4-6 Quels ont été vos contacts avec les enseignants ?

V- EXPERIENCE PERSONNELLE

<ul style="list-style-type: none">• 5-1 Comment évaluez-vous les bénéfices de votre période d'études sur le plan personnel:
<ul style="list-style-type: none">• 5-2 Avez-vous rencontré des problèmes graves au cours de votre séjour ? Si oui, veuillez préciser lesquels :
<ul style="list-style-type: none">• 5-3 Quels aspects de votre période d'études avez-vous particulièrement appréciés ?
<ul style="list-style-type: none">• 5-4 Avez-vous des remarques ou des conseils concernant la vie pratique (assurance, banque, téléphone, transport...)?

<ul style="list-style-type: none">• 5-5 Quelles recommandations donneriez-vous aux autres étudiants en ce qui concerne l'information, les procédures de candidature, etc. ?
<ul style="list-style-type: none">• 5-6 De quelle façon, selon vous, le programme d'échanges internationaux pourrait-il être amélioré ?
<ul style="list-style-type: none">• 5-7 Indiquez toute information complémentaire que vous jugez utile sur le séjour, l'université, le campus, la ville, vie quotidienne... :
<ul style="list-style-type: none">• 5-8 Accepteriez-vous de transmettre vos coordonnées aux étudiants de Paris IV qui souhaitent partir en programme d'échange ? Adresse électronique :@..... Portable : 06
<ul style="list-style-type: none">• 5-9 Remarques :

ANNEX 3
GUIDE DE L'ÉTUDIANT 2013/2014 OF THE PARIS-SORBONNE UNIVERSITÉ.
CHAPTER RELATED TO INTERNATIONAL MOBILITY

SOURCE: GUIDE DE L'ÉTUDIANT 2013/2014 OF THE PARIS-SORBONNE UNIVERSITÉ

LA MOBILITÉ INTERNATIONALE

Les séjours d'études à l'étranger

LES ÉCHANGES DANS LE CADRE DU PROGRAMME ERASMUS

Les étudiants "partants"

Ce programme offre aux étudiants des possibilités de séjour dans les universités des pays membres de l'Union Européenne (ainsi qu'en Islande, Norvège, Suisse et Turquie) d'une durée de trois mois minimum à un an maximum.

Les candidats inscrits à l'université Paris-Sorbonne sont dispensés des droits d'inscription dans l'université d'accueil et perçoivent une modeste aide financière de l'Union Européenne. Les crédits obtenus (ECTS) pendant le séjour à l'étranger sont pris en compte dans le cursus de l'étudiant par son université d'origine.

Des réunions d'information sont organisées en début d'année : dans les UFR pour les questions d'ordre pédagogique et en décembre pour toutes les démarches administratives (consulter le site internet pour les lieux et dates de réunions).

☎ 01 40 46 32 81

✉ erasmus-out.ri@paris-sorbonne.fr

Les étudiants "arrivants"

Pour effectuer une période d'études à l'université Paris-Sorbonne dans le cadre du programme Erasmus, vous devez être sélectionné(e) par votre université d'origine. En ligne sur nos pages Internet, vous trouverez tous les renseignements nécessaires sur les diverses démarches administratives et pédagogiques à accomplir, l'organisation des études à Paris-Sorbonne, une liste des foyers et des centres d'hébergement, etc.

Les candidatures se font en ligne : www.paris-sorbonne.fr

☎ 01 40 46 47 79

✉ erasmus-in.ri@paris-sorbonne.fr

LES ÉCHANGES DANS LE CADRE D'UNE CONVENTION DE COOPÉRATION INTERNATIONALE

Les étudiants "partants"

Diverses possibilités de séjours d'études pour les étudiants désirant préparer leur Master ou leur Doctorat sont offertes

112 / Guide de l'étudiant 2013-2014

LA MOBILITÉ INTERNATIONALE

dans des universités étrangères liées par convention avec Paris-Sorbonne.

Les étudiants sont dispensés de droits d'inscription dans l'université d'accueil et doivent être inscrits à Paris-Sorbonne l'année de leur séjour à l'étranger. Le diplôme est obtenu à Paris-Sorbonne et non dans l'université d'accueil, à l'exception des co-diplômes.

Les étudiants "arrivants"

Pour effectuer une période d'études à l'université Paris-Sorbonne dans le cadre d'une convention, vous devez être sélectionné(e) par votre université d'origine.

Concernant vos diverses démarches, consultez notre site Internet www.paris-sorbonne.fr sur lequel vous trouverez des renseignements pratiques (rubrique "Venir étudier à Paris-Sorbonne") ou encore des pistes à explorer concernant les possibilités d'hébergement...

Vos contacts

Pour l'Australie, le Canada, les États-Unis et la Nouvelle-Zélande : ☎ 01 40 46 26 47

✉ conventions1.ri@paris-sorbonne.fr

Pour l'Afrique, l'Amérique Latine, l'Asie, l'Europe et le Moyen-Orient : ☎ 01 40 46 32 08

✉ conventions2.ri@paris-sorbonne.fr

Aides à la mobilité

Dans le cadre d'un séjour d'études ou d'un stage obligatoire à l'étranger, vous pouvez bénéficier d'aides financières sur critères sociaux. Pour de plus amples informations, veuillez consulter la rubrique "Aides financières" sur nos pages Internet.

Pour tout renseignement complémentaire :

www.paris-sorbonne.fr, International.

☎ 01 40 46 33 76

✉ contact.ri@paris-sorbonne.fr

Attention : Un séjour à l'étranger se prépare longtemps à l'avance. Rapprochez-vous du service des Relations Internationales en tout début de projet.

Guide de l'étudiant 2013-2014 / 113

LA MOBILITÉ INTERNATIONALE

Le service des Relations internationales (RI)

Localisation

En Sorbonne,
1, rue Victor-Cousin, 75005 Paris
escalier I, 1^{er} étage

Secrétariat

☎ 01 40 46 33 76

✉ contact.ri@paris-sorbonne.fr

Horaires d'ouverture

Du lundi au vendredi de 9h à 12h
et les mardis et jeudis de 14h à 16h

En période de rentrée universitaire, consultez :
www.paris-sorbonne.fr / rubrique International

ATTENTION : l'accueil et l'inscription des étudiants étrangers arrivant à titre individuel se font auprès du Service des inscriptions administratives (voir p. 23) et sur l'ENT : ent.paris-sorbonne.fr.



114 / Guide de l'étudiant 2013-2014

LA MOBILITÉ INTERNATIONALE

Le SELFEE : Service des examens de langue française réservés aux étudiants étrangers

Localisation

En Sorbonne, 1 rue Victor-Cousin, 75005 Paris
escalier H, 1^{er} étage, Bureau F 672

Secrétariat

☎ 01 40 46 32 20 / 32 22

✉ selfee@paris-sorbonne.fr

www.paris-sorbonne.fr / International / rubrique Diplômes de français pour étudiants étrangers

Horaires d'ouverture

Du lundi au vendredi de 9h30 à 12h30 et de 14h à 16h
Fermeture le mercredi

Le SELFEE est chargé depuis 1959 des diplômes réservés aux étudiants étrangers qui souhaitent faire valider leurs connaissances de la langue, de la littérature et de la civilisation françaises.

5 niveaux de compétence en langue française et en savoirs disciplinaires :

- B1 : Certificat intermédiaire de langue française
- B2 : Certificat pratique de langue française - module « Compréhension et expression »

Examen d'entrée à l'Université en Licence (hors DAP), Master ou Doctorat

- C1 : Certificat pratique de langue française
Dispense les étudiants de l'Union européenne du test linguistique exigé à l'université Paris-Sorbonne
- C2 : Diplôme de langue et littérature françaises

Les titulaires de ce diplôme sont dispensés de tout test linguistique pour une inscription à l'université Paris-Sorbonne

- C3 : Diplôme supérieur d'études françaises
Permet l'équivalence des semestres 1 et 2 dans le parcours Lettres modernes sous certaines conditions

Examens d'entrée à l'Université des étudiants internationaux à titre individuel :

- Module "compréhension et expression", inscription en LMD, hors demande d'admission préalable
- TCF (DAP) du CIEP, inscription en L1 ou L2 à Paris-Sorbonne uniquement (hors UE)

Plus de renseignements : www.paris-sorbonne.fr

Guide de l'étudiant 2013-2014 / 115

ANNEX 4
GUIDE DE L'ÉTUDIANT 2014/2015 OF THE PARIS-SORBONNE UNIVERSITÉ.
CHAPTER RELATED TO INTERNATIONAL MOBILITY

SOURCE: GUIDE DE L'ÉTUDIANT 2014/2015 OF THE PARIS-SORBONNE UNIVERSITÉ

LA MOBILITÉ INTERNATIONALE

Les séjours d'études à l'étranger

LES ÉCHANGES DANS LE CADRE DU PROGRAMME ERASMUS

Les étudiants "partants"
Ce programme offre aux étudiants des possibilités de séjour dans les universités des pays membres de l'Union Européenne (ainsi qu'en Islande, Norvège, Suisse et Turquie) d'une durée de trois mois minimum à un an maximum.
Les candidats inscrits à l'université Paris-Sorbonne sont dispensés des droits d'inscription dans l'université d'accueil et perçoivent une modeste aide financière de l'Union Européenne. Les crédits obtenus (ECTS) pendant le séjour à l'étranger sont pris en compte dans le cursus de l'étudiant par son université d'origine.
Des réunions d'information sont organisées en début d'année : dans les UFR pour les questions d'ordre pédagogique et en décembre pour toutes les démarches administratives (consulter le site internet pour les lieux et dates de réunions).
☎ 01 40 46 32 81
✉ erasmus-out.ri@paris-sorbonne.fr

Les étudiants "arrivants"
Pour effectuer une période d'études à l'université Paris-Sorbonne dans le cadre du programme Erasmus, vous devez être sélectionné(e) par votre université d'origine. En ligne sur nos pages Internet, vous trouverez tous les renseignements nécessaires sur les diverses démarches administratives et pédagogiques à accomplir, l'organisation des études à Paris-Sorbonne, une liste des foyers et des centres d'hébergement, etc.
Les candidatures se font en ligne : www.paris-sorbonne.fr
☎ 01 40 46 47 79
✉ erasmus-in.ri@paris-sorbonne.fr

LES ÉCHANGES DANS LE CADRE D'UNE CONVENTION DE COOPÉRATION INTERNATIONALE

Les étudiants "partants"
Diverses possibilités de séjours d'études pour les étudiants désirant préparer leur Master ou leur Doctorat sont offertes

LA MOBILITÉ INTERNATIONALE

dans des universités étrangères liées par convention avec Paris-Sorbonne.
Les étudiants sont dispensés de droits d'inscription dans l'université d'accueil et doivent être inscrits à Paris-Sorbonne l'année de leur séjour à l'étranger. Le diplôme est obtenu à Paris-Sorbonne et non dans l'université d'accueil, à l'exception des co-diplômations.

Les étudiants "arrivants"
Pour effectuer une période d'études à l'université Paris-Sorbonne dans le cadre d'une convention, vous devez être sélectionné(e) par votre université d'origine.
Concernant vos diverses démarches, consultez notre site Internet www.paris-sorbonne.fr sur lequel vous trouverez des renseignements pratiques (rubrique "Venir étudier à Paris-Sorbonne") ou encore des pistes à explorer concernant les possibilités d'hébergement...

Vos contacts
Pour l'Australie, le Canada, les États-Unis et la Nouvelle-Zélande : ☎ 01 40 46 26 47
✉ conventions1.ri@paris-sorbonne.fr
Pour l'Afrique, l'Amérique Latine, l'Asie, l'Europe et le Moyen-Orient : ☎ 01 40 46 32 08
✉ conventions2.ri@paris-sorbonne.fr

Aides à la mobilité
Dans le cadre d'un séjour d'études ou d'un stage obligatoire à l'étranger, vous pouvez bénéficier d'aides financières sur critères sociaux. Pour de plus amples informations, veuillez consulter la rubrique "Aides financières" sur nos pages Internet.

Pour tout renseignement complémentaire :
www.paris-sorbonne.fr, International.
☎ 01 40 46 33 76
✉ contact.ri@paris-sorbonne.fr

Attention : Un séjour à l'étranger se prépare longtemps à l'avance. Rapprochez-vous du service des Relations internationales en tout début de projet.

112 / Guide de l'étudiant 2014-2015 Guide de l'étudiant 2014-2015 / 113

LA MOBILITÉ INTERNATIONALE

Le service des Relations internationales (RI)

Localisation
En Sorbonne,
1, rue Victor-Cousin 75005 Paris
escalier I, 1^{er} étage

Secrétariat
☎ 01 40 46 33 76
✉ contact.ri@paris-sorbonne.fr

Horaires d'ouverture
Du lundi au vendredi de 9h à 12h
et les mardis et jeudis de 14h à 16h

En période de rentrée universitaire, consultez : www.paris-sorbonne.fr / rubrique International

ATTENTION : l'accueil et l'inscription des étudiants étrangers arrivant à titre individuel se font auprès du Service des inscriptions administratives (voir p. 23) et sur l'ENT : ent.paris-sorbonne.fr.

LA MOBILITÉ INTERNATIONALE

Le SELFEE : Service des examens de langue française réservés aux étudiants étrangers

Localisation
En Sorbonne, 1 rue Victor-Cousin 75005 Paris
escalier H, 1^{er} étage, Bureau F 672

Secrétariat
☎ 01 40 46 32 20 / 32 22
✉ sellee@paris-sorbonne.fr
www.paris-sorbonne.fr / International / rubrique Diplômes de français pour étudiants étrangers

Horaires d'ouverture
Du lundi au vendredi de 9h30 à 12h30 et de 14h à 16h
Fermeture le mercredi

Diplômes réservés aux étudiants étrangers
Le SELFEE évalue et valide vos connaissances de la langue, de la littérature et de la civilisation françaises sur une échelle de 5 niveaux de compétence du B1 au C3.

Niveaux B1 à B2 : examens de langue, introduction à la littérature

- B1 : Certificat intermédiaire de langue française
- B2 : Certificat pratique de langue française - module « Compréhension et expression »

Niveaux C1 à C3 : examens de littérature et de civilisation françaises

- C1 : Certificat pratique de langue française
Dispense les étudiants de l'Union européenne du test linguistique exigé à l'université Paris-Sorbonne
- C2 : Diplôme de langue et littérature françaises
Ce diplôme dispense de tout test linguistique pour une inscription à l'université Paris-Sorbonne
- C3 : Diplôme supérieur d'études françaises
Permet l'équivalence des semestres 1 et 2 dans le parcours Lettres modernes sous certaines conditions

Examens d'entrée à l'Université des étudiants internationaux à titre individuel :
Certificat pratique de langue française - module « compréhension et expression », inscription en LMD (hors DAP).
Plus de renseignements : www.paris-sorbonne.fr

114 / Guide de l'étudiant 2014-2015 Guide de l'étudiant 2014-2015 / 115



ANNEX 5

Agreement of Scientific Cooperation between Université Paris-Sorbonne Paris IV
and other institution (English and French version)



**AGREEMENT
OF SCIENTIFIC COOPERATION**

between

Paris-Sorbonne University, 1, rue Victor Cousin, 75 230 PARIS Cedex 05 (France),
represented by Professor Barthélémy JOBERT, fully authorised to execute this
agreement in his capacity as President,

and

the University of, represented by

whereas

the two parties decide as follows:

Article 1: Purpose

The contracting institutions wish to develop cooperation in the field of Education and
Research in the Humanities and Social Sciences.

Article 2: Actions of cooperation

Through the present framework agreement, the contracting institutions promise to
promote:

- the setting up of common syllabi;
- the development of common actions such as symposium, seminars, team
research, publications;
- the exchange of information and documents susceptible to help research;
- the reciprocal exchange of students;
- the joint supervision and co-direction of theses (there will be a specific convention
for every thesis);
- the reciprocal exchange of professors and researchers.

Article 3: Implementation of actions of cooperation

Appendix no.1, agreed upon by both parties, details the specifics leading to the implementation of the intended actions listed under article 2.

Article 4: Scientific coordination

The scientific coordination of the various actions is the responsibility of the faculty members designated by each contracting institution. Their names will be specified in an appendix to the present document.

As far as the working out of common projects is concerned, both contracting institutions shall keep in touch regularly.

Article 5: Funding

Implementation of the collaborative research and study activities the parties decide to launch shall depend on the availability of funding. A provisional budget will be drafted out by both institutions in the appendix.

If necessary, the parties shall apply for outside funding agencies for financial support, such as intergovernmental agreements and European or international bodies.

Article 6: Exchange of students

Students shall pay their registration and tuition fees at their home university whether they leave for a year or a semester. The host university will waive all tuition and registration fees.

Students shall be responsible for their own medical insurance, general insurance, conforming to the partner state legislation. They shall provide for their board and lodging.

Each contracting institution shall endeavour to help student find accommodation.

Article 7: Recognition of the study period

The results obtained by the students at their host university will be assessed and become part of their final grades at their home institution.

Article 8: Exchange of staff

Specifics for the exchange of professors and researchers, the duration of the stays and financial practical details shall be dealt with in a separate and specific protocol, approved and signed by each party, added to this Agreement.

In all events, professors under the exchange program will be responsible for their own medical coverage and for their insurance, conforming to the partner state legislation.

Article 9: Duration

The present framework agreement shall be in force for five (5) years starting on the later of the two dates of signature.

The agreement may be continued beyond the term only by an amendment signed by both parties.

Article 10: Modifications

Every modification of the present document shall be carried out through a written document signed by the contracting institutions.

Article 11: Cancellation

Either contracting institution can terminate the agreement at any time, provided notification is given to the partner institution through an official letter, delivered by registered mail, six (6) months prior to the intended date of termination.

Termination cannot prevent the students, researchers and professors currently involved from carrying their studies or research to their intended term.

Article 12: Litigation

Any dispute that may arise out of the application of the present document shall be settled by privately negotiated agreement between the contracting institutions. If they are not able to resolve the dispute, the jurisdiction of the defender's place of residence will apply.

2 originals in French.

2 originals in English.

On behalf of Paris-Sorbonne University

On behalf of University

.....

.....

Barthélémy JOBERT



CONVENTION DE COOPÉRATION INTERNATIONALE

entre

l'**université Paris-Sorbonne**, 1, rue Victor Cousin, 75230 PARIS Cedex 05, représentée par son Président Barthélémy JOBERT, d'une part,

et

l'**université de** (.....), représentée par, d'autre part,

il est convenu ce qui suit :

Article 1 : Objet

Les établissements contractants souhaitent développer une coopération dans les domaines de l'Enseignement et de la Recherche en Lettres et Sciences Humaines.

Article 2 : Actions de coopération

Les parties s'attachent dans le cadre de la présente convention à favoriser :

- l'établissement de programmes communs ;
- le développement d'actions communes telles que colloques, séminaires, recherches en équipes, publications ;
- l'échange d'informations et de documentations susceptibles d'aider les chercheurs ;
- l'échange réciproque d'étudiants ;
- les cotutelles de thèses ; chaque cotutelle fait l'objet d'une convention spécifique entre les établissements concernés ;
- l'échange réciproque d'enseignants-chercheurs et de chercheurs.

Article 3 : Mise en œuvre des actions de coopération

Les parties établissent de manière précise, par annexe, la mise en œuvre des actions de coopération énumérées à l'article 2. Cette annexe est établie d'un commun accord entre les parties.

Article 4 : Coordination scientifique

La coordination scientifique des diverses actions menées est assurée par des professeurs responsables désignés par les représentants légaux de chaque établissement. Cette désignation fait l'objet d'une annexe au présent acte.

Pour la mise au point des projets communs, les deux universités se consultent régulièrement.

Article 5 : Moyens financiers

Les établissements, si nécessaire, arrêteront en commun un budget prévisionnel pour la mise en œuvre de la présente convention sous forme d'annexe.

S'il y a lieu, ils sollicitent dans le cadre des accords intergouvernementaux, ainsi qu'auprès d'organismes européens ou internationaux, l'attribution de moyens financiers en vue de la réalisation des objectifs précités.

Article 6 : Échange d'étudiants

Dans le cadre de l'échange envisagé d'étudiants, ceux-ci s'acquittent du paiement des droits universitaires dans leur université d'origine et sont exonérés des droits d'inscription dans l'université d'accueil.

Les étudiants doivent avoir une couverture sociale et être assurés en matière de responsabilité civile selon la réglementation en vigueur dans chacun des pays.

Chaque établissement s'engage à aider les étudiants accueillis dans la recherche d'un hébergement.

Article 7 : Validation des résultats obtenus

Les résultats obtenus par les étudiants dans l'université d'accueil sont validés dans l'université d'origine qui délivre les diplômes.

Article 8 : Échange d'enseignants

Dans le cadre de l'échange envisagé d'enseignants-chercheurs, la durée des séjours et les modalités financières sont fixées par accord écrit entre les parties contractantes suivant les dispositions réglementaires en vigueur dans chacun des pays.

Les enseignants prennent leurs dispositions pour avoir une couverture sociale et s'assurer en matière de responsabilité civile selon la réglementation en vigueur dans chacun des pays.

Article 9 : Durée

La présente convention est conclue pour une durée de cinq (5) ans, à compter de la date de la dernière signature.
Elle est renouvelable par voie d'avenant signé par les deux institutions.

Article 10 : Modification

Toute modification du présent acte s'effectue par voie d'avenant signé des parties.

Article 11 : Résiliation

La présente convention peut être dénoncée à tout moment, par l'une ou l'autre des parties, par lettre recommandée avec accusé de réception avec un préavis de six (6) mois.
Une telle résiliation ne peut faire obstacle, pour les étudiants, les enseignants-chercheurs et les chercheurs concernés, à la poursuite des études, stages et recherches en cours.

Article 12 : Litige

Pour toute contestation qui s'élèverait à l'occasion de l'interprétation ou de l'exécution de la présente convention, les parties conviennent, avant de porter litige devant le tribunal compétent, de rechercher à l'amiable le règlement de toute difficulté. En cas d'échec de la négociation amiable, la juridiction territorialement compétente est celle du lieu où demeure le défendeur.

En deux exemplaires originaux en version française.
En deux exemplaires originaux en version

Date :

Date :

Le Président de l'université Paris-Sorbonne

Le Président de l'université de

.....

.....

Barthélémy JOBERT

ANNEX 6

Accords internationaux de l'Université Paris-Sorbonne Année 2015-2016

Accords internationaux de l'Université Paris-Sorbonne
Année 2015-2016

Pays	Université/ Programme	Lieu	Disciplines	Niveaux	Date limite de retour des dossiers aux Relations Internationales	Observations	Lien internet
AUSTRALIE	Macquarie University	SYDNEY	Toutes disciplines	M et D	De mars à juin : 30/09/2014 De juillet à décembre : 13/02/2015	Toefl IBT ou IELTS exigé - Inscription sur le site de l'université australienne : www.international.mq.edu.au/studyabroad	www.mq.edu.au
AUSTRALIE	University of New South Wales	SYDNEY	Toutes disciplines	M et D	De mars à juin : 30/09/2014 De juillet à décembre : 13/02/2015	Toefl IBT ou IELTS exigé - Inscription sur le site de l'université australienne : www.international.unsw.edu.au/exchange/exchangehome.html	www.unsw.edu.au
AUSTRALIE	University of Sydney	SYDNEY	Toutes disciplines	M et D	De mars à juin : 30/09/2014 De juillet à décembre : 13/02/2015	Toefl IBT ou IELTS exigé - Inscription sur le site de l'université australienne : www.usyd.edu.au/studyabroad	www.usyd.edu.au http://www.usyd.edu.au/stuserv/information/USYDEXchangeGuide.pdf
CANADA	CREPUQ (toutes universités québécoises)	QUEBEC	Toutes disciplines	M et D	06/02/2015	Inscription sur le site CREPUQ et sur le site des universités. Dossier à rendre aux Rel. Int. de Paris-Sorbonne. Voir conditions spécifiques sur les fiches rédigées par les universités québécoises	www.crepuq.qc.ca
CANADA	Glendon College	TORONTO	Toutes disciplines	M	06/02/2015	Dossier envoyé par mail par les Relations Internationales de Paris-Sorbonne	www.glendon.yorku.ca

Pays	Université/ Programme	Lieu	Disciplines	Niveaux	Date limite de retour des dossiers aux Relations Internationales	Observations	Lien internet
ETATS-UNIS	Programme APA : DePauw University	INDIANA	Toutes disciplines	M et D	05/12/2014	Toefl IBT exigé - Poste d'assistant	www.depauw.edu
ETATS-UNIS	American University of Paris	PARIS	Toutes disciplines pour les cours. LFA pour les stages	L, M et D pour les cours. M et D pour les stages	30/04 pour S1 et 30/11 pour S2	Cours en anglais pendant un semestre dans la discipline de votre choix et/ou stages (cours à donner) uniquement pour les étudiants en LFA	www.aup.edu
ETATS-UNIS	Programme AYA : Bard College	ETAT de NEW YORK	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www.bard.edu
ETATS-UNIS	Boston College	BOSTON	Toutes disciplines	M et D	06/02/2015 pour S1 et 30/09/2015 pour S2	Séjour d'études d'un semestre TOEFL IBT exigé	www.bc.edu
ETATS-UNIS	Brown University	RHODE ISLAND	Toutes disciplines	D et enseignants	13/02/2015	Bourses de recherche - séjours courts (plus ou moins 3 mois)	www.brown.edu
ETATS-UNIS	Columbia University	NEW-YORK CITY	Toutes disciplines	M2 et 2e année de thèse	13/02/2015	TOEFL IBT exigé - Bourses de recherche - séjours courts (max 1 semestre)	www.columbia.edu
ETATS-UNIS	Programme CUPA : Bard College	ETAT de NEW YORK	Toutes disciplines	M et D	05/12/2014	Bourse semestrielle	www.bard.edu
ETATS-UNIS	Programme CUPA : Carleton College	MINNESOTA	Toutes disciplines, prépa litt	M et D	05/12/2014	TOEFL IBT exigé - Poste d'assistant	www.carleton.edu
ETATS-UNIS	programme CUPA : Oberlin College	OHIO	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www.oberlin.edu
ETATS-UNIS	Programme CUPA : Reed College	OREGON	Toutes disciplines, prépa litt	M et D	05/12/2014	TOEFL IBT exigé - Poste d'assistant	web.reed.edu/apply

SERVICE DES RELATIONS INTERNATIONALES DE L'UNIVERSITÉ PARIS-SORBONNE PARIS IV

ETATS-UNIS	Programme CUPA : Baylor University	TEXAS	Toutes disciplines	M et D	05/12/2014	TOEFL IBT exigé Bourse semestrielle	www.baylor.edu
ETATS-UNIS	Programme CUPA : Université du Massachusetts	MASSACHUSETTS	Toutes disciplines	D	05/12/2014	Bourse de recherche semestrielle	www.umass.edu
Pays	Université/ Programme	Lieu	Disciplines	Niveaux	Date limite de retour des dossiers aux Relations Internationales	Observations	Lien Internet
ETATS-UNIS	Programme EDUCO : Cornell University	ETAT de NEW YORK	Toutes disciplines	D	13/02/2015	Bourse de recherche - 1 semestre	www.cornell.edu
ETATS-UNIS	Programme EDUCO : Tulane University	NOUVELLE ORLEANS	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www2.tulane.edu
ETATS-UNIS	Georgia State University	GEORGIE	Philosophie	M	13/02/2015	Poste d'assistant d'un professeur - séjour d'un an	www.gsu.edu/philosophy
ETATS-UNIS	Programme IES	Universités diverses	Toutes disciplines	M et D	05/12/2014	Toefl IBT exigé - Postes d'assistants + séjours d'été à Loyola University (Chicago)	olivieauz@lesparis.org Plus de détails sur le site Paris-Sorbonne, rubrique "International", article "Programme IES"
ETATS-UNIS	Programme MICEFA	Universités diverses	Toutes disciplines	M et D	05/12/2014	Toefl IBT exigé - Inscription sur le site MICEFA. Séjours d'études et Postes d'assistants. Dossier à rendre aux Rel. Int. de Paris-Sorbonne	www.micefa.org
ETATS-UNIS	Sarah Lawrence College	ETAT de NEW YORK	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www.slac.edu

ETATS-UNIS	Smith College	MASSACHUSETTS	Toutes disciplines. Diplôme possible pour Anglistes (American studies)	M et D	05/12/2014	Bourse	www.smith.edu
ETATS-UNIS	Stanford University	Californie	Toutes disciplines	Enseignants-Chercheurs	06/02/2015	Bourse d'une semaine pour un enseignant-chercheur	www.stanford.edu
Pays	Université/ Programme	Lieu	Disciplines	Niveaux	Date limite de retour des dossiers aux Relations Internationales	Observations	Lien internet
ETATS-UNIS	Sweet Briar Program : Denison University	OHIO	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www.denison.edu
ETATS-UNIS	Sweet Briar Program : Sweet Briar College	VIRGINIE	Toutes disciplines	M et D	05/12/2014	Bourse - Etudiantes uniquement	www.sbc.edu
ETATS-UNIS	Sweet Briar Program : Washington and Lee University	VIRGINIE	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www2.wlu.edu
ETATS-UNIS	Programme Vassar-Wesleyan : Vassar College	ETAT de NEW YORK	Toutes disciplines	M et D	05/12/2014	Poste d'assistant	www.vassar.edu
NOUVELLE-ZELANDE	Université d'Auckland	AUCKLAND	Toutes	M et D	De mars à juin : 30/09/2014 De juillet à novembre : 13/02/2015	IELTS ou TOEFL exigé Inscription sur le site d'Auckland : www.auckland.ac.nz/applynow	www.auckland.ac.nz - www.auckland.ac.nz/360 - Student exchange information - www.auckland.ac.nz/devea - nDeva (student and course information) - www.auckland.ac.nz/accommodation - Accommodation Services

ANNEX 7

Conventions between the Université Paris IV and Latino-American, Asian, East European, South European, West European and Middle East Universities

Zone	Pays	Etablissement	Ville ou Etat	Validité	Domaines	Niveaux	Observation	Site Internet
Amérique Latine	ARGENTINE	Université Nationale de Cuyo	MENDOZA	2010/2015	Tous	M et D		http://www.uncu.edu.ar/
		Universidad Nacional de La Plata	LA PLATA	2009/2014	Tous	M et D		http://unlp.edu.ar
	BRESIL	Universidad del Salvador	BUENOS AIRES	2010/2015	Tous	M et D		http://www.usal.edu.ar/
		Universidade do Ceara	FORTALEZA	2010/2014	Tous	M et D		http://www.ufc.br/
		Universidade de Sao Paulo - FFLCH	SAO PAULO	2012/2017	Sciences Humaines	M et D		http://www2.usp.br/
		Universidade de Sao Paulo - FEA	SAO PAULO	2009/2014	LEA	M et D		http://www.fea.usp.br/
		Universidade de Sao Paulo - ECA	SAO PAULO	2010/2015	Communication	M et D		http://www3.eca.usp.br/
		Pontificia Universidade Católica Minas Gerais - PUC Minas	BELO HORIZONTE	2012/2017	Tous	M et D		http://www.puc.br/
		Universidade do Vale do Itajai (UNIVALI)	ITAJAI	2010/2015	Tous	M et D		http://www.univali.br/
		Universidade Federal Do Parana (UFPR)	CURITIBA	2010/2015	Tous	M et D		http://www.ufpr.br/portal/
		Universidade Federal de Rio de Janeiro (UFRJ)	RIO DE JANEIRO	2013/2018	Tous	L,M,D		http://www.ufrj.br/
	Universidade Estadual de Campinas (UNICAMP)	SAO PAULO	2012/2017	Tous	L,M,D		www.unicamp.br	
	CHILI	Pontificia Universidad Catolica de Chile	SANTIAGO	2011/2016	Tous	M et D		http://www.puc.cl/
		Universidade de Chile	SANTIAGO	2012/2017	Tous	M et D		http://www.uchile.cl/
	COLOMBIE	Universidad del Cauca	POPAYAN	2009/2014	Musique et Musicologie	M2 et D		http://www.unicauca.edu.co/
	MEXIQUE	Université Nacional de México & l'HESS	MEXICO	2008/2013	Archéologie	Enseignants-chercheurs		http://www.unam.mx/
Universidad de Guadalajara		GUADALAJARA	2010/2015	Tous	M et D		http://www.udg.mx/	
Universidad Nacional Autonoma de Mexico		MEXICO	2009/2014	Tous	M et D		http://www.unam.mx/	
PEROU	El Colegio de Mexico	MEXICO	2010/2015	Tous	M et D		http://www.colmex.mx/	
	Pontificia Universidad Catolica del Peru	LIMA	2011/2016	Archéologie et Sciences Humaines (sauf Musique)	M et D		http://www.pucp.edu.pe/	
Asie	JAPON	Aichi Prefectural University of Fine Arts and Music	NAGAKUTE	2011/2016	Musique	M et D		http://www.aichi-fam-u.ac.jp/top?set_language=en-us
		Université de Waseda	TOKYO	2011/2016	Tous	M2 et D	Maitrise du japonais obligatoire	http://www.waseda.jp/
		Kunitachi College of Music	TOKYO	2013/2018	Musique	M et D		http://www.qs.kunitachi.ac.jp/i_index.html
	CHINE	Université des Langues Etrangères de Beijing	BEIJING	2009/2014	Tous	M et D		http://www.bfsu.edu.cn/
CUHK (Hong Kong)		HONG-KONG	2012/2017	Tous	M et D	TOEFL requis pour les cours en commerce, gestion et droit	http://www.cuhk.edu.hk/v5/en/	
CHINE	Shanghai Jia Tong University	SHANGHAI	2010/2015	Celsa	M	Contacteur le Celsa	http://www.sjtu.edu.cn/english/index/index.htm	
Asie	COREE du SUD	HUFS (Hankuk)	SEOUL	2010/2015	Tous	M et D		http://www.hufs.ac.kr/eng/
	COREE du SUD	Seoul National University	SEOUL	2010/2015	Tous	M et D		http://www.snu.ac.kr/engsnu/
		Korea University	SEOUL	2010/2015	Langue Française, FLE	M	stages de FLE possibles	http://www.korea.edu/
	SINGAPOUR	National University of Singapore	SINGAPOUR	2009/2014	Tous	M et D	TOEFL requis pour les cours en commerce, gestion et droit	http://www.nus.edu.sg/
THAILANDE	Mahidol University-College of Management	BANGKOK	2013/2018	Tous	M et D	Anglophone	http://www.cmmu.mahidol.ac.th/cmmu/index.php	
Europe Est	CROATIE	Université de Zagreb	ZAGREB	2009/2013	Tous	M et D		http://www.unizg.hr/homepage/
		Université Sciences et Techniques	BUDAPEST	2009/2014	Géographie	M2	Diplôme délocalisé en Hongrie	http://www.bme.hu/en/
	HONGRIE	Université de Debrecen	DEBRECEN	2009/2014	Géographie	M2	Diplôme délocalisé en Hongrie	http://www.unideb.hu/index.php?C=en
		École Supérieure des Finances Wekerle Sándor	BUDAPEST	2009/2014	Géographie	M2	Diplôme délocalisé en Hongrie	http://wsuf.hu/
		Université de Varsovie	VARSOVIE	2012/2017	Lettres, Civil, Histoire, Géol, Philo	M et D		http://www.uw.edu.pl/en/
	POLOGNE	Université de Varsovie	VARSOVIE	2012/2017	LLCE Etudes Slaves, Mention Polonais	Master	Double diplôme	http://www.uw.edu.pl/en/
		Inst. Recherches Litt. de l'Académie des Sciences	VARSOVIE	2009/2013	Litt. Polonaise, comparée, Philosophie	Recherche	Recherches, Publications, Colloques	
	RUSSIE	Université d'Etat des Sciences Humaines de Russie RGGU	MOSCOU	2009/2014	Slavistes et Histoire	M et D		http://rqqu.com/
		Haut Collège d'Économie de Moscou	MOSCOU	2009/2014	Philosophie, Études slaves, Journalisme	M et D		http://new.hse.ru/C2/C17/France/default.aspx
		Lomonosov Moscow State University - MSU	MOSCOU	2010/2015	Tous	M et D		http://www.msu.ru/fr/
		Université d'Etat de St-Petersbourg	St-PETERSBOURG	2009/2013	Géo + Slavistes + langue fr	M et D		http://www.spbu.ru/e/
		Université d'Etat de Novosibirsk	NOVOSIBIRSK	2009/2014	Slavistes	M et D		http://www.nsu.ru/french/
Université Pédagogique Municipale de Moscou	MOSCOU	2012/2017	Tous	L, M et D		http://www.mgpu.ru/		
Europe de l'ouest	ITALIE/ALL/ESP/SUISSE	Universités de Sienne, Heildberg, Santiago de Compostela et Zurich	SIENNE, HEILDEBERG, SANTIAGO DE COMPOSTELA & ZURICH	2009/2015	Philologie romane	D	Doctorat européen : contacter le service des doctorats	
	ALLEMAGNE	Rheinischen Friedrich Wilhelms Universität	BONN	En renouvellement	Allemand/Lettres	L1/2/3	Double diplôme	http://www.uni-bonn.de/index_fr.shtml
	ALLEMAGNE	Rheinischen Friedrich Wilhelms Universität	BONN	En renouvellement	Allemand/Lettres	M1 / M2	Double diplôme	http://www.uni-bonn.de/index_fr.shtml
	BELGIQUE	Université de Liège	LIEGE	2009/2014	Philosophie et Sociologie	M et D	Recherche sur les politiques universitaires	http://www.ulg.ac.be
	ESPAGNE	Universidad Complutense de Madrid	MADRID	2010/2015	Langue française Appliquée	M2	Double diplôme	http://www.ucm.es/

SERVICE DES RELATIONS INTERNATIONALES DE L'UNIVERSITÉ PARIS-SORBONNE PARIS IV

Europe de l'ouest	ESPAGNE	Universitat de Barcelona	BARCELONE	2010/2013	Latin	D et enseignants-chercheurs	Contacteur l'UFR de Latin	
	SUISSE	Conservatoire de Musique de Genève	GENEVE	2010/2014	Musique et Musicologie	M	Master Pro Pratique de musique médiévale	http://www.cmusge.ch/
	ITALIE	Università di Palermo	PALERME	2009/2014		D et enseignants-chercheurs		http://portale.unipa.it/
		Università degli Studi di Lecce	LECCE	2010/2015	Philosophie	D		http://www.unile.it/ateneo_eng/
		Università degli Studi Roma Tre	ROME	2010/2015	Langues et Littérature	Enseignants-chercheurs	Centre d'Etude de la langue et de la littérature fr du XVIIe et XVIIIe siècle (CELLF)	http://www.uniroma3.it
		Università degli Studi di Bari	BARI	2009/2014	Philosophie	Enseignant-chercheurs et D		
		Università degli Studi di Napoli Federico II	NAPLES	2011/2016	Tous	M et D		www.unina.it
Moyen Orient	ISRAEL	Université hébraïque de Jérusalem	JERUSALEM	2010/2015	Français, Histoire, Art, Musique, Philo, Géo	Recherche	Cours en hébreu	http://www.huji.ac.il/huji/eng/
		Tel Aviv University	TEL AVIV	2012/2017	Tous	M et D		http://english.tau.ac.il/
		Université d'Haïfa	HAIFA	2013/2018	Tous	L, M et D	Cours en hébreu	http://www.haifa.ac.il/index_eng.html
	LIBAN	Université Saint-Joseph	BEYROUTH	2011/2016	Tous	M et D	Francophone	http://www.upa.edu.lb/Nouveau_site_Flash_GB/intro.html
		Beirut Arab University	BEYROUTH	2010/2015	Tous	M et D	Cursus anglophone disponible	http://www.bau.edu.lb/

ANNEX 8 Sorbonne University in Numbers

During collection of data for this Report, the numbers of the SU evolved. In order to show this process, the findings will be presented below.

❖ Sorbonne University in numbers*¹⁸²

65 000 students, of whom:

- 13 000 international students
- 23 000 master's students and
- 7 000 doctoral candidates.

About 5 000 researchers and professor-researchers (24 are researchers supported by the European Research Council and 45 hold industry-sponsored research chairs)

200 laboratories and research centers.

Source: Marin, C. International Relations Coordinator, "Sorbonne University" [Online]. Available: www.sorbonne-universites.fr; [Accessed 14.07.2015], and Not Available Anymore: [Accessed 04.02.2016].

❖ Sorbonne University in numbers*

58 000 students, of whom:

- 10,000 international students
- 23,000 master's students
- 5,200 are doctoral candidates

Of the nearly 7 700 researchers and professor-researchers, 24 are researchers supported by the European Research Council and 45 hold industry-sponsored research chairs, and 85 are members of the French Academy of Sciences.

Sources: Marin, C. International Relations Coordinator, "Sorbonne University"[Online]. Available: [Accessed 04.02.2016]. See the document below.

❖ Sorbonne University in numbers

58 680 students

- 7 685 *enseignants-chercheurs*
- 7 830 supporting staff
- 26 doctoral schools
- 5200 *doctorants*.

Source: *Guide de l'étudiant 2015/2016*, page 4.

❖ Sorbonne Universités in numbers

58 000 undergraduate students (under the umbrella of a common Bachelor's College), and graduate students

- 8 200 international students
- 5 000 doctoral candidates under the umbrella of a Common Doctorate College
- 4 800 researchers and professor-researchers in 180 laboratories and research centers

Source: Marin, C. DAAD Information Visit "The greener, the merrier? Innovative approaches towards city development in France and Germany" Visit of Sorbonne Universités (SU). Welcome and presentation of the international activities of SU." 16.11.2015, p. 8.

¹⁸² * Note: The documents do not have any date of creation. Author of the Report mentioned only the date when they were available and accessed online.

Sorbonne University

Seven leading French higher education establishments and four national research organizations have joined together to form the new Sorbonne University group. A successor to the historic Sorbonne, it is one of the most comprehensive university centers in France.



Innovative Education and Research for the 21st Century

This university cluster provides higher education and research in economics, humanities, business and administration, science, medicine, and technology. By bringing together the best talent in a wide array of disciplines, Sorbonne University offers new transversal academic programs and scientific expertise.

Sorbonne University welcomes close to 58,000 students, of whom:

- 10,000 are international students
- 23,000 are master's students
- 5,200 are doctoral candidates

Of the nearly 7,700 researchers and professor-researchers, 24 are researchers supported by the European Research Council and 45 hold industry-sponsored research chairs, and 85 are members of the French Academy of Sciences.

• The Sorbonne Bachelor's College

The College offers programs that enable students to progressively define their education, by choosing both a discipline as well as complementary studies

that are aligned with their individual goals. Research-based teaching is introduced at the bachelor's level and an integral part of Sorbonne University master's programs. Doctoral research is professional employment including a work contract, and offers tailored programs for emerging job profiles.

• Bringing Innovation into Society

Sorbonne University has end-to-end capabilities for technology transfer, with independent structures for technology maturing, start-up incubators, and venture capital. Housed in innovation centers, these resources will play a vital role in regional and national economic development.

• Multidimensional Research

Sorbonne University accelerates research with strategic projects that have been awarded funding from the French *Investing for the Future* initiative. An exceptional number of strategic cross-disciplinary projects at Sorbonne University were designated as Excellence Initiatives, including joint laboratories, shared equipment investments, biotechnology consortiums and University-Hospital Institutes.

• International Partnerships

Sorbonne University has a broad network of partnerships worldwide, and focuses its international action on strategic alliances in targeted regions: Europe, India, China, Brazil, South Africa, and the United States, as well as building on established alliances at its international campuses in Singapore and Abu Dhabi.

Since its creation, Sorbonne University has established milestone partnerships such as the CAPES chairs in the Brazilian exchange program and a strategic alliance agreement with the Harbin Institute of Technology (China).

Marin, C. International Relations Coordinator, "Sorbonne University"[Online]. Available: in Google. [Accessed 04.02.2016].*



Sorbonne University was selected as an Excellence Initiative by the French government.



Sorbonne University Members

Pierre & Marie Curie University - UPMC (Science and Medicine) is the leading French university of science and medicine. UPMC offers bachelor's, master's and doctoral programs to 34,000 students and conducts research in its 100 laboratories in a broad number of domains, including fundamental science, and ranging from targeted research to sustainable development for complex systems.

Paris-Sorbonne University (Humanities) is the main inheritor of the old Sorbonne, which dates back to the 13th century. It was one of the first universities in France dedicated to Literature, Languages, Civilizations, Arts, Humanities and Social Sciences. Paris-Sorbonne has close to 22,000 students and 1,200 faculty-researchers. The university is still located on the original medieval foundations, and now extends to the Latin Quarter and to other areas in Paris.

The National Museum of Natural History is both a scientific and public service establishment, focusing on the dual tasks of research and the dissemination of knowledge. It has five primary missions that govern all of its activities: basic and applied research, management and conservation of collections, teaching and pedagogy, dissemination of knowledge, and expertise.

INSEAD Business School is one of the world's leading and largest business schools. INSEAD has campuses in Europe, Asia and the Middle East. Its renowned faculty members from 35 countries inspire more than 1,000 degree participants annually in its MBA, Executive MBA and PhD programs. More than 6,000 executives participate in INSEAD's Executive Education programs each year.

Compiègne University of Technology - UTC has more than 4,000 engineering and master's students as well as PhD candidates who benefit from the technological innovation taking place in UTC's research units. The engineering curriculum has a modular course structure, to ensure both excellent engineering skills and a good general education.

The Paris Boulogne-Billancourt Arts Education Center is a public institution of higher education created by the cities of Paris and Boulogne-Billancourt and the Ministry of Culture, providing bachelor's programs in music, drama and jazz dance.

The International Center for Pedagogical Studies is a national public institution recognised both in France and abroad for its expert evaluation, training, assessment, and management of international projects.

The CNRS is the French National Center for Scientific Research, the largest governmental research organisation in France and the largest fundamental science agency in Europe.

INSERM is the French Institute of Health and Medical Research, which includes biomedical and public health research. It is the successor to the French National Institute of Health.

IRD stands for the Institute of Research for Development, and is a French public science and technology research institute.

INRIA, the French Institute for Research in Computer Science and Automation, is the only public research body dedicated to computational sciences.

www.upmc.fr | www.paris-sorbonne.fr | www.mnhn.fr | www.insead.edu | www.utc.fr | www.pspbb.fr | www.cepp.fr | www.cnrs.fr | www.inserm.fr | www.ird.fr | www.inria.fr



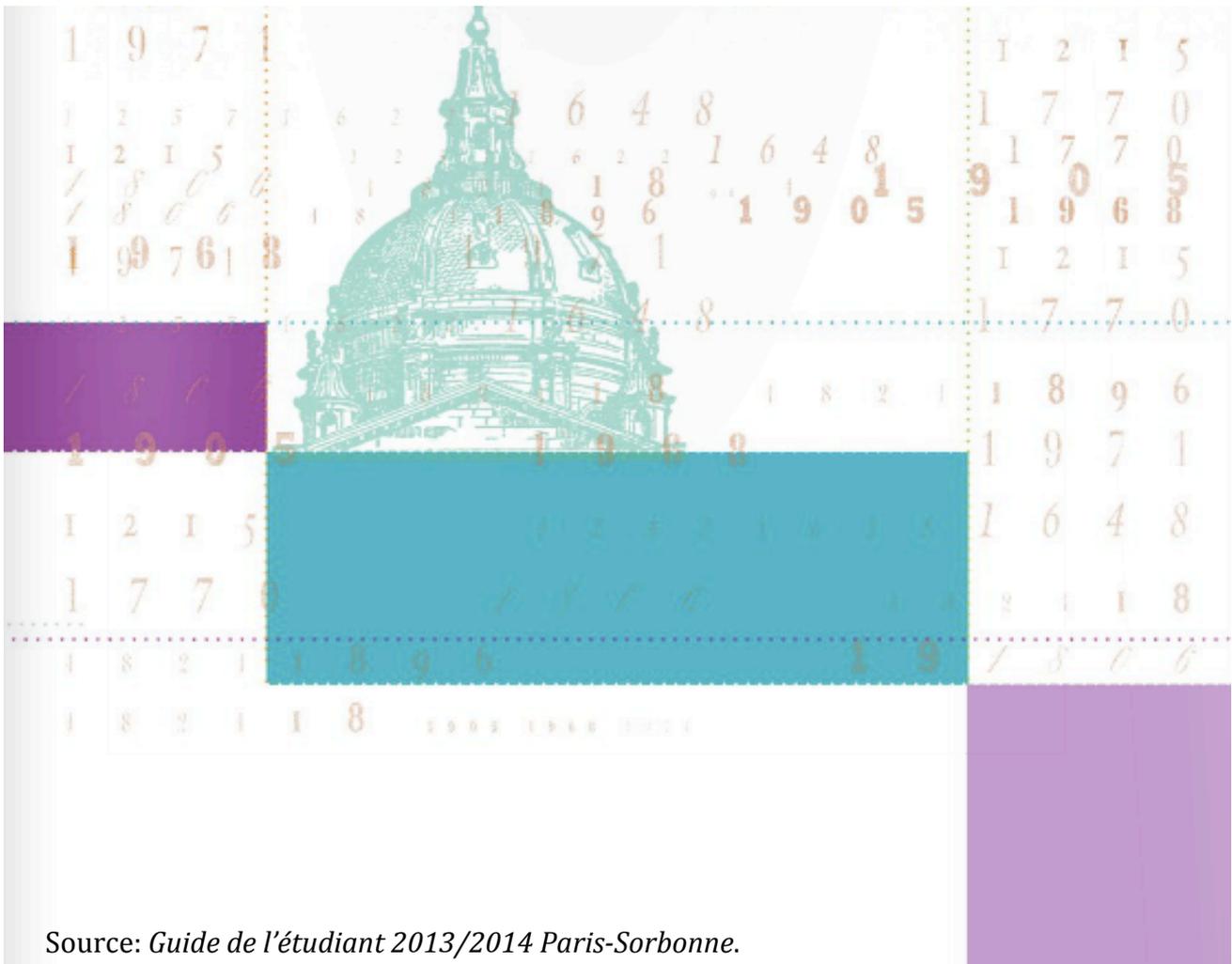
Cornelia Marin, International Relations Coordinator
Tel: + 33 (0)1 56 81 08 43. Email: cornelia.marin@sorbonne-universites.fr
26 rue des Fossés Saint-Jacques F-75005 PARIS. www.sorbonne-university.com

© Sorbonne Université - Université Paris-Saclay - Université Paris Lodron - Université de Bourgogne - Université de Caen - Université de Lille - Université de Montpellier - Université de Nantes - Université de Picardie - Université de Poitiers - Université de Reims - Université de Rouen - Université de Strasbourg - Université de Toulon - Université de Tours - Université de Valenciennes - Université de Bourgogne - Université de Caen - Université de Lille - Université de Montpellier - Université de Nantes - Université de Picardie - Université de Poitiers - Université de Reims - Université de Rouen - Université de Strasbourg - Université de Toulon - Université de Tours - Université de Valenciennes

About the Author

Lidia Maria Wiśniewska

- Visiting Scholar/Researcher at the University of Michigan (USA).
- International PhD candidate in Educational Science: Organization of Higher Education and Curricula, University of Granada (Spain): Transdisciplinary, intercontinental project on practices in internationalization of Higher Education and Research – cultural approach.
- Master *Erasmus Mundus Mundusfor Formation des professionnels de la formation Alumni: Internationalisation of Higher Education and Research*, by Akershus & Oslo University Colleges (Norway), Reims University (France), Granada University (Spain), Oporto University (Portugal), Tarragona University (Spain).
- Interdisciplinary European Studies in Philosophy & History - Double Master Degree and Double Bachelor Degree with Honors by the Maria Curie-Sklodowska University (Poland).
- Work experience: Paris-Sorbonne University (France), Office of International Research Projects of University of Granada (Spain), Chonnam National University (South Korea), Geneva University (Switzerland), Sheffield Hallam University (UK), Akershus & Oslo University Colleges (Norway).
- Participant of: Socrates-Erasmus, Erasmus, Erasmus Mundus, Free Movers, Korean Honorific *Frontier Program*, *Escuela de Blas Cabrera* (Spain), Visiting Scholar (USA) and others.



Source: *Guide de l'étudiant 2013/2014 Paris-Sorbonne.*

