

Teaching Landscape in Spanish Universities: Looking for New Approaches in Geography

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1. INTRODUCTION

The purpose of this work is to describe the approaches of landscape teaching in Geography degrees in Spanish universities in order to open new research paths on landscape teaching and methodology in different European countries. The scope will cover the so-called Bologna Process, which Spanish universities are currently following. The lack of research on this issue, especially in landscape teaching in higher education in other countries, makes it difficult to understand how Europe is adapting to this new approach since the establishment of the European Higher Education Area (EHEA) in 1999, applying the aforementioned Bologna Process. This is why our work offers a framework to establish an overview of the range of different courses and approaches of landscape in the degrees in Geography of the Spanish universities.

Landscape boasts a broad social base that covers different areas in which it is introduced with this name, from artistic and political areas to the scientific and academic ones. In the scientific arena, landscape is an important object of interest—both direct or multidisciplinary—in international and regional conferences on geographic or environmental issues that are periodically held, as well as in government centers where landscape catalogs and studies on landscape impact are written, in order to comply with landscape policies that are established at the local, regional, or national level. In university settings, strengthening the teaching of landscape takes shape in the form of courses specifically dedicated to the study of this field, or “specializations”, according to the new educational model established by the European Union (Riesco González 2008).

The importance of teaching the landscape is reflected in the European Landscape Convention (ELC) since 2000, where signatory states commit to adopting general measures in matters relating to landscape. Standing out among them are, firstly, the recognition of landscape as a subject of law and the promotion of landscape policies and public participation processes; secondly, the need to train and educate all persons involved in its management on the understanding of landscape knowledge, and also in the areas of secondary and higher education. In this respect there are numerous teaching strategy proposals that reflect this new social sensibility toward landscape, and allow their implementation in curricula (Herbillon & Pouységur 1996; Lawson 2003; Herlin 2004; Castiglioni 2007; Priestnall, 2009; Meijles & van Hoven 2010; Papadimitriou & Probal 2010; Klonari, Dalaka & Petanidou 2011).

Although the European Landscape Convention points to the need of landscape education, given that the latter affects various disciplines and educational levels, Geography is the discipline that contains the majority of courses pertaining to landscapes in the Spanish university system. However, there is no unanimous consensus on the content that all landscape courses should include, and even less agreement on its teaching. This relates to the different approaches that take up the issue of landscape: ecological,

cultural, perceptual, historical, systemic or integrated approach, etc. To start with, environmentalist or physiognomic approaches of an analytical nature runs counter to humanistic approaches, while Geography as a scientific discipline has had to overcome certain quantitative pretensions to reclaim their 'landscape' tradition. From a humanistic perspective, Geography can be defined as "the study of the Earth as the home of people" (Tuan 1991). Geography primarily focuses on the relation between society and nature –and landscape and its social perception is the result of this relation–. For a current geographer, landscape is the place and its image: the configuration of geographical facts and their perceptions and cultural representations.

The present work undertakes a study of the implementation of landscape in Geography Degrees offered by Spanish universities via the characterization of the courses focusing on the teaching of landscape. It attempts to explain not only the differences in the aforementioned approaches, but also aspects such as the incorporation of Geographical Information Technologies (GIT) in such teaching – used, for instance, in studies on landscape impact assessment-, references to the existing legislation on landscape, and the financial aspect of landscape. A detailed analysis of the educational guides of landscape courses must ultimately allow for the proposal of ideas conducive to strengthening of the study of landscape in the degrees of Geography, a discipline in which landscape constitutes an integral part and, in addition, unfolding new landscape teaching proposals and recommendations.

2. THEORETICAL FRAMEWORK AND BACKGROUND

In Spain, since the origins of the Free Institution of Education, a pedagogical project was developed between 1876 and 1936 with high impact on the Spanish intellectual life at that moment, when the Giner de los Ríos's doctrine of landscape interpretation became a significant ingredient in the new education system. Since then, the number of universities progressively integrating a more institutional understanding of Geography and landscape in the new curricula (Bologna Process) has been growing (Ortega-Cantero 2004). The analysis of the process and the degree of implementation of Geography in the Spanish university and secondary education system has been widely studied, from Becker's interesting and pioneering work of 1917, to other relatively recent ones such as those of Albet & García (2002), Burriel (2004a, 2004b) and García-Ramón (2005). However, the topic of landscape studies within the larger framework of academic Geography at the higher education level has not been sufficiently explored (Gómez-Ortiz 1993, 2001; Bovet & Pena 1996; Busquets 1996; Jerez-García 2007), although the new legislative framework that the European Landscape Convention entails has received attention (Gómez-Zotano & Riesco-Chueca 2010a, 2010b; Riesco-Chueca & Gómez-Zotano 2012), accordingly, there are few precedents that offer an overview in this regard.

This being the case, in the few years since the widespread introduction of the Geography Degree –taking over the previous long-cycle degree (Licenciatura) in Geography before the Bologna Process was established–, the study of the presence of landscape studies in the university curriculum in Spain has no specific precedents other than the work of Gómez-Zotano and Alomar-Garau (2013), in which various aspects of the implementation of landscape studies in higher education are analyzed. According to these authors, 32 of the 77 existing universities in Spain in the academic year 2012-2013 offered a degree dedicated to geography as an academic discipline. The vast majority of these universities, 26 in total, offered this degree following the designations adopted for Geography Degrees in compliance with the Bologna Plan. This includes Geography (3 instances); Geography and Regional Planning (19 instances);

Geography and Environment (1 instance); Geography, Regional Planning and Environment (1 instance); Geography and Land Management (1 instance) and Geography, Land Management and History (1 instance). Meanwhile, 6 universities chose the designation of Degree in Geography and History, or in History and Geography. In the cited work, Gómez-Zotano and Alomar-Garau (2013) noted the absence of some guidelines in relation to the agenda of the educational guides of the subjects dedicated to landscape. This disparity is due to the lack of consistency regarding not only the content of a Geography course devoted to landscape, but also the actual concept of landscape, and even what is considered as “geographical perspective of landscape” (Clifford et al 2009).

Firstly, it is necessary to take into account the legal framework concerning Geography teaching in higher education. Since the educational reforms undertaken in Spain since 1999, in accordance with the so-called Bologna process, which led to the creation of the European Higher Education Area (EHEA), Spanish universities have been establishing a new system of degrees and credits per course. On the one hand, diplomas replace Bachelor’s degrees (and require 180 to 240 ECTS credits, which entail 3 to 4 academic years, except for the degrees of Architecture, Pharmacy, Dentistry and Veterinary Medicine (300 ECTS in 5 academic years) and Medicine (360 ECTS in 6 academic years). In contrast, the ECTS (*European Credit Transfer System*) equates one credit with 25-30 hours of student work. From this point the adoption of new Geography Degrees into EHEA Geography was resolved, though with some formal discrepancies, such as whether one of the two possible areas of learning (Arts and Humanities or Social and Legal Sciences), or the one relating to the actual name of the degree. All models entail curricula of 60 required ECTS in the core subjects, and a minimum of 114 ECTS, including the final project, and may contain more or fewer courses from other disciplines, in addition to a maximum of optional 66 ECTS, which define the different tracks. Thus, the total number of credits required to obtain a degree is 240.

The *White Book of the Bachelor Degree in Geography and Regional Planning*, developed by the National Agency on Evaluation, Quality and Accreditation (ANECA 2004), defines six different professional profiles or fields of study of Geography in Spain (ANECA, 2004; Baylina & Villanueva, 2011), establishing the essential contents to guarantee the proper application of each of the profiles. Landscape is mentioned in the basic contents of two of those profiles: on one hand, the Environment, Physical Systems and Natural Resources profile; on the other hand, the Territorial Planning and Management: Legal and Physical Dimensions. The rest of the profiles are: Research, Education and Dissemination; Geographical Information Technologies; Territorial Planning and Management: Population and Demographic Analysis; and Socio-economic and Territorial Development.

On the other hand, it is possible to emphasize that the relations between society and the environment are concretized in the landscape, which has become a constant and essential matter of Geography (Gómez Zotano & Riesco Chueca, 2010a). Nevertheless, it is possible to emphasize the existence of multiple approaches of landscape: landscape ecology (Wiens & Milne, 1989; Forman, 1995; Wu, 2006), perceptual landscape (Lowenthal, 1978; Morgan, 1978; Zube, Sell & Taylor, 2000), systemic or integrated landscape (Bertrand, 1968, 1974, 1978), historical landscape approach (Aldred & Fairclough, 2003; Stabbetorp et al., 2007; Lambrick, Hind & Wain, 2013) and landscape educational approach (Castiglioni, 2007). In this sense, this author refers to landscape teaching as a way to approach four different dimensions of human life: sensorial dimension (especially, visual), in which landscape teaching can be considered as “education of the sight”; a cognitive dimension, towards a better understanding of natural and human factors over landscape; an ethic dimension, which highlights the responsibility of human actions over the landscape; and a social dimension, in which landscape is shared by the community. According to Zanato (2007), landscape has a social function as it promotes the

development of a local identity and its changeability. In this way, landscape is not only a mere subject in Geography degrees and its curriculum but it is a concept that implies an ethical and social dimension.

In Europe, the university teaching about the landscape has been raised from different disciplinary, conceptual and methodological approaches. However, following the entry into force of the European Landscape Convention, education in this area poses a new challenge for higher education. The landscape is undergoing an important process of renewal, a conceptual and methodological revival in which Geography plays a fundamental role in the promotion of the social sensitivity and public interest required by the landscape question (Gómez Zotano & Riesco Chueca, 2010a). In fact, the definition of landscape according to the convention is “an area, as perceived by people, whose character is the result of action and interaction of natural and/or human factors”. In addition, the importance of landscapes in the quality of life and in culture, the degradation of many of them, as well as the growing demand for specialists in their protection and management, are sufficient reasons for the geography curricula transmit the most recent knowledge on the subject.

3. METHODOLOGY

In order to identify the distinctive features of landscape teaching in higher education concerning Spanish Geography, we have researched the presence of landscape courses in Geography Degrees in the Spanish university system, as well as the name that each degree adopts. From this initial data, we have examined the titles of landscape courses and their teaching guides during the academic year 2014-2015. These teaching guides are the main element that characterises the courses to be analysed since they are documents that offer important information: the main aspects of every subject are specified, as well as their educational objectives, skills acquired, methodology and bibliography recommended, a catalog of teaching techniques employed, the academic activities to be undertaken and methods of assessment. The tabulation of this information allows not only for an individualized consultation of the formal characteristics of each subject, but also an overview. The characterization and systematization of information is based on the following seventeen factors (F):

- F1.** YES = Explicit landscape course in the curriculum of Geography Degree. NO = Course not explicitly related to landscape.
- F2.** Number of landscape courses.
- F3.** Core (CO), mandatory (MA) or optional (OP) status.
- F4.** Academic year in which it is taught.
- F5.** Number of hours of the course.
- F6.** Number of class hours.
- F7.** Number of hours of theoretical classes (classes or lectures).
- F8.** Number of practicum hours.
- F9.** Out-of-class work / Field work (number of hours).
- F10.** Number of ECTS credits.
- F11.** Study of the concept of landscape and its evolution.
- F12.** Theoretical aspects of the landscape (art, aesthetics, philosophy).
- F13.** Usage of Geographic Information Technologies.
- F14.** Landscape management. Land Management. Legislation. European Landscape Convention.

F15. Analysis of explicit regional landscapes.

F16. Explicit consideration of the heritage approach (landscape protection).

F17. Empirical Approach (EA) / theoretical approach (TA) / empirical and theoretical approach (ETA).

Aspects concerning the epistemological and pedagogical approaches of each course have also been analysed. In order to do so, the sections “course description” and “course curriculum” of the study guides have been crucial in this analysis. This approach has been based on the presence or absence of the following topics: the concept of landscape and its evolution, together with its relation to the art, ascetics, architecture, or psychology of perception; the use of Geographical Information Technologies, whether by using mapping software of Geographical Information Systems as a tool for spatial analysis; the study of the legal framework regarding landscape, the European Landscape Convention, landscape in Territorial Planning, landscape management, and landscape protection from a patrimonial heritage and legal point of view; and the explicit study of regional landscape.

Taking into account these aspects as criteria for analysis, a quantitative approach has been followed based on the interpretation of the content of the study guides. By doing this, a general approach has been established with three options: positivist approach, relativist approach, and an approach both relativist and positivist at the same time. The student is offered a set of methods and techniques of landscape analysis, with IT support of Geographical Information Technologies, and in particular, the GIS and automatic mapping techniques. The course, then, adopts an applied nature (as opposed to what we have called a relativist approach) in order to endorse a ‘quantitative’ and ‘physicalist’ approach to the analysis of landscape, elevating it, through this method, to the category of ‘science’. The relativist approach, on the other hand, gives landscape a metaphysical and subjective value. The teacher focuses on the artistic and philosophic fundamentals, in a broad sense, of the concept of landscape and its evolution until its incorporation in the scientific framework of Geography.

With the aforementioned separation between the two approaches –in the study guides they are usually combined-, it is intended to make a distinction between two types of courses. The first type of courses includes those that follow a pedagogical approach based on the understanding of the epistemic, theoretical, and methodological keys of the geographical study of landscape, its cultural references, its social construction, and its identity values.

4. RESULTS

According to the analysis of the curriculum of the degrees in Geography in Spanish universities and, especially, the presence or absence of landscape subjects and the contents of their didactic guides, as indicated in the Figure 1, of the 32 degrees of Geography existing in Spain—with their various official designations—20 have incorporated into their curricula a course specifically and explicitly designed for the study of landscape; that is, those courses that adhere semantically to the theoretical principles of landscape, and excluding those that use this term in order to conceal a regional perspective; in other words, as a substitute for a specific geographical location.

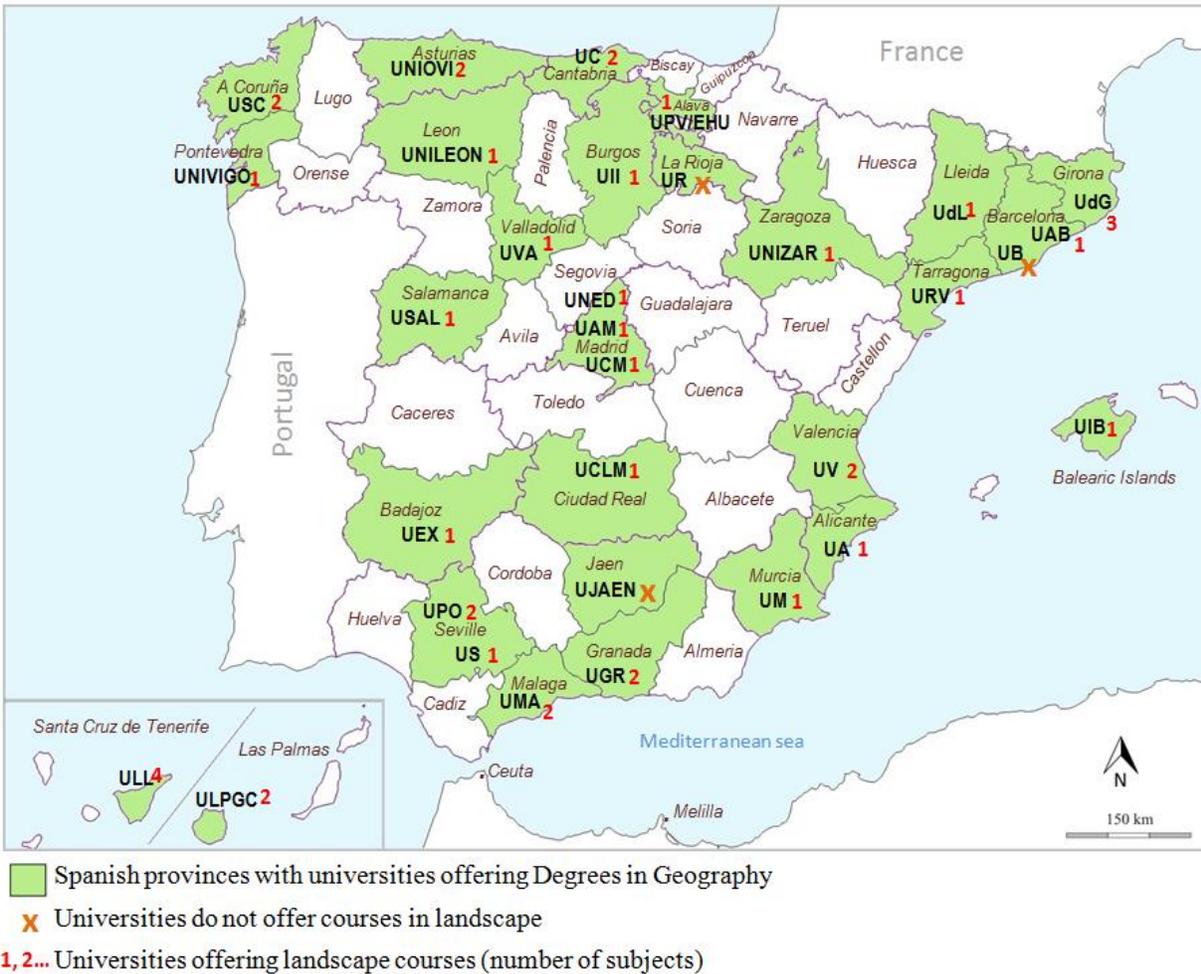


Figure 1. Offer of Degrees in Geography and courses of landscape in the Spanish universities (academic year 2014-2015). Source: authors.

As shown in figure 2, a few Geography Degrees –10 in total– offer two courses on landscape and there is only one case with four (University of La Laguna) and three (University of Girona). Thus, in the Spanish curricula of Geography Degrees a total of 36 courses are explicitly dedicated to landscape. Almost half (17) are mandatory and 20 are optional. Of those that are mandatory, 5 are considered as Basic Education or Core (CO), which means that they are taught in the first year. This prompts consideration to the year in which these subjects are taught: 5 in the first year, 1 in the second year, 13 in the third year and 17 in the fourth year. Most of those that are taught in the fourth year are optional: 11 in total in contrast of 6 that are mandatory. Of those taught in the third year, 5 are obligatory and 8 are optional.

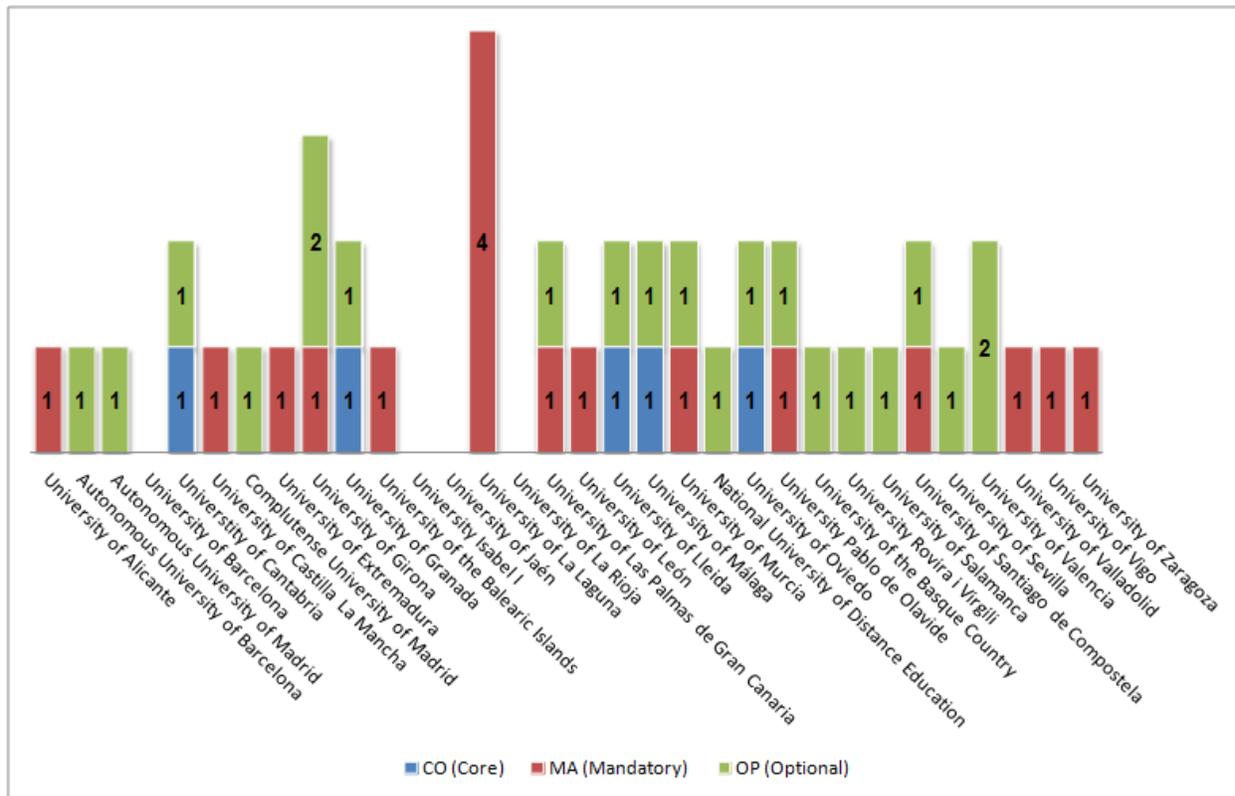


Figure 2. Number of landscape courses (F2) and status (F3) in the curriculum of Geography according to Spanish universities (academic year 2014-2015).

With regards to the number of hours allocated to the courses, the norm is 150 hours of subject matter, equivalent to 6 ECTS credits. The European credit system measures total student apprenticeship work required to fulfill the objectives stipulated in the curricula. According to table 1, as an exception, there are four cases involving courses of 3, 5, 7.3 (this is the case with Territory and Landscape, which is taught in the Degree in Geography and History at the Pablo de Olavide University) and 7.5 credit courses (in the case of *Paisatge, territori i societat*, ‘Landscape, Territory and Society’, in the Degree of Geography and Regional Planning at the University of Lleida).

Table 1. Distribution of the temporality of the landscape courses -in hours- in the curriculum of Geography Degrees (Spanish universities, academic year 2014-2015)

University	Title of course	Factors (F)					
		F5	F6	F7	F8	F9	F10
University of Alicante (UA)	<i>Landscape Analysis and Management</i>	-	-	-	-	-	6
Autonomous U. of Barcelona (UAB)	<i>Territorial and Landscape Dynamics</i>	150	75	22.5	45	45	6
Autonomous U. of Madrid (UAM)	<i>Study of Geographic Landscape</i>	150	50	40		NO	6
University of Barcelona (UB)	<i>-no course-</i>	-	-	-	-	-	-
University of Cantabria (UC)	<i>Landscape: Analysis, Evaluation and Protection</i>	150	67.5	36	24	NO	6

	<i>Territory and Landscape: Introduction to Field Observation</i>	-	-	-	-	-	6
U. Castilla La Mancha (UCLM)	<i>Landscape and Natural Environment Planning</i>	150	68	54	6	8	6
Complutense U. of Madrid (UCM)	<i>Methodology for Landscape Analysis and Planning</i>	-	-	-	-	YES	6
University of Extremadura (UEX)	<i>Landscapes, Society and Territory</i>	150	67	-	-	NO	6
University of Girona (UdG)	<i>Landscape: visions and intervention</i>	150	150	35	-	NO	6
	<i>The faces of Landscape</i>	150	75	27	-	32	6
	<i>Landscape Planning and Management: Tools and Policies</i>	-	-	-	-	-	6
University of Granada (UGR)	<i>Society and its Environment. Geosystem, Territory and Landscape</i>	150	60	32	20	5	6
	<i>Landscape Geography</i>	-	-	-	-	-	6
U. Balearic Islands (UIB)	<i>Landscape Geography</i>	150	60	43.5	13.5	6	6
University Isabel I (UII)	<i>Geographical Information System. Analysis and Interpretation of Landscape: Photointerpretation and Teledetection</i>	-	-	-	-	-	6
University of Jaen (UJAEN)	<i>-no course-</i>	-	-	-	-	-	-
University of La Laguna (ULL)	<i>Biotic Elements of Landscape</i>	-	-	-	-	-	6
	<i>Analysis of Volcanic Landscape</i>	-	-	-	-	-	6
	<i>Analysis of Vegetal Landscape</i>	-	-	-	-	-	6
	<i>Analysis of Coastal Landscape</i>	-	-	-	-	-	6
University of La Rioja (UR)	<i>-no course-</i>	-	-	-	-	-	-
U. Las Palmas de Gran Canaria (ULPGC)	<i>Landscape</i>	-	-	-	-	5	6
	<i>Volcanic Landscapes</i>	-	-	-	-	-	6
University of Leon (UNILEON)	<i>Analysis and Evaluation of Landscape</i>	150	60	29	30	15	6
University of Lleida (UdL)	<i>Landscape, Territory and Society</i>	187.5	74.5	50	18	12	7.5
	<i>Landscape History and Land Organization</i>	150	56	51	0	NO	6
University of Malaga (UMA)	<i>Territory and Landscape. Introduction to Methods of Geography</i>	150	45	-	-	4	6
	<i>Analysis, Evaluation and Management of Landscape</i>	150	45	10	-	15	6
University of Murcia (UM)	<i>Landscape in the Regional Planning</i>	150	70	40	17	10	6
	<i>Mediterranean Landscapes</i>	150	61	42	14	14	6
National U. Distance Education (UNED)	<i>Landscape, Heritage and Tourism</i>	150	45	-	-	NO	5
University of Oviedo (UNIOVI)	<i>Analysis and Interpretation of Landscape</i>	150	60	28	14	14	6
	<i>Aerial Images in the Analysis and Representation of Landscape</i>	-	-	-	-	-	6
University Pablo de Olavide (UPO)	<i>Territory and Landscape</i>	-	-	-	-	YES	7.3
	<i>Landscape and Historical Settlement in the Mediterranean</i>	-	-	-	-	-	6
U. País Vasco (UPV/EHU)	<i>Landscape Analysis and Evaluation</i>	150	60	40	20	YES	6
University Rovira i Virgili (URV)	<i>Protected Areas and Landscape Management Tools</i>	-	-	-	-	-	3
University of Salamanca (USAL)	<i>Landscape and the Environment</i>	150	60	28	20	YES	6
U. Santiago de Compostela (USC)	<i>Territorial Landscape Management</i>	150	42	32	-	YES	6
	<i>Analysis and Interpretation of Landscape Vegetation</i>	150	51	32	-	YES	6
University of Sevilla (US)	<i>Heritage and Landscape</i>	150	60	27	20	10	6
University of Valencia (UV)	<i>Landscape Construction</i>	150	60	30	15	15	6
	<i>Landscape and Environment in the History of the Art</i>	150	60	45	15	10	6
University of Valladolid (UVA)	<i>Landscape and Territorial Heritage</i>	150	60	20	15	10	6
University of Vigo (UNIVIGO)	<i>Applied Geography: Territory and Landscape</i>	150	50	13	-	-	6

University of Zaragoza (UNIZAR)	<i>Landscape in Regional Management</i>	150	85	30	25	5	6
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F5. Number of hours of the course; **F6.** Number of class hours; **F7.** Number of hours of theoretical classes (classes or lectures); **F8.** Number of practicum hours; **F9.** Out-of-class work / Field work (number of hours). **F10.** Number of ECTS credits.

(-) No data.

If in theory it is specified, for each activity anticipated in the teaching guides, the work to be done by the student and by the professor, then a distinction is made between classroom-based work—those activities for which the professor is present—and non-face-to-face work. Face-to-face work conventionally refers to the lectures and labs or computer classroom, also indicating the number of ECTS credits that are assigned to each activity. Thus, the landscape courses of the Spanish Geography Degrees tend to establish a set number of face-to-face meeting hours that vary from 45 to 85 hours, although 60 is the norm. If we consider the number of hours devoted to theoretical classes (often lectures), the result is an average of 33 hours. This figure, though accurate, is an estimate because some gaps in certain teaching guides therefore do not make precise results possible. Regarding the number of hours assigned to practical classes (generally referring to those dedicated to management software skills in which one the student learns the techniques of landscape cartography and landscape assessment), the average is 20 hours, with the aforementioned caveats. Another characteristic aspect is the one that relates to the outings or field work referred to in the educational guides studied. Of the 36 landscape courses studied in our work, 26 require one or more non-individual, extra-disciplinary field outings, under the professor’s supervision. This requires the student to go beyond the classroom or campus, with the overall goal of observing and defining the field of homogeneous landscape units, and analyzing the basic components of landscaping. As it has been previously said, the information in every part of the study guides –especially, in the “course description” and “contents” sections- (Table 2), appropriately incorporated and interpreted, has enabled an understanding of the positivist or relativist approach that the course follows, or its preference for a combination of both.

Table 2. Subject-matters (contents and theoretical/empirical approach) of the landscape courses in the curriculum of Geography Degrees (Spanish universities, academic year 2014-2015).

University	Title of course	Factors (F)						
		F11	F12	F13	F14	F15	F16	F17
University of Alicante (UA)	<i>Landscape Analysis and Management</i>	YES	NO	YES	YES	NO	YES	ETA
Autonomous U. of Barcelona (UAB)	<i>Territorial and Landscape Dynamics</i>	YES	NO	YES	YES	NO	NO	EA
Autonomous U. of Madrid (UAM)	<i>Study of Geographic Landscape</i>	YES	YES	NO	YES	NO	YES	TA
University of Barcelona (UB)	<i>-no course-</i>	-	-	-	-	-	-	-
University of Cantabria (UC)	<i>Landscape: Analysis, Evaluation and Protection</i>	YES	YES	-	YES	NO	YES	ETA
	<i>Territory and Landscape: Introduction to Field Observation</i>	-	-	-	-	-	-	-
U. Castilla La Mancha (UCLM)	<i>Landscape and Natural Environment Planning</i>	YES	NO	-	YES	NO	NO	ETA
Complutense U. of Madrid (UCM)	<i>Methodology for Landscape Analysis and Planning</i>	YES	NO	YES	YES	YES	YES	ETA
University of Extremadura (UEX)	<i>Landscapes, Society and Territory</i>	YES	NO	-	NO	NO	NO	EA

University of Girona (UdG)	<i>Landscape: visions and intervention</i>	YES	YES	NO	YES	NO	NO	TA
	<i>The faces of Landscape</i>	-	NO	-	YES	NO	-	ETA
	<i>Landscape Planning and Mangement: Tools and Policies</i>	-	-	-	-	-	-	-
University of Granada (UGR)	<i>Society and its Environment. Geosystem, Territory and Landscape</i>	NO	NO	YES	YES	NO	NO	EA
	<i>Landscape Geography</i>	-	-	-	-	-	-	-
U. Balearic Islands (UIB)	<i>Landscape Geography</i>	YES	NO	YES	YES	NO	YES	ETA
University Isabel I (UII)	<i>Geographical Information System. Analysis and Interpretation of Landscape: Photointerpretation and Teledetection</i>	-	-	-	-	-	-	-
University of Jaen (UJAEN)	<i>-no course-</i>	-	-	-	-	-	-	-
University of La Laguna (ULL)	<i>Biotic Elements of Landscape</i>	-	-	-	-	-	-	-
	<i>Analysis of Volcanic Landscape</i>	-	-	-	-	-	-	-
	<i>Analysis of Vegetal Landscape</i>	-	-	-	-	-	-	-
	<i>Analysis of Coastal Landscape</i>	-	-	-	-	-	-	-
University of La Rioja (UR)	<i>-no course-</i>	-	-	-	-	-	-	-
U. Las Palmas de Gran Canaria (ULPGC)	<i>Landscape</i>	YES	NO	YES	YES	NO	NO	EA
	<i>Volcanic Landscapes</i>	-	-	-	-	-	-	-
University of Leon (UNILEON)	<i>Analysis and Evaluation of Landscape</i>	YES	NO	NO	NO	YES	NO	EA
University of Lleida (UdL)	<i>Landscape, Territory and Society</i>	YES	NO	NO	YES	NO	NO	EA
	<i>Landscape History and Land Organization</i>	YES	NO	NO	NO	NO	NO	EA
University of Malaga (UMA)	<i>Territory and Landscape. Introduction to Methods of Geography</i>	NO	NO	YES	NO	NO	NO	EA
	<i>Analysis, Evaluation and Management of Landscape</i>	YES	NO	YES	YES	NO	NO	EA
University of Murcia (UM)	<i>Landscape in the Regional Planning</i>	YES	NO	YES	YES	YES	YES	ETA
	<i>Mediterranean Landscapes</i>	-	NO	YES	YES	YES	YES	TA
National U. Distance Education (UNED)	<i>Landscape, Heritage and Tourism</i>	NO	NO	NO	YES	NO	YES	ETA
University of Oviedo (UNIOVI)	<i>Analysis and Interpretation of Landscape</i>	YES	NO	-	YES	NO	NO	EA
	<i>Aerial Images in the Analysis and Representation of Landscape</i>	-	-	-	-	-	-	-
University Pablo de Olavide (UPO)	<i>Territory and Landscape</i>	YES	NO	NO	NO	NO	NO	TA
	<i>Landscape and Historical Settlement in the Mediterranean</i>	NO	NO	NO	NO	YES	NO	TA
U. País Vasco (UPV/EHU)	<i>Landscape Analysis and Evaluation</i>	YES	NO	YES	NO	NO	NO	EA
University Rovira i Virgili (URV)	<i>Protected Areas and Landscape Management Tools</i>	YES	NO	NO	YES	NO	NO	EA
University of Salamanca (USAL)	<i>Landscape and the Environment</i>	YES	NO	YES	YES	NO	YES	EA
U. Santiago de Compostela (USC)	<i>Territorial Landscape Management</i>	YES	NO	NO	YES	NO	YES	ETA
	<i>Analysis and Interpretation of Landscape Vegetation</i>	YES	NO	NO	NO	NO	NO	EA
University of Sevilla (US)	<i>Heritage and Landscape</i>	YES	NO	NO	NO	NO	YES	TA
University of Valencia (UV)	<i>Landscape Construction</i>	YES	NO	YES	YES	NO	NO	ETA
	<i>Landscape and Environment in the History of the Art</i>	NO	YES	NO	NO	YES	NO	TA
University of Valladolid (UVA)	<i>Landscape and Territorial Heritage</i>	YES	NO	YES	YES	NO	YES	EA
University of Vigo (UNIVIGO)	<i>Applied Geography: Territory and Landscape</i>	YES	NO	YES	YES	YES	NO	EA
University of Zaragoza	<i>Landscape in Regional Management</i>	NO	NO	-	YES	NO	NO	EA

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F11. Study of the concept of landscape and its evolution; **F12.** Theoretical aspects of the landscape (art, aesthetics, philosophy); **F13.** Usage of Geographic Information Technologies; **F14.** Landscape management. Land Management. Legislation. European Landscape Convention; **F15.** Analysis of explicit regional landscapes; **F16.** Explicit consideration of the heritage approach (landscape protection); **F17.** Empirical Approach (EA) / theoretical approach (TA) / empirical and theoretical approach (ETA).

(-) No data.

With the exception of those courses whose teaching guides do not show a clear approach, the vast majority of those courses (17 in total) are committed to the study of landscape from a positivist and pragmatic approach. On the other hand, there are 7 more courses that clearly follow a relativist or theoretical approach, that is, courses which do not follow any quantitative analysis of landscape. As a further matter, there are only 10 courses that combine both options. Two clear examples of this kind of pedagogical approach can be found in courses like *Landscape: visions and intervention*, taught in the Bachelor's degree in Geography, Territorial Planning and Environmental Management (University of Girona), or *The geographical study of landscape*, taught in the Bachelor's degree in Geography and Territorial Planning (Autonomous University of Madrid). The second type of courses includes those whose approach follows the application of methods of analysis and landscape diagnosis, implicitly or explicitly following the principles of what is called *Landscape Ecology*, that "new science of space". This is the case of courses like Analysis and Evaluation of the Landscape, in the Bachelor's degree in Geography and Territorial Planning (University of Pais Vasco).

Although these criteria are supported by the descriptions and programs of each subject, as defined in their respective educational guides, the final determination of a particular approach is greatly dependent on its subjective interpretation. In this regard, although certain subjects may focus on the hypotheses of the so-called General Systems Theory and of 'landscape ecology' and may privilege a landscape analysis based on the indices and metrics of the landscape, this does not invalidate the inclusion of a teaching unit dedicated to an understanding of the historical evolution of the concept of landscape, and its art-related origins.

In the case of courses devoted to landscape, the variety of topics covered does lead to the discovery of their commonalities. Thus, once analysed the "contents" section of each of the study guides, it can be observed that landscape teaching is based on five central themes. The first is the concept of landscape and its evolution, which includes its definition, current trends in Geography and, ultimately, the creation of the modern view of landscape. The second includes the units of landscape and its classification. The third deals with the legal framework of the protection of the landscape. The fourth concerns the instruments of planning and management of landscape. And the fifth addresses the methods and techniques of the analysis and evaluation of the landscape.

5. DISCUSSION

The present work has provided a comparative analysis of the university courses on landscape within the area of university Geography Degrees in Spain. The preliminary work of Gómez-Zotano and Alomar-Garau (2013) on this very issue highlighted the high level of consolidation of the teaching of landscape within Spain, but also some marked differences of opinion concerning not only the names of the subjects of landscape, but also the academic year in which they are taught and the dichotomy of their mandatory or optional status. These disparities point to the autonomy with which various university departments

operate in terms of making landscape courses mandatory and, ultimately, the lack of coordination regarding this requirement. Anyhow, these differences are indicative of the difficulties—and perhaps the impossibility—of the uniform implementation of a course. Although there has been a definition of landscape agreed in Europe since 2000 (European Landscape Convention), there has not been an implementation of the same in the conception of the different courses analyzed, prevailing a polysemic nature of the landscape recognized by various authors (Cancer 1994, Mitchell 2002, Santos 2002-2003, among others). In addition, according to Plieninger et al (2015), studies on landscape can be divided into two broad fields of inquiry: (1) geographical research and (2) art and landscape painting. Regarding the first field of enquiry, in Geography, the term landscape was initially used as a “regional synthesis” (Antrop 2008:30). As for the second field is concerned, landscape is seen as object worthy of aesthetic admiration (Howard et al 2012).

Connected to this issue, in the case of the analysed landscape courses, it can be observed that in some cases the appearance of the word “landscape” in the title of the course is arbitrary and inconsistent with the content of the course, given that landscape and its theoretical bases aren’t included as an explicit object of study. Is the case of courses such as *Territorio y paisaje. Iniciación a la observación de campo*, ‘Territory and Landscape: Introduction to Field Observation’ (University of Cantabria); *Las imágenes aéreas en el análisis y la representación del paisaje*, ‘Aerial Images in the Analysis and Representation of Landscape’ (University of Oviedo); and *Sistemas de Información Geográfica. Análisis e interpretación del paisaje: fotointerpretación y teledetección*, ‘Geographical Information System. Analysis and Interpretation of Landscape: Photointerpretation and Teledetection’ (Isabel I de Castilla International University). There are also cases of courses in which the mention of “landscape”, although the term may be arbitrary and not directly related to the content appropriate to the landscape discipline, is actually consistent with some ways of referring to a particular type of setting or geographical area. This is the case with the four courses in the Degree of Geography and Regional Planning at the University of La Laguna: *Elementos bióticos del paisaje*; *Análisis de los paisajes volcánicos*; *Análisis de los paisajes vegetales* y *Análisis de los paisajes litorales*: ‘Biotic Elements of Landscape’; ‘Analysis of Volcanic Landscape’; ‘Analysis of Vegetal Landscape’ and ‘Analysis of Coastal Landscape’, as well as the course *Paisajes volcánicos*, ‘Volcanic Landscape’, at the University of Las Palmas de Gran Canaria.

However, there are courses whose formal title suggests that its subject matter is not exactly the landscape, but merely a given geographical environment. The review of the description and programs’ content, however, seems to confirm that these materials have content explicitly related to landscape, in terms seemingly denoting its geographic study. This is the case with *Paisajes Mediterráneos*, ‘Mediterranean Landscapes’, which is taught in the Geography Degree at the University of Murcia. While this course focuses on the subject of the Mediterranean from a regional perspective, it in fact includes an approach to what is understood as landscape as subject of study, and a reference to mankind as the creator of landscapes. The same can be said of the course *Análise e interpretação da paisaxe vexetal*, ‘Analysis and Interpretation of Landscape Vegetation’, which is taught in the Degree of Geography and Regional Planning at the University of Santiago de Compostela.

Apart from what have been already said, there are some other paradoxes, peculiarities, and masks that affect some of the subjects that Spanish Geography Degrees define and count as landscape courses. For this reason, courses whose titles explicitly mention landscape have been discussed, but the object of study to which they refer is solely land and its analysis. This suggests a comparison of both concepts—landscape and territory—which is confusing and disjointed, because “territory” refers to the tangible field of geographical space, of which “landscape” is its sensory manifestation. This occurs with courses such as

Territorio y Paisaje. Iniciación a la Observación de Campo, ‘Territory and Landscape: Introduction to Field Observation’, which is taught in the Degree of Geography and Regional Planning at the University of Cantabria, a program in which the theme of landscape appears to be absent, and actually addresses the comparative study of urban, industrial and rural spaces. Sometimes, however, the combined mention of both concepts is deliberate and well-motivated, as is the case with the course *La sociedad y su medio. Geosistema, Territorio y Paisaje*, ‘Society and its Environment: Geosystem, Territory and Landscape’, in which the mention of these three concepts is clearly and discretely explained, such as when an attempt is made to underscore the historical and current value of landscape as a method of diagnosis and land analysis.

The diversity of the criteria for the implementation of landscape subjects in the curricula of Geography Degrees in Spain extends to program content. While the different approaches of landscape may create confusion and hinder a precise definition, analysis of the bibliographies of these programs allow us to confirm the contrast between teachers who choose to fully address the theoretical aspects of landscape—and quote, in the respective bibliographies, “theorists” of landscape such as Augustin Berque, Javier Maderuelo and Eduardo Martínez de Pisón, among others—and those who reject all doctrinaire approaches and focus solely on the geographical analysis of landscape and its role in environmental, territorial or national legislation, i.e., its coordinating role at the level of environmental, territorial or national strategies, because appealing to landscape justifies and develops numerous interventional activities.

Certainly, the lack of coordination between Spanish professors when it comes to defining criteria for landscape teaching programs is not necessarily a problem. It is the different interpretations of the subject what is problematic, as it is for other subjects as well. For example, while the course on Climatology in the Geography degree of both the University of Barcelona and the Complutense University of Madrid is a first-year compulsory course, the only course on this subject in the degree of Geography and Land (University of Malaga), *Advanced Study of the Elements and Climate Dynamics*, is offered as an elective course.

In the case of Geography degrees where the teaching of landscape is absent, there is certainly a departmental responsibility for the loss of the significance of landscape in the higher education teaching of Geography in Spain, while the weakness of the departments in this regard has benefited other disciplines such as Architecture, Environmental Sciences or Biology. Such disciplines have appropriated the concept of landscape—legitimately—given that landscape is a transverse discipline, to the extent that society does not consider the scientific treatment of the landscape or landscape practice itself as directly related to Geography but rather, to Architecture in particular. This is largely due to the social and academic success of the term ‘landscape architecture’. In fact, in Spain there is the teaching of subject matters directly related to the landscape, yet not included in Geography Degrees. For instance, the Degree in Environmental Sciences at the University of Zaragoza offers the course *Análisis e interpretación del paisaje*, ‘Analysis and Interpretation of Landscape’; and the Degree in Architecture Studies offers the course *Proyectos de paisaje*, ‘Landscape Projects’. Another related case is that of the Universitat Jaume I, whose Degree in History and Heritage offers the course *El paisaje como patrimonio: Geografía General Humana*, ‘Landscape as Heritage: General Human Geography’. A peculiar case of inconsistency exists in the Department of Geography at the University of Valladolid, where the course *Geografía del Paisaje*, ‘Landscape Geography’ is part of the Primary Education Degree; however, the Geography Degree itself does not offer it, but the course *Paisaje y Patrimonio Territorial*, ‘Territorial Heritage and Landscape’ is taught instead.

The undeniable historical link between landscape and geography is well known, and it would therefore be useful to clarify the reasons for the need to include or strengthen the study and landscape analysis in such plans. This invites a reflection on the desirability of educational training appropriately suited to the new social demands for landscape experts, not only in the context of the well-known European Landscape Convention, but also because of the opportunities that the corresponding regional landscape laws represent for Spanish graduates in Geography.

Taking into account all these issues, it may be helpful to create a debate forum in order to solve the disparities in terms of landscape teaching in Spanish universities, together with a common agreement towards landscape teaching at national level. This proposal could be performed in Spain by The Association of Spanish Geographers and, especially, by the Landscape Project Team. At European level, there are different networks and associations –RECEP-ENELC, UNISCAPE, and CIVILSCAPE. See www.eurolandscape.net giving support to public institutions for them to meet the requirements of the European Landscape Convention, being one of these requirements the development of education programs at university level related to landscape, and the fostering of academic exchange, including students.

6. CONCLUSIONS

For the first time a study has been undertaken that directly focuses on examining and analyzing the degree of implementation of landscape in the Geography Degrees in Spanish higher education. In view of the results of this study, it is clear that the vast majority of the Degrees have the same objectives by which landscape is a top-rated object of geographical study and analysis. This means that the teaching of landscape within Spain is consolidated, and the consensus emerging from this fact can be used to promote the teaching in the context of university departments in which it is still not taught, or solidify it where it is being taught. However, with regards to Degrees in which landscape is taught, several differences were identified regarding the name of courses as well as their content. However, the study of the differences demonstrates –conversely– the usefulness of highlighting the similarities, and for this reason our article also serves to explore the shared criteria agreed upon vis-a-vis the ‘geographical’ teaching of landscaping, and with a greater succinctness and integration. Thus, despite of the conglomerate of ideas and different methods used and followed by landscape teachers and specialists, the challenge now is to come up with the criteria by which landscape teaching and learning should be performed in an integrated way, without too many disciplinary fragmentations that could eventually lead to problematic professional competences.

The results of this study could be improved in several aspects. One is the comparative analysis of the educational tradition of landscape in the already extinct long-cycle degrees (*Licenciaturas*) in Geography, as well as the continuation of this tradition in the curricula of the new Bachelor’s degrees in Geography. It would also be worthwhile to undertake a broader study on the presence of the study of landscape in Spanish universities’ master's degrees, as well as in the various academic disciplines of Geography, such as Architecture, Environmental Science, Biology and Engineering, and the risks this may entail for the geographers who specialize in this area.

In conclusion, social interest in landscape is progressively growing during the last years; therefore, it is convenient to strengthen landscape teaching and learning processes in and out of higher education institutions and to promote landscape education since it is a subject that not only has a mere presence in the curriculum but it adds social values to it. If the presence of landscape courses in higher education programs, especially in Geography degrees, has now become unavoidable, it can be said that

the objectives of the European Landscape Convention concerning the development of landscape teaching in universities have been completely met.

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