# Materiales complementarios del curso: Cómo publicar en revistas científicas de impacto

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## RESUMEN

En este documento se compilan los materiales y documentos que sirven como apoyo y complemento docente al curso 'Cómo Publicar en Revistas Científicas de Impacto: Consejos y Reglas sobre publicación 4ª ed'. Más concretamente el contenido de los materiales es el siguiente: Material I. Las revistas de impacto y los sexenios, Material II. Informe COPE sobre autoría, Material III. Seleccionando la revista, Material IV. Las normas de las revistas, Material V. Colección de cover letters, Material VI. Descubriendo al Corresponding Authora, Material VII. Las quías de los revisores, Material VIII. El proceso de revisión al completo

## PALABRAS CLAVE

Revistas Científicas; Publicación Científica; Factor de Impacto; Revisión por Pares







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# MATERIAL I. Las revistas de impacto y los sexenios

# Campo 3. Biología Celular y Molecular.

- 1. Todas las aportaciones deberán ser clasificables como ordinarias según la Orden de 2 de diciembre de 1994, salvo casos excepcionales. Las solicitudes que presenten patentes, previo informe del comité, se trasladarán al campo 6.
- 2. El número de autores no será evaluable como tal, pero sí deberá estar justificado por el tema, su complejidad y su extensión.
- 3. Se valorarán preferentemente las aportaciones que sean artículos en revistas de reconocida valía, aceptándose como tales las que ocupen posiciones relevantes en los listados por ámbitos científicos en el Subject Category Listing del Journal Citation Reports (Science Citation Index) del Web of Knowledge (WoK). Las revistas electrónicas se considerarán cuando aparezcan en los listados del WoK En la evaluación de los libros y capítulos de libros, si procede, se tendrán en cuenta el número de citas, cuando sea posible; el prestigio internacional de la editorial; los editores; la colección en la que se publica la obra, y las reseñas recibidas en las revistas científicas especializadas.
- 4. Como norma general, para obtener una evaluación positiva, las aportaciones del currículum vítae abreviado deberán cumplir alguno de los criterios descritos en los puntos anteriores.
- 5. Con carácter orientador, se considera que para obtener una evaluación positiva en las áreas de Biología Celular y Molecular al menos tres de dichas aportaciones deben ser artículos publicados en revistas de alto impacto entre las recogidas bajo cualquiera de los epígrafes del Science Citation Index.

# Campo 5. Ciencias de la Naturaleza.

- 1. Todas las aportaciones deberán ser clasificables como ordinarias según la Orden de 2 de diciembre de 1994, salvo casos excepcionales. Las solicitudes que presenten patentes, previo informe del comité, se trasladarán al campo 6.
- 2. El número de autores no será evaluable como tal, pero sí deberá estar justificado por el tema, su complejidad y su extensión.

3. Se valorarán preferentemente las aportaciones que sean artículos en revistas de reconocida valía, aceptándose como tales las que ocupen posiciones relevantes en los listados por ámbitos científicos en el «Subject Category Listing» del «Journal Citation Reports (Science Citation Index)» del «Web of Knowledge (WoK)». Para las áreas en que ninguno de los ámbitos del Science Citation Index se adecuara de forma precisa, el Comité Asesor podrá elaborar un listado ad hoc según el índice de impacto de las revistas de la citada base de datos. Las revistas electrónicas se considerarán cuando aparezcan en los listados del WoK.

Los libros y capítulos de libros se considerarán como contribuciones extraordinarias. En su evaluación, si procede, incluyendo como tales las monografías de flora, fauna y mycobiota, se tendrán en cuenta el número de citas, cuando sea posible; el prestigio internacional de la editorial; los editores; la colección en la que se publica la obra, y las reseñas recibidas en las revistas científicas especializadas. Para las series de cartografías temáticas se aplicarán criterios semejantes.

- 4. Como norma general, para obtener una evaluación positiva, las aportaciones del currículum vítae abreviado deberán cumplir alguno de los criterios descritos en los puntos anteriores.
- 5. Con carácter orientador, se considera que para obtener una evaluación positiva en las áreas de conocimiento de Ciencias de la Naturaleza las cinco aportaciones deben ser artículos publicados en revistas de impacto alto o medio entre las recogidas bajo cualquiera de los epígrafes del Science Citation Index

# Campo 7. Ciencias Sociales, Políticas, del Comportamiento y de la Educación.

- 1. Todas las aportaciones deberán ser clasificables como ordinarias según la Orden de 2 de diciembre de 1994. Las solicitudes que presenten patentes, previo informe del comité, se trasladarán al Campo 6.
- 2. Salvo que estuviera plenamente justificado por la complejidad del tema o la extensión del trabajo, un elevado número de autores puede reducir la calificación asignada a una aportación.
- 3. Entre las aportaciones se valorarán preferentemente:
- a) Los artículos en revistas de reconocida valía, aceptándose como tales las recogidas en los listados por ámbitos científicos en el Subject Category Listing del Journal Citation Reports (Social Science Citation Index) y del Journal Citation Reports (Science Citation Index) del Web of Knowledge (WoK).

- b) Podrán considerarse también los artículos publicados en revistas que ocupan posiciones relevantes en los listados de SCOPUS, en revistas listadas en otras bases de datos nacionales o internacionales (por ejemplo, ERIH, INRECS, DICE-CINDOC, etc.), o aquellas revistas acreditadas por la FECYT, siempre que, a juicio del comité asesor, cuenten con una calidad científica similar a las incluidas en los índices mencionados y que satisfagan los criterios que se especifican en el apéndice I de esta resolución.
- c) Las revistas electrónicas estarán sujetas a los mismos criterios que las demás.
- d) Los libros y capítulos de libros, en cuya evaluación se tendrá en cuenta el número de citas recibidas; el prestigio de la editorial; los editores; la colección en la que se publica la obra; las reseñas en las revistas científicas especializadas, y las traducciones de la propia obra a otras lenguas. Se valorará desfavorablemente la reiterada publicación de trabajos en revistas o editoriales pertenecientes o asociadas al mismo organismo donde el solicitante realiza su investigación.
- 4. Como norma general, para obtener una evaluación positiva, las cinco aportaciones del currículum vítae abreviado deberán cumplir alguno de los criterios descritos en los puntos anteriores.
- 5. Con carácter orientador, se considera que para obtener una evaluación positiva en las áreas de Sociología, de Ciencia Política y de la Administración, de Ciencias de la Educación, y de Comunicación y Periodismo al menos una de las aportaciones debe ser un libro de difusión o referencia internacional que cumpla los criterios señalados anteriormente; o bien al menos dos de las aportaciones deben ser artículos publicados en revistas que cumplan los criterios del apartado 3.a); o bien al menos tres de las aportaciones deben ser artículos publicados en revistas que cumplan los criterios del apartado 3.b).

Con carácter orientador, se considera que para obtener una evaluación positiva en las áreas de Psicología al menos tres de los artículos deben estar publicados en revistas que cumplan los criterios del apartado 3.a) y dos de ellos en una revista de impacto medio o alto

# **MATERIAL II. Informe COPE sobre autoría**



## How to handle authorship disputes: a guide for new researchers

**Tim Albert**, trainer in medical writing, **Elizabeth Wager**, freelance writer and trainer

One of the main tasks of COPE's education committee is to reduce unethical behaviour. This involves the rather bold step of defining when people have been behaving unethically, and then providing suggestions on how they can avoid doing so in the future. To this end we have written, and tested on a group of authors, a guide for young researchers on the area of authorship, which many people agree is one of the more confused areas. But writing a document is one thing; disseminating it is another.

We would therefore welcome comments, particularly on how we can use this report to change behaviour, so that it becomes not just another discussion document, but a real catalyst for change. In theory, authorship sounds straightforward, but in practice it often causes headaches. While preparing these guidelines, we heard about several cases. In one, a deserving junior researcher was omitted from the author list; in another a sponsoring company insisted on the inclusion of an opinion leader who had made virtually no contribution to a study. And the writer of a review article found her name replaced with that of her boss, because she was on maternity leave when the final version was submitted.

Listing the authors tells readers who did the work and should ensure that the right people get the credit, and take responsibility, for the research. Although journal editors do not always agree among themselves on what constitutes authorship, many of them subscribe to the guidance from the International Committee of Medical Journal Editors (ICMJE), also known as the Vancouver group. The latest version, issued in 2001, states that: "Authorship credit should be based only on:

(1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content; and (3) final approval of the version to be published. Conditions (1), (2), and (3) must all be met. Acquisition of funding, the collection of data, or general supervision of the research group, by themselves, do not justify authorship."

The problem, as studies have shown, is that what editors want is not what authors do. This is hardly surprising given the enormous pressure on individuals and institutions to "publish or perish." Thus the principles laid down by editors are often breached and by-lines often do not reflect who really did the work. Many people (both editors and investigators) feel that this misrepresentation is a form of research misconduct, and that honesty in reporting science should extend to authorship. They argue that, if scientists are dishonest about their relationship to their work, this undermines confidence in the reporting of the work itself.

We have written this document to help new researchers prevent and resolve authorship problems. In particular it provides:

- suggestions for good authorship practice that should reduce the incidence of such dilemmas,
- advice on what to do when authorship problems do arise, and
- a glossary of key concepts in authorship, with some reading lists and websites for those who wish to take this further.

## How to reduce the incidence of authorship problems

People generally lie about authorship in two ways:

- by putting down names of people who took little or no part in the research (gift authorship, see below
- by leaving out names of people who did take part (ghost authorship, see below).

Preventing a problem is often better than solving it and we recommend the following three principles.

## (a) Encourage a culture of ethical authorship

One problem is that people who are being unethical about authorship are simply following local customs and practice. They need to be made aware of the views of editors, so that in time the culture will change. As a junior researcher

you can make sure your departmental library has at least one book on publication ethics (see list below). You can also inquire if there is a university or departmental policy on authorship, and suggest that you start working on one if there is not.

## (b) Start discussing authorship when you plan your research

Raise the subject right at the start. Start gathering views of all team members and if possible discuss authorship at a face-to-face meeting. Even before a study is finished, you should have some idea of the publications that might come out of it, such as a conference abstract, the full paper, then some supplementary papers, and who is likely to be most involved in these. Continue to discuss ideas about authorship as the project evolves, and especially if new people get involved. Keep a written record of your decisions

## (c) Decide authorship before you start each article

Many authorship difficulties arise because of misplaced expectations and poor communication. So it is important that, before you start to write up your project, you confirm in writing who will be doing what—and by when. Ideally you should do this face to face, though this may not always be possible. Keep everyone informed of any changes with a written note.

## How to handle authorship disputes when they occur

The above suggestion, that every team should have a written authorship agreement before the article is written, should reduce the chances of disputes arising at a late stage, when effectively all the real work has been done. We accept, however, that many people are reluctant to be pinned down in this way, and that it will not always be possible to take such a sensible approach in real life. Disagreements about authorship can be classified into two types: those that do not contravene ICMJE guidelines (disputes) and those that do (misconduct).

## (a) Disputes

These are largely questions of interpretation, such as whether someone's contribution was 'substantial' or not. In such cases you need to negotiate with the people involved. If the suggestions to include or omit names came from your supervisor, make clear that you are not disputing his or her right to make such a decision, but show dispassionately why you do not agree with the decision. Support this with evidence, such as laboratory notebooks, manuscripts, ICMJE statement, Instructions to Authors etc. If you remain unhappy with your supervisor's decision, you may consider an appeal to someone more senior, such as the departmental head or dean. But you should

do this in exceptional circumstances only - and make sure your supervisor knows what you are intending to do.

## (b) Misconduct

If you believe that someone is proposing to do something with the authorship list that is unethical, then you have a real problem. Should you say nothing (and therefore be complicit in the unethical behaviour), or should you blow the whistle, even though this might damage your career prospects or future funding? We recommend a third way, which is to explain the fact that the suggested author list contravenes editors' recommendations, and could be considered scientific misconduct. Again, stick to the facts and avoid being emotional. Point out that an editor could well decline to publish if he or she finds out. As soon as the meeting is finished, make a note and file it.

## What you can do if authorship issues are not resolved

Authorship may be used as a bargaining tool if team members cannot agree on the presentation or interpretation of results. All authors should see the final version of a publication before it is submitted so you can withdraw your name. This will not be an easy decision, and you must weigh up the loss of credit for the work you did with the disadvantages of being included in something with which you do not fully agree.

If your name is included on a publication against your wishes you should inform the other authors as soon as possible. If you discover this only after publication you may contact the journal and ask for a correction. Similarly, if your name is wrongly omitted, you should discuss this with the other contributors. You could contact the journal but an editor is unlikely to add your name without the agreement of the other authors. If your name is omitted by accident, and the other authors agree, then the journal may publish a correction.

## **Key concepts in authorship**

Acknowledgements: Most journals permit (or even encourage) acknowledgement of contributions to a research project that do not merit authorship. The ICMJE guidelines state: 'All others who contributed to the work who are not authors should be named in the Acknowledgments, and what they did should be described'. All those who are listed in this way should be aware of it. Some journals (mainly in the US) will require signatures of those acknowledged.

**Appeals**: You may ask a journal to withdraw your name from a paper if it has been included against your wishes. However most editors are reluctant to get involved in disputes about omitted authors since they do not have enough information to judge such cases. Some journals have an ombudsman, but they deal with cases of alleged misconduct by the journal. Similarly, COPE only hears cases submitted by journal editors and is not an appeal body for cases of disputed authorship.

**Contributorship:** The ICMJE guidelines now recommend that authors should state their contribution to the project: 'authors should provide a description of what each contributed, and editors should publish that information'. Some journals publish this information but in most cases it is for the benefit of the editor, who wants reassurance that the criteria have been fulfilled. (See Instructions to Authors.)

**Corresponding author:** The person who receives the reviewers' comments, the proofs, etc. and whose contact details are printed on the article so that readers can request reprints or contact the research group. Journal editors view this as a purely administrative role, but some authors equate it with seniority. Take the views of your co-authors at an early stage, and decide in advance who will be the corresponding author. Ideally, choose somebody whose contact details are not likely to change in the near future.

**First and last authors:** Generally speaking, the most sought-after position is the first, which is not surprising given the convention of referring to studies by the first-named author, e.g. 'Smith et al. have shown that'. The firstnamed author is therefore generally held to have made the greatest contribution to the research. Sometimes significance is attached to being the last named author. However, views about this do seem to vary, so don't assume that everybody feels the same way about it. Authors have often given the last place to a senior team member who contributed expertise and guidance. This can be consistent with the ICMJE criteria if this person was involved in study design, the interpretation of the data, and critically reviewed the publication. However, cynics may suspect that the final author is often a guest or honorary author. (See Order of authors.)

**Ghost authors**: This phrase is used in two ways. It usually refers to professional writers (often paid by commercial sponsors) whose role is not acknowledged. Although such writers rarely meet ICMJE criteria, since they are not involved in the design of studies, or the collection or interpretation of data, it is important to acknowledge their contribution, since their involvement may represent a potential conflict of interest. The term can also be used to describe people who made a significant contribution to a research project (and fulfil the ICMJE criteria) but are not listed as authors. The ICMJE guidelines clearly condemn this

practice and state that 'All persons designated as authors should qualify for authorship, and all those who qualify should be listed.'

**Gift authors:** People who are listed as authors but who did not make a significant contribution to the research and therefore do not fulfil the ICMJE criteria. These are often senior figures (e.g. heads of department) whose names are added to curry favour (or because it is expected). Another type of gift author is a colleague whose name is added on the understanding that s/he will do the same for you, regardless of your contribution to his/her research, but simply to swell your publication lists.

**Group authorship:** Some journals permit the use of group names (e.g. The XYZ Study Group) but many require contributors to be listed (often alphabetically) and/or the writing group to be named as well. One problem with group names is that they are often miscoded on databases such as Medline. The first person in an alphabetical list of contributors sometimes becomes the first author by default, which rather defeats the object.

**Guarantor:** Should we expect a radiographer to explain the statistical methods or the statistician to interpret the x-rays? To take increasing specialisation into account, the latest version of the ICMJE guidelines acknowledges that it may be unreasonable to ask individuals to take responsibility for every aspect of the research. However, the editors felt that it was important that one person should guarantee the integrity of the entire project. 'All persons designated as authors should qualify for authorship, and all those who qualify should be listed. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. One or more authors should take responsibility for the integrity of the work as a whole, from inception to published article.'

**Instructions to authors**: While there is a great deal of agreement among journal editors on authorship matters, there are also some differences in detailed requirements and the ways in which by-lines are presented. You should carefully read the Instructions to Authors for your target journal.

**Number of authors:** There are no rules about this. In the past, databases such as Medline limited the number of authors they listed. This was shown to influence the number of authors (most groups tried to stay below the limit) and, in larger groups, probably increased jostling for position. Now, however, most databases list all authors. Rather than decide how many authors there should be, it is probably best to agree who will qualify as an author, and then simply include all those who do. However, remember that including large numbers of

authors usually increases the time it takes to prepare, review and finalise a paper.

**Order of authors:** The ICMJE guidelines state that the order of authorship, should be 'a joint decision of the coauthors. Authors should be prepared to explain the order in which authors are listed'. They rather unhelpfully do not give guidance about the order in which authors are listed. Wherever possible, make these decisions before starting to write up the project. Some groups list authors alphabetically, sometimes with a note to explain that all authors made equal contributions to the study and the publication. If you do so, make sure it is clear to the editor

## **MATERIAL III. Seleccionando la revista**

[Práctica: escoger tres posibles revistas para este trabajo]

García, J. A.; Rodríguez-Sánchez, Rosa; Fdez-Valdivia, J.; Robinson-Garcia, N; <u>TORRES-SALINAS</u>, <u>D</u>. **Mapping academic institutions according to their journal publication profile: Spanish universities as a case study**.

**Resumen**: We introduce a novel methodology for mapping academic institutions based on their journal publication profiles. We believe that journals in which researchers from academic institutions publish their works can be considered as useful identifiers for representing the relationships between these institutions and establishing comparisons. However, when academic journals are used for research output representation, distinctions must be introduced between them, based on their value as institution descriptors. This leads us to the use of journal weights attached to the institution identifiers. Since a journal in which researchers from a large proportion of institutions published their papers may be a bad indicator of similarity between two academic institutions, it seems reasonable to weight it in accordance with how frequently researchers from different institutions published their papers in this journal. Cluster analysis can then be applied to group the academic institutions, and dendrograms can be provided to illustrate groups of institutions following agglomerative hierarchical clustering. In order to test this methodology, we use a sample of Spanish universities as a case study. We first map the study sample according to an institution's overall research output, then we use it for two scientific fields (Information and Communication Technologies, as well as Medicine and Pharmacology) as a means to demonstrate how our methodology can be applied, not only for analyzing institutions as a whole, but also in different disciplinary contexts.

Keywords: Mapping; Publication Profile; Clustering; Rankings; Universities; Spain; Social

## MATERIAL IV. Las normas de las revistas

# Normas para autores de la revista Journal of Informetrics

#### **INTRODUCTION**

Journal of Informetrics (JOI) publishes refereed articles on fundamental quantitative aspects of information science. The journal, although limited to -metrics aspects, has a broad scope: in principle, all quantitative analysis of original problems in information science are within the scope of JOI. Besides its generality, Journal of Informetrics focusses on papers describing fundamental methods and theories and/or universally important data, gathered in a non-trivial way. Fundamental methods comprise mathematical, probabilistic or statistical models and techniques as well as methods in operational research. These methods can serve the quantitative explanation of certain phenomena, evaluation of information and its producers as well as the management of libraries and other information centres.

For further information please visit http://www.elsevier.com/locate/joi

## Types of paper

- Full length papers, reporting original work generally of up to 4000 words.
- Brief communications of original work or work in progress of up to 2000 words.
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- Book reviews or critical literature reviews.
- Letters to the editor commenting on Journal of Informetrics publications or editorial policies and practices.
- Articles based upon conference papers may be submitted for consideration by the journal only where the journal article is substantially updated and/or expanded from the conference paper.



## Before You Begin

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Submission to this journal proceeds totally online and you will be guided stepwise through the creation and uploading of your files. The system automatically converts source files to a single PDF file of the article, which is used in the peer-review process. Please note that even though manuscript source files are converted to PDF files at submission for the review process, these source files are needed for further processing

after acceptance. All correspondence, including notification of the Editor's decision and requests for revision, takes place by e-mail removing the need for a paper trail.

## Submit your article

To submit your article please click here: http://ees.elsevier.com/joi



## Use of wordprocessing software

It is important that the file be saved in the native format of the wordprocessor used. The text should be in single-column format. Keep the layout of the text as simple as possible. Most formatting codes will be removed and replaced on processing the article. In particular, do not use the wordprocessor's options to justify text or to hyphenate words. However, do use bold face, italics, subscripts, superscripts etc. When preparing tables, if you are using a table grid, use only one grid for each individual table and not a grid for each row. If no grid is used, use tabs, not spaces, to align columns. The electronic text should be prepared in a way very similar to that of conventional manuscripts also Guide (see the to Publishing Elsevier: http://www.elsevier.com/guidepublication). Note that source files of figures, tables and text graphics will be required whether or not you embed your figures in the text. See also the section on Electronic artwork. To avoid unnecessary errors you are strongly advised to use the 'spell-check' and 'grammar-check' functions of your wordprocessor.

## **Article structure**

#### Subdivision - numbered sections

Divide your article into clearly defined and numbered sections. Subsections should be numbered 1.1 (then 1.1.1, 1.1.2, ...), 1.2, etc. (the abstract is not included in section numbering). Use this numbering also for internal cross-referencing: do not just refer to 'the text'. Any subsection may be given a brief heading. Each heading should appear on its own separate line.

## Introduction

State the objectives of the work and provide an adequate background, avoiding a detailed literature survey or a summary of the results.

#### Material and methods

Provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference: only relevant modifications should be described.

## Theory/calculation

A Theory section should extend, not repeat, the background to the article already dealt

with in the Introduction and lay the foundation for further work. In contrast, a Calculation section represents a practical development from a theoretical basis.

#### Results

Results should be clear and concise.

#### Discussion

This should explore the significance of the results of the work, not repeat them. A combined Results and Discussion section is often appropriate. Avoid extensive citations and discussion of published literature.

#### **Conclusions**

The main conclusions of the study may be presented in a short Conclusions section, which may stand alone or form a subsection of a Discussion or Results and Discussion section.

## **Appendices**

If there is more than one appendix, they should be identified as A, B, etc. Formulae and equations in appendices should be given separate numbering: Eq. (A.1), Eq. (A.2), etc.; in a subsequent appendix, Eq. (B.1) and so on. Similarly for tables and figures: Table A.1; Fig. A.1, etc.

## **Essential title page information**

- **Title.** Concise and informative. Titles are often used in information-retrieval systems. Avoid abbreviations and formulae where possible.
- Author names and affiliations. Where the family name may be ambiguous (e.g., a double name), please indicate this clearly. Present the authors' affiliation addresses (where the actual work was done) below the names. Indicate all affiliations with a lower-case superscript letter immediately after the author's name and in front of the appropriate address. Provide the full postal address of each affiliation, including the country name and, if available, the e-mail address of each author.
- Corresponding author. Clearly indicate who will handle correspondence at all stages of refereeing and publication, also post-publication. Ensure that phone numbers (with country and area code) are provided in addition to the e-mail address and the complete postal address. Contact details must be kept up to date by the corresponding author.
- Present/permanent address. If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author actually did the work must be retained as the main, affiliation address. Superscript Arabic numerals are used for such footnotes.

## **Abstract**

A concise and factual abstract is required maximum length 200 words. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations

should be avoided, but if essential they must be defined at their first mention in the abstract itself.

## **Graphical abstract**

A Graphical abstract is optional and should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership online. Authors must provide images that clearly represent the work described in the article. Graphical abstracts should be submitted as a separate file in the online submission system. Image size: Please provide an image with a minimum of 531 × 1328 pixels (h × w) or proportionally more. The image should be readable at a size of 5 × 13 cm using a regular screen resolution of 96 dpi. Preferred file types: TIFF, EPS, PDF or MS Office files. See http://www.elsevier.com/graphicalabstracts for examples. Authors can make use of Elsevier's Illustration and Enhancement service to ensure the best presentation of their images also in accordance with all technical requirements: Illustration Service.

## **Highlights**

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). See http://www.elsevier.com/highlights for examples.

## Keywords

Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

## **Abbreviations**

Define abbreviations that are not standard in this field in a footnote to be placed on the first page of the article. Such abbreviations that are unavoidable in the abstract must be defined at their first mention there, as well as in the footnote. Ensure consistency of abbreviations throughout the article.

## **Acknowledgements**

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, writing assistance or proof reading the article, etc.).

#### Units

Follow internationally accepted rules and conventions: use the international system of units (SI). If other units are mentioned, please give their equivalent in SI.

## Math formulae

Present simple formulae in the line of normal text where possible and use the solidus (/) instead of a horizontal line for small fractional terms, e.g., X/Y. In principle, variables are to be presented in italics. Powers of e are often more conveniently denoted by exp. Number consecutively any equations that have to be displayed separately from the text (if referred to explicitly in the text).

#### **Footnotes**

Footnotes should be used sparingly. Number them consecutively throughout the article, using superscript Arabic numbers. Many wordprocessors build footnotes into the text, and this feature may be used. Should this not be the case, indicate the position of footnotes in the text and present the footnotes themselves separately at the end of the article. Do not include footnotes in the Reference list. *Table footnotes* 

Indicate each footnote in a table with a superscript lowercase letter.

#### Artwork

#### Electronic artwork

## General points

- Make sure you use uniform lettering and sizing of your original artwork.
- Embed the used fonts if the application provides that option.
- Aim to use the following fonts in your illustrations: Arial, Courier, Times New Roman, Symbol, or use fonts that look similar.
- Number the illustrations according to their sequence in the text.
- Use a logical naming convention for your artwork files.
- Provide captions to illustrations separately.
- Size the illustrations close to the desired dimensions of the printed version.
- Submit each illustration as a separate file.

#### **Tables**

Number tables consecutively in accordance with their appearance in the text. Place footnotes to tables below the table body and indicate them with superscript lowercase letters. Avoid vertical rules. Be sparing in the use of tables and ensure that the data presented in tables do not duplicate results described elsewhere in the article.

## References

## Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal

communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

## Web references

As a minimum, the full URL should be given and the date when the reference was last accessed. Any further information, if known (DOI, author names, dates, reference to a source publication, etc.), should also be given. Web references can be listed separately (e.g., after the reference list) under a different heading if desired, or can be included in the reference list.

## References in a special issue

Please ensure that the words 'this issue' are added to any references in the list (and any citations in the text) to other articles in the same Special Issue.

## Reference management software

This journal has standard templates available in key reference management packages EndNote (http://www.endnote.com/support/enstyles.asp) and Reference Manager (http://refman.com/support/rmstyles.asp). Using plug-ins to wordprocessing packages, authors only need to select the appropriate journal template when preparing their article and the list of references and citations to these will be formatted according to the journal style which is described below.

## Reference style

Text: Citations in the text should follow the referencing style used by the American Psychological Association. You are referred to the Publication Manual of the American Psychological Association, Sixth Edition, ISBN 978-1-4338-0561-5, copies of which may be ordered from http://books.apa.org/books.cfm?id=4200067 or APA Order Dept., P.O.B. 2710, Hyattsville, MD 20784, USA or APA, 3 Henrietta Street, London, WC3E 8LU,

List: references should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication.

#### Supplementary data

Elsevier accepts electronic supplementary material to support and enhance your scientific research. Supplementary files offer the author additional possibilities to publish supporting applications, high-resolution images, background datasets, sound clips and more. Supplementary files supplied will be published online alongside the electronic version of your article in Elsevier Web products, including ScienceDirect: http://www.sciencedirect.com. In order to ensure that your submitted material is directly usable, please provide the data in one of our recommended file formats. Authors should submit the material in electronic format together with the article and supply a concise and descriptive caption for each file. For more detailed

instructions please visit our artwork instruction pages athttp://www.elsevier.com/artworkinstructions.

#### Submission checklist

The following list will be useful during the final checking of an article prior to sending it to the journal for review. Please consult this Guide for Authors for further details of any item.

## Ensure that the following items are present:

One author has been designated as the corresponding author with contact details:

- E-mail address
- Full postal address
- Phone numbers

All necessary files have been uploaded, and contain:

- Keywords
- All figure captions
- All tables (including title, description, footnotes)

Further considerations

- Manuscript has been 'spell-checked' and 'grammar-checked'
- References are in the correct format for this journal
- All references mentioned in the Reference list are cited in the text, and vice versa
- Permission has been obtained for use of copyrighted material from other sources (including the Web)
- Color figures are clearly marked as being intended for color reproduction on the Web (free of charge) and in print, or to be reproduced in color on the Web (free of charge) and in black-and-white in print
- If only color on the Web is required, black-and-white versions of the figures are also supplied for printing purposes

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## After Acceptance

## Use of the Digital Object Identifier

The Digital Object Identifier (DOI) may be used to cite and link to electronic documents. The DOI consists of a unique alpha-numeric character string which is assigned to a document by the publisher upon the initial electronic publication. The assigned DOI never changes. Therefore, it is an ideal medium for citing a document, particularly 'Articles in press' because they have not yet received their fullbibliographic information

## Online proof correction

Corresponding authors will receive an e-mail with a link to our ProofCentral system, allowing annotation and correction of proofs online. The environment is similar to MS Word: in addition to editing text, you can also comment on figures/tables and answer questions from the Copy Editor. Web-based proofing provides a faster and less errorprone process by allowing you to directly type your corrections, eliminating the potential introduction If preferred, you can still choose to annotate and upload your edits on the PDF version. All instructions for proofing will be given in the e-mail we send to authors, including alternative methods to the online version We will do everything possible to get your article published quickly and accurately please upload all of your corrections within 48 hours. It is important to ensure that all corrections are sent back to us in one communication. Please check carefully before replying, as inclusion of any subsequent corrections cannot be guaranteed. Proofreading is solely your responsibility. Note that Elsevier may proceed with the publication of your article if no response is received.

## MATERIAL V. Colección de cover letters

#### Prof. Blaise Cronin

Please consider the following manuscript entitled "On the use of Biplot analysis for multivariate bibliometric and scientific indicators". In this paper we present a methodology for representing multivariate data named Biplot analysis. We define the methodology and we explore its application for research policy purposes using three case studies. The selected case studies have been chosen aiming at applying the Biplot analysis in different contexts and using variables and cases of different natures. The novelty of this technique is that it not only represents the cases, as other representation techniques, but also the variables in a way that makes it an easy-to-read tool; meaning an advantage when comparing with other techniques such as PCA, MDS or CA.

In this sense, we believe it may well be a very useful tool for research policy and bibliometric purposes among other. It has been widely and successfully used in a wide range of fields, from Health Sciences to Social Sciences, however, no study has been found regarding its use in Library & Information Science. Therefore, we are convinced the submitted manuscript is a contribution of great interest to the community. For this reason, we consider JASIS&T to be the most suitable journal for publication as our target audiences are information and library scientists. The present manuscript has not been published or submitted to any other journal.

Yours sincerely, The Authors.

## Dear Prof. Gary E Gorman,

Please consider the following manuscript entitled "Coverage, field specialization and impact of scientific publishers indexed in the 'Book Citation Index'". In this paper we analyze the disciplinary coverage of the database focusing on publisher presence and impact. We present the Book Citation Index distribution by discipline and country, we explore publishers disciplinary profile and we calculate the impact these publishers have according to this database. Also, a critical analysis of the database coverage is made pointing out the problems encountered and stressing the cautions researchers and especially bibliometricians must take when using it.

In this sense, we believe this contribution is of great interest as no other publication has been found exploring the capabilities of this novel database. The interest of this database lies not just only on the expectation any other database produced by Thomson Reuters awakes within the Library Science community, but also on the

peculiarities of such a database. This is the first citation index focused on monographs and if it is proved to be a reliable tool, it could open a new range of opportunities for research evaluation especially for the fields of Social Sciences and Humanities. But its launch is not only of interest for bibliometricians, it also must draw the attention of librarians and publishers who now must judge the value of such resource. For this reason, we consider Online Information Review to be the most suitable journal for publication as our target audience are information and library scientists.

The present manuscript has not been published or submitted to any other journal.

Yours sincerely, The Authors

## Dear Prof. Egghe

Please consider the following manuscript entitled "Mapping Citation Patterns of Book Chapters in the Book Citation Index". In this paper we present one of the first bibliometric studies employing the complete BKCI as information resource. We apply a methodology based on information gain measures in order to analyze the citation distribution of book chapters in the database. For visualizing and interpreting such a measure we develop heliocentric maps which position academic publishers in the BKCI according to the standard citation distribution of a given discipline. This allows us to analyze not only the citation patterns that occur in this citation index, but also to identify the mainstream publishers, their impact and also, coverage flaws on the publisher distribution of disciplines along with anomalous citation behaviors.

In this sense, we believe it may well be a very useful tool for research policy and bibliometric purposes among other. The methodology employed is widely used in the Computer Vision field and we believe it may be of great applicability in the field of Scientometrics. In this sense, we have already tested its capabilities in a previous study (DOI: 10.1007/s11192-012-0854-y) for benchmarking universities. Therefore, we are convinced the submitted manuscript is a contribution of great interest to the community as it employs a scarcely used methodology with visualization improvements in the long-expected BKCI, a citation index of great interest as it allows for the first time, to analyze large datasets of books and book chapters for bibliometric purposes. For this reason, we consider JoI to be the most suitable journal for publication as our

target audience are mainly bibliometricians and other information scientists.

The present manuscript has not been published or submitted to any other journal.

Yours sincerely, The Authors

# **MATERIAL VI. Descubriendo al Corresponding Author**



# Nature journals' authorship policy

## Corresponding author - prepublication responsibilities

The corresponding (submitting) author is solely responsible for communicating with the journal and with managing communication between coauthors. Before submission, the corresponding author ensures that all authors are included in the author list, its order has been agreed by all authors, and that all authors are aware that the paper was submitted.

At submission, the corresponding author must include written permission from the authors of the work concerned for mention of any unpublished material included in the manuscript, for example others' data, in press manuscripts, personal communications or work in preparation. The corresponding author also must clearly identify at submission any material within the manuscript that has previously been published elsewhere by other authors (for example, figures) and provide written permission from those authors and/or publishers, as appropriate, for the re-use of such material.

After acceptance, the proof is sent to the corresponding author, who circulates it to all coauthors and deals with the journal on their behalf; the journal will not necessarily correct errors after publication if they result from errors that were present on a proof that was not shown to coauthors before publication. The corresponding author is responsible for the accuracy of all content in the proof, in particular that names of coauthors are present and correctly spelled, and that addresses and affiliations are current.

## Corresponding author - responsibilities after publication

The journal regards the corresponding author as the point of contact for queries about the published paper. It is this author's responsibility to inform all coauthors of matters arising and to ensure such matters are dealt with promptly. This author does not have to be the senior author of the paper or the author who actually supplies materials; this author's role is to ensure enquiries are answered promptly on behalf of all the co-authors. The name and e-mail address of this author (on large collaborations there may be two) is published in the paper.

# MATERIAL VII. Las guías de los revisores



INDICACIONES PARA EVALUADORES EXTERNOS DE «COMUNICAR»

El Consejo de Evaluadores Externos de «Comunicar» es un órgano colegiado esencial para poder garantizar la excelencia de esta publicación científica, debido a que la revisión ciega basada exclusivamente en la calidad de los contenidos de los manuscritos y realizada por expertos de reconocido prestigio internacional en la materia es la mejor garantía y, sin duda, el mejor aval para el avance de la ciencia y para preservar en esta cabecera una producción científica original y valiosa.

La evaluación de manuscritos por expertos internacionales, en consecuencia, es la clave fundamental para seleccionar los artículos de mayor impacto para la comunidad científica. Esta revisión permite también que los autores, una vez que sus manuscritos son estimados para ser evaluados, puedan contar con informes objetivables sobre los puntos fuertes y débiles de sus manuscritos, en virtud de criterios externos.

Todas las revisiones en «Comunicar» emplean el sistema estandarizado internacionalmente de evaluación por pares con «doble ciego» que garantiza el anonimato de los manuscritos, auditados dentro de la Plataforma open Source «RECYT», de la Fundación de Ciencia y Tecnología de España (FECYT), generándose un promedio de cinco informes por cada manuscrito sometido a evaluación, tanto de revisores nacionales como internacionales.

El Consejo de Evaluadores de «Comunicar» está conformado por un colectivo de expertos internacionales en diferentes temáticas, externos a los órganos directivos del grupo editor de la publicación. Pueden ser miembros, a su vez, del Consejo Científico, del Consejo de Redacción o del Consejo Técnico, pero en todo caso se garantiza su independencia y ano-nimato en todo el proceso evaluador. Una vez al año se hacen públicos en la web oficial de la revista (www.revistacomunicar.com / www.comunicarjournal.com) los listados completos de los evaluadores.

## 1. Criterios de aceptación/rechazo de evaluación manuscritos

Los editores de «Comunicar» siempre que proceden a realizar una invitación para evaluar un manuscrito lanzan una invitación al evaluador que se estima más cualificado en la temática del mismo. Si bien se pide por parte de la revista la máxima colaboración de los evaluadores para facilitar y agilizar los informes y respuestas a los autores de los manuscritos, en todo caso la aceptación de la misma ha de estar vinculada a:

- a) Conocimiento y experiencia académica sobre el tema del manuscrito. La aceptación conlleva necesariamente la posesión de competencia en la temática concreta del artículo.
- b) Disponibilidad temporal. Revisar un artículo exige tiempo y conlleva reflexión concienzuda de muchos aspectos.
- c) Conflicto de intereses. La comunidad científica es limitada. Por ello, en caso de identificación de la autoría del manuscrito, excesiva cercanía académica o familiar a sus autores, pertenencia a la misma Universidad, Departamento, Grupo de Investigación, Red Temática, Proyectos de Investigación, publicaciones conjuntas con los autores... o cualquier otro tipo de conexión o conflicto/cercanía profesional debe rechazarse la invitación del editor para su revisión. Los conflictos de intereses pueden ser tanto por proximidad como por animadversión hacia los autores, en caso de que éstos puedan ser identificados, dentro del anonimato del manuscrito. Si bien los Autores pueden indicar a través de la Plataforma qué investigadores pueden tener conflictos con sus trabajos, también los Evaluadores deben hacer constar esta incidencia.
- d) Compromiso de confidencialidad. La recepción de un manuscrito para su evaluación exige del evaluador un compromiso expreso de confidencialidad, de manera que éste no puede, durante todo el proceso, ser divulgado a un tercero. Si desea obtener una opinión de colegas en relación con el artículo, se debería consultarlo con el editor, que ha de aprobar explícitamente esa difusión restringida con fines evaluativos. Los editores agradecen comentarios adicionales pero necesitan mantener confidencial todo el proceso de examen. Su valoración y sus recomendaciones contribuirán a la decisión final de los editores.

Si no puede llevar a cabo la revisión por algunos de estos motivos u otros justificables, debe notificarlo al editor a través de la Plataforma RECYT (por la misma vía que ha recibido la invitación), especificando los motivos de rechazo a fin de que se tengan en cuenta.

## 2. La función revisora

La tarea del Evaluador Externo, como revisor de pares, es la de analizar de forma crítica y constructiva el contenido del manuscrito, para colaborar con los Editores Adjuntos y Temáticos, en comprobar/ratificar si el trabajo presentado es de alta calidad científica y cumple todos los exigentes parámetros de esta publicación para ser aceptado y posteriormente editado.

La valoración de los Evaluadores es clave para apreciar la originalidad y excelencia del contenido presentado de forma sustancial y precisa.

Los revisores proporcionarán una evaluación general de «impact priority» que refleje la probabilidad del artículo de ejercer una influencia constante y potente en las áreas de investigación de la Revista.

## 3. Criterios generales de evaluación de manuscritos

- a) Tema. El tema central del artículo, para que sea valioso y relevante, ha de ser al tiempo específico (que le permita ser tratado en detalle, sin llegar al localismo), al tiempo que ha de ser de profundo interés para la comunidad científica internacional.
- b) Redacción. En general, la valoración crítica del manuscrito por los Evaluadores ha de estar escrita en tono objetivo, aportando citas exactas del manuscrito o referencias de interés para mostrar su argumentación y justificarla
- c) Originalidad. La originalidad e idoneidad del manuscrito es esencial como criterio de selección para nuestra revista. El alto número de trabajos recepcionados nos exigen que los evaluadores sean muy selectivos:
- ¿Es el artículo suficientemente novedoso e interesante para justificar su publicación?
- ¿Aporta algo al canon del conocimiento?
- ¿Es relevante la pregunta de investigación?

Una búsqueda rápida de literatura utilizando herramientas tales como Web of Knowledge, Scopus y Google Scholar para ver si la investigación ha sido cubierta previamente puede ser de utilidad. Las referencias de esas obras son también de interés para los Editores.

- d) Estructura. Cualquier manuscrito ha de contener todos los elementos clave: resumen, introducción, metodología, resultados, discusión y conclusión.
- El título, el resumen y las palabras clave han de describir exactamente el contenido del artículo. Son esenciales para que los motores de búsqueda de Internet ayuden a que cualquier lector pueda recuperar con facilidad el artículo.
- La revisión literaria debe resumir el estado de la cuestión de las investigaciones pertinentes que contextualizan el trabajo en el panorama internacional, y explicar qué conclusiones de otros autores, si los hubiere, están siendo cuestionadas o extendidas.

Debe incluir la explicación general del estudio, su objetivo central y el diseño metodológico seguido.

- En caso de investigaciones, en la descripción y análisis del método, el autor debe precisar cómo se recopilan los datos, el proceso y los instrumentos usados para responder a las hipótesis, es decir, toda la información necesaria para replicar el estudio si algún otro investigador lo deseara hacer.
- En los resultados se deben especificar claramente los hallazgos, estableciéndose claramente y en secuencia lógica. Será necesario tener en cuenta si el tipo de análisis correspondiente seguido, ya sea cuantitativo, cualitativo o mixto presenta algún tipo de error.
- En la discusión se incluyen aquí la interpretación de los datos obtenidos tanto a la luz de la revisión de la literatura como de la recogida de datos. Los autores deberán incluir aquí si su artículo apoya o contradice las teorías previas. Las conclusiones explicarán, finalmente, también los avances que la investigación plantea en el área del conocimiento científico.
- Idioma: si un artículo presenta errores gramaticales importantes o un lenguaje barroco y alambicado que dificulta su lectura y va en contra de la claridad, sencillez, precisión y transparencia del lenguaje científico, el Evaluador no debe proceder a corrección, ya sea en español o inglés. Informará a los Editores de estos errores gramaticales o lenguaje dificultoso y éstos procederán a devolverlo a sus autores para que, si procede, presenten un texto con los parámetros exigibles conforme a normativa.
- Se ha de determinar también la pertinencia de las figuras y tablas, su aportación, la descripción precisa de los datos así como la consistencia en los gráficos.
- Finalmente, se requiere una profunda revisión de las referencias por si se hubiera omitido alguna obra relevante. Las referencias han de ser precisas, citando en la lógica de la temática a estudiar, sus principales obras así como los documentos que más se asemejen al propio trabajo, así como las últimas investigaciones en el área.

## 4. Dimensiones relevantes de valoración

## ESTUDIOS, INFORMES, PROPUESTAS, EXPERIENCIAS

- 01. Título y resumen (claridad y estructura)
- 02. Relevancia de la temática
- 03. Revisión de la literatura
- 04. Estructura y organización artículo
- 05. Capacidad argumental y coherencia
- 06. Redacción científica
- 07. Aportaciones originales
- 08. Conclusiones
- 09. Citaciones

10. Referencias Total máximo: 50

Los Evaluadores de «Comunicar» han de analizar profundamente el manuscrito, contrastando la información que se ofrece, revisando la literatura científica que justifica el documento e informando a los editores de forma cuantitativa y cualitativa sobre la conveniencia o no de aceptar el trabajo.

La información evaluativa ha de ser razonada y cualitativa, acompañada también de una puntuación numérica, que ha de estar en sintonía con las observaciones redactadas y que sirve además como criterio de jerarquización de los trabajos presentados.

#### **INVESTIGACIONES**

- 01. Título y resumen (claridad y estructura)
- 02. Relevancia de la temática
- 03. Originalidad del trabajo
- 04. Revisión de la literatura
- 05. Estructura y organización artículo
- 06. Capacidad argumental
- 07. Redacción
- 08. Rigor metodológico
- 09. Instrumentos de investigación
- 10. Resultados de investigación
- 11. Avances
- 12. Discusión
- 13. Conclusiones
- 14. Citaciones (variedad y riqueza)
- 15. Referencias Total máximo: 50

## 5. Cuestiones éticas

- a) Plagio: Si sospecha que un artículo es una copia sustancial de otra obra, el Evaluador ha de informar a los Editores citando la obra anterior con tanto detalle cómo le sea posible. Los sistema de detección de plagio y autoplagio son utilizados (Grammarly, Turnitin...) de forma prescriptiva por la publicación, tanto por Evaluadores como por Editores.
- b) Fraude: Si hay sospecha real o remota de que los resultados en un artículo son falsos o fraudulentos, es necesario informar de ellos a los Editores.

## 6. Proceso de evaluación de manuscritos en RECYT

Desde el momento que el experto forma parte del Consejo Evaluador, se le da de alta en la Plataforma RECYT y a partir de ese momento puede recibir peticiones de evaluación de artículos. Para ello, recibirá un correo electrónico de petición de revisión de artículo en su buzón personal. Esta petición deberá ser aceptada o rechazada en un plazo de 10 días a través de la plataforma.

Para notificar su decisión, el revisor ha de identificarse con su usuario y contraseña, facilitada cuando se le dio de alta (en caso de pérdida, si se conoce el usuario se puede pedir de forma automática una nueva contraseña) y haber seleccionado el rol de revisor, tendrá acceso a la pantalla con la lista de «Envíos activos».

Al pinchar sobre el artículo por revisar, aparecerá una página con información sobre el envío por revisar: titulo, autores y resumen, el estado de la revisión (fechas), los pasos a realizar para completar la revisión y las normas.

- a) Seleccionar, según la decisión del Evaluador, si se acepta o rechaza el encargo.
- b) Si la decisión ha sido afirmativa, el Evaluador debe realizar el informe.
- c) Tras enviar el correo de aceptación, debe descargar el artículo a revisar y guardarlo en su PC.
- d) Tras la revisión del artículo descargado, se deberá rellenar la Ficha de Evaluación.
- e) Para subir la Ficha de Evaluación, deberá pulsar el botón «Examinar» que le permitirá navegar por los ficheros de su PC hasta encontrar el que corresponda y después pulsar el botón «Subir».

Una vez realizada la selección de recomendación, se habilita la pantalla que permite enviar un correo al editor para informarle del fin de la revisión, para lo que habrá que pulsar el botón «Enviar Revisión al editor». Es imprescindible realizar esta última acción para que el Editor sepa que el trabajo de revisión se ha completado.

Con el envío de este correo, finaliza la tarea de evaluación de un artículo. Esta revisión será valorada por los Editores Temáticos y Adjuntos, los cuales tomarán una decisión teniendo en cuenta las evaluaciones, y criterios expertos y editoriales. Una de las posibles decisiones es iniciar una nueva ronda de revisión (segunda ronda), para la cual se podría solicitar de nuevo la colaboración del mismo Evaluador, que volvería a realizar los pasos descritos.

Para completar esta información, los Evaluadores pueden consultar el Manual RECYT para Revisores:

www.revistacomunicar.com/evaluadores/manual-evaluador.pdf

Los Autores pueden consultar el Manual de Envío de Manuscritos: www.revistacomunicar.com/normas/00-manual-envio-recyt.pdf

## 7. Informe a los Editores

El informe debe contener los elementos clave de su revisión abordando los puntos indicados en la sección anterior.

Los comentarios de los Evaluadores deben ser respetuosos y constructivos, y no debe incluir comentarios ni datos personales. Han de proporcionar información clara y contundente sobre cualquier deficiencia. Deben explicar y apoyar su evaluación para que Editores y Autores sean capaces de entender el razonamiento en el que se apoyan los comentarios. Se debe indicar además si los comentarios manifestados son personales o están fundamentados en criterios de autoridad.

Los informes pueden ser remitidos a los Autores tal como han sido elaborados por el Evaluador. Es importante, por ello, cuidar especialmente los aspectos formales (organización, claridad, redacción, ortografía, etc.). Téngase en cuenta que a menudo los informes incluyen valoraciones y solicitan modificaciones en lo que concierne a los aspectos formales de los artículos, por lo que es imprescindible que sean cuidadosos en aquello que valoran.

Cuidar la formulación de las valoraciones, evitando en la medida de lo posible que puedan ser interpretadas de forma ofensiva por los Autores. Es necesario hacer compatible el rigor e incluso la dureza de las valoraciones con un respeto exquisito al trabajo de los autores. No utilizar nunca expresiones del tipo "No es serio que...", "Sólo desde un desconocimiento total o una ignorancia del problema estudiado puede afirmarse que...", o similares.

Las valoraciones parciales relativas a aspectos de contenido y aspectos formales tendrán en cuenta los siguientes criterios de evaluación:

## Aspectos de contenido

- Grado de interés y actualidad del tema.
- Pertinencia y actualidad de las fuentes.
- Interés del planteamiento teórico.
- Claridad en la exposición de los objetivos del trabajo.
- Adecuación del diseño metodológico a los objetivos del trabajo.
- Pertinencia y corrección de los procedimientos de análisis de datos (si procede).
- Interés de los datos empíricos aportados (si procede).
- Relevancia de la discusión, resultados y conclusiones.
- Importancia para la didáctica profesional (si procede).

## Aspectos formales

- Organización y estructura.
- Extensión de secciones equilibrada y adecuada al contenido .
- Redacción y estilo.
- Presentación de tablas y/o gráficos.

• Referencias bibliográficas (Normas APA y correspondencia de las citas en texto con la lista final).

Sólo se contemplarán los criterios respecto a los cuales el evaluador considere conveniente formular comentarios, sugerencias.

Las categorías de «Comunicar» para clasificar un manuscrito evaluado son las siguientes:

- a) Rechazo debido a las deficiencias detectadas, justificadas y razonadas con valoración cualitativa y cuantitativa. El informe ha de ser más extenso si obtiene menos de los 40 de los 50 puntos posibles.
- b) Aceptación sin revisión.
- c) Aceptación condicionada y por ende con revisión (mayor o menor). En este último caso, se ha de identificar claramente qué revisión es necesaria, enumerando los comentarios e incluso especificando párrafos y páginas en las que sugieren modificaciones.

## 8. Protocolos de evaluación de manuscritos para Evaluadores Externos

Los Evaluadores Externos están obligados a conocer en profundidad la normativa de la publicación: www.revistacomunicar.com/normas/00-normativa-comunicar.pdf para observar si los manuscritos evaluados se adaptan a las mismas e indicar cualquier divergencia importante.

Los revisores seguirán el Protocolo de Evaluación de Manuscritos para Evaluadores Externos Investigaciones, Estudios, Informes, Propuestas y Experiencias):

- www.revistacomunicar.com/normas/01-protocolo-revisores-investigaciones.pdf
- www.revistacomunicar.com/normas/01-protocolo-revisores-estudios.pdf

Examinarán cada uno de los criterios de revisión y valorarán el mérito científico y técnico, dando una puntuación independiente a cada uno. Un artículo no tiene por qué destacar en todas las categorías para determinar su nivel de calidad e impacto científico.

# MATERIAL VIII. El proceso de revisión al completo

A continuación vamos a ver el proceso de revisión del siguiente manuscrito

TORRES-SALINAS, D; Robinson-García, N; Jiménez-Contreras, E; Herrera, F; Delgado López Cózar, E. On the use of Biplot analysis for multivariate bibliometric and scientific indicators. Journal of the American Society for Information Science and Technology, 2013.

El manuscrito fue a enviado a JASIST. Una vez enviado ocurre lo siguiente

## 1. RESPONDE EL EDITOR ENTREGANDO LA PRIMERA REVISIÓN

Dear Mr Robinson-Garcia,

Your manuscript Manuscript # JASIST-2012-06-0337 entitled "On the use of Biplot analysis for multivariate bibliometric and scientific indicators" which you submitted to the Journal of the American Society for Information Science and Technology has been refereed.

The referees" comments are appended to this letter and referees" attached comments (if any) are linked from Manuscript Central (<a href="http://mc.manuscriptcentral.com/jasist">http://mc.manuscriptcentral.com/jasist</a>; from your Submitting Author Center, select "Manuscripts with Decisions" and click on "view decision letter").

A revised version of your manuscript that takes into account the referees" comments will be reconsidered for publication. Please note that submitting a revision of your manuscript does not guarantee acceptance. The revised version may be re-reviewed by the referee(s) before a decision is made.

Please also make sure that you provide a detailed response to the referees' comments.

You can upload and submit your revised manuscript through Manuscript Central. You will also be able to respond to the comments made by the referees and document any changes you make to the original manuscript.

IMPORTANT: We have your original files. When submitting (uploading) your revised manuscript, please delete the file(s) that you wish to replace and then upload the revised file(s). Once again, thank you for submitting your manuscript

to the Journal of the American Society for Information Science and Technology. I look forward to receiving your revision.

Sincerely,

**Professor Blaise Cronin** 

Editor-in-Chief

Journal of the American Society for Information Science and Technology

# 2. NOS ENTREGA LA SIGUIENTE REVISIÓN (incluimos solo respuesta revisor 1)

# Introduction

# Page 3

**Line 25.** The author/s talk about Principal Components as an alternative to eigenvector techniques. However, a Principal Component is precisely an eigenvector. So, that is inaccurate and misleading.

Line 27. As it is written, it seems that Correspondence Analysis was proposed by Börner, Chen & Boyack (2003), which is wrong. If Gabriel is quoted as the father of Biplot, the father of Correspondences Analysis must also be cited. In addition, it is necessary to include citations to the application in Bibliometrics of the classical multivariate techniques mentioned in the text: MDS, PCA and CA.

**Line 42**. Gabriel's quote is incorrect, is not 1972, but 1971. This mistake is repeated several times throughout the text.

Lines 44-48. Biplot is not well defined, not all elements are represented with vectors, and axes are oblique. The author/s themselves paint points and vectors on orthogonal axes. They argue that the representation assumes projecting a three dimensional space to one of two dimesions. Actually, projecting from a hyperspace of many dimensions as observable variables considered in the study. Also do not refer to the central feature of Biplot who claim to use (JK). This feature is the scalar product of the markers reproduces the matrix element. This concept is fundamental to geometric interpretation in terms of distances, angles, orthogonal, etc..

# Page 4

**Lines 15-21**. Most citations included have nothing to do with the JK-Biplot they use:

- Wouter et al. (2003) use a GE-Biplot. It has nothing to do with the JK. This is a Biplot to represent the genotype-environment interaction and it is interpreted just in a opposite way. The same goes for Yan, W. et al. (2000) who used GGE-Biplot.
- Battley, PF, et al (2001) is an article that used the JK biplot, although not named in any time, but should not be used as a reference for the interpretation of the biplot because of is wrong. He states: The principal components biplot was used to assess. The length and proximity of the vectors reveal the correlations between different organs: technically, they are the eigenvalue loadings of the principal components analysis. It is completely false.
- Galindo, Vaz & Nijkamp (2011) use a Logistic Biplot that has nothing to do with the JK, this is a Biplot for dichotomous data. Oddly, no article is cited Veiga de Cabo and MartínRodero (2011) using the Logistic Biplot for evaluating degree of implementation of 2.0 technologies in scientific journals and, however, cite an article of economy.
- Alcantara y Rivas (2007) use a HJ-Biplot (Galindo, 1986) not JK.

#### Page 8

**Line 33.** there is a quote (Gabriel, 2002) that is not included in the reference list .Therefore, the citations are not appropriate at all.

Lines 25-28. It is said that a major contribution of this paper is that it is the first application of the methods Biplot in Bibliometrics. The work of Diaz-Faes et al. (2011) is cited in the background giving less importance, when in fact it is this work that involves the introduction of Biplot methods in Bibliometrics. This work (Diaz-Faes et al., 2011) is misquoted and put in a wrong context. No hospitals studied, as the author/s claim, but Spanish universities. It should be mentioned as background properly. Furthermore, both cited in the text and reference contain errors, lack an author and has to include a link to full text is available as: http://hdl.handle.net/10760/15998

# Methodology

Considering target audience of the article, present the methodology in terms of spectral decomposition makes no sense. This was introduced by Gabriel in the journal Biometrika that is aimed to mathematicians. If one observes the article

of Odoroff and Gabriel (1990), which was aimed at doctors, presentation omitted any algebraic development. Should be limited to providing clear rules of interpretation and limit the method to his original quote (properly cited, of course).

# Page 8

Lines 13-26. The author/s confuse the concept of goodness of fit (cummulative qualites of representations of the columns) with the concept of quality of representation of each row and / or each column. There may be a acceptable overall quality of representation and be poor quality for some points. The author/s of this article does not even consider. However, is include an appendix with the quality of representation of the points that you have not defined previously (Page 11, lines 7-13).

Table 1. All letters shown in Table 1 are undefined, so thus not transmit any information. Also displayed with a low clarity. In summary, section 2.2 must be rewritten and focused in an intuitive and practical way.

# Page 10

**Section 2.3 – Line 11.** The name of the software used (MultiBiplot) is not spelled correctly. Taking

into account that there is other program in R with that name, this error leads to confusion

**Section 2.4.** The analyzed data resulting from aggregation of 8, 4 and 6 variables, these variables

have to be described adequately in order to facilitate the reader's understanding of the indicators used.

# **Analysis and results**

Page 11. In the first example presented there are large differences in the units of measurement of variables. Variables such as "MILL€", "RES", "DOC" determine the analysis with respect to others as "NCIT" or "CAVG" without an adequate data transformation. Have you used any type of transformation to the data?

# **Examples presented**

The interpretation of the three examples presented is generally quite poor and in some cases erroneous. Not discussed the contributions of the latent variables to observed variables which is very important in Biplots interpretation.

**Second example** THE Ranking variables (Pages 13-14, Figure 3):

 It is said that the variables "Citations" and "International Outlook" does not correlate with

the rest, while is clear that there is correlation between the variables "Citations" and

"Research".

 Michinga, MIT and Columbia universities are not well represented in the in the first two axes. Why is this

**Third example** University of Granada in 12 scientific fields (Pages 15-16, Figure 4):

- The Biplot is not interpreted in no time, but repeatedly referred to the position of the University of Granada in the rankings. Biplot only shows the activity of the University of Granada in 12 scientific fields.
- Its is said about the position of the scientific field "Technology and Communication" "outstanding for all indicators", while, as the graph shows, this scientific field doesn't have high values for all variables, such as %Q1. Instead of interpreting the graph, simply says: "University of Granda is the top Spanish university In This Field". How can you make such a claim in view of the biplot graph?
- Mentioned in this example "in the case of Granada Pshyics The Highest Citation Average of all Spanish Universities and this is Reflected in the Biplot". How can you make such information if analyzed only 12 disciplines at the University of Granada and do not represent the other universities?
- Therefore, is necessary to redo the interpretation of the Biplot graphs, adapt to the information provided and do it correctly.

# Pages 16-17

The final comparison with other multivariate techniques (PCA, MDS, CA) is not adequate. Must be improved.

- It is said: "MDS and PCA representations show similar patterns to those presented by the Biplot representation; generating similar cluster". At no time Cluster Analysis is applied, in all cases, the distribution is similar.
- It is considered: "the PCA representations shows a similar distribution of variables to the ne displayed through Biplot..." PCA is not a technique to represent the correlations between variables, as shown in Figure 5, but are shown and described individuals.
- Regarding to Correspondence Analysis: "CA representation displayed in figure 5 is similar to the Biplot map, we find much more difficult to interpret". That sentence makes no sense because the Biplot and the CA are interpreted similarly. What happens is that the position of the points is different and the conclusions are different, because in the respective hyperspaces defined different distances. It is also essential to know which program has been made the CA. If you have done with SPSS must specify the distance and model.

# Page 17

**Lines 22-23.** And indicated below: "For these reason many authors (Gabriel, 1955) point out the Biplot analysis as a good alternative instead of CA". Obviously this citation does not exist because none of the two techniques had appeared.

# **Conclusions**

Page 18. Reference is made to the interest of the technique for data mining, but the data matrices—used in the article are extremely small: 21x8, 25x4, 12x6. Must be specifically justified the utility of the method for massive bibliometric data management including the appropriate references. Finally it should be noted that when using JK-Biplot can only be interpreted the position of the rows (countries, universities or scientific fields).

# 3. REALIZAMOS LA SIGUIENTE RESPUESTA A LA REVISIÓN

# Response to the Reviewers JASIST-2012-06-0337

**Title of the paper:**On the use of Biplot analysis for multivariate bibliometric and scientific indicators.

**Authors:** Daniel Torres-Salinas, Nicolas Robinson-Garcia, Evaristo Jiménez-Contreras, Francisco Herrera, Emilio Delgado López-Cózar

The main changes introduced in the new version of the paper are the following ones:

- Section 2.2. has been rewritten as suggested by #Reviewer 1 changing its perspective into a more intuitive and less technical one, referring the reader to Appendix 1 for a more mathematical approach
- Table 1 has been deleted and table 2 has been modified inserting a new column in which variables are defined
- The description of results has been improved following reviewers suggestions.

Thanks are due to the two anonymous reviewers for their constructive suggestions. This comment was introduced in the Acknowledgments of the revised manuscript.

# **REVIEWER 1**

**RV: Reviewer** 

**AA: Author Answers** 

#### Introduction

# RV:

#### Page 3

Line 25. The author/s talk about Principal Components as an alternative to eigenvector techniques. However, a Principal Component is precisely an eigenvector. So, that is inaccurate and misleading.

#### AA:

According to the reviewer's suggestion we have deleted Eigenvector solutions from the text. Where it said:

"Traditionally, the main classifying methodologies employed for representing bibliographic data have been those based on multivariate analysis such as Eigenvector solutions, Multi-Dimensional Scaling (MDS), Principal Component Analysis (PCA) or Correspondence Analysis (Börner, Chen & Boyack, 2003), for instance"

# It now says:

"Traditionally, the main classifying methodologies employed for representing bibliographic data have been those based on multivariate analysis such as Multi-Dimensional Scaling (MDS), Principal Component Analysis (PCA) or Correspondence Analysis (Börner, Chen & Boyack, 2003), for instance"

Also, the abstract has been modified accordingly.

#### RV:

Line 27. As it is written, it seems that Correspondence Analysis was proposed by Börner, Chen &Boyack (2003), which is wrong. If Gabriel is quoted as the father of Biplot, the father of Correspondences Analysis must also be cited. In addition, it is necessary to include citations to the application in Bibliometrics of the classical multivariate techniques mentioned in the text: MDS, PCA and CA.

# AA:

This citation was wrongly introduced, the work cited is a review of visualization methods applied for scientific mapping, our intention with this citation was to give readers a reference where more information can be found discussing this methodologies within the field of bibliometrics. We have emphasized this last point in the text and the following changes have been made.

# Were it said:

"Traditionally, the main classifying methodologies employed for representing bibliographic data have been those based on multivariate analysis such as Multi-Dimensional Scaling (MDS), Principal Component Analysis (PCA) or Correspondence Analysis (Börner, Chen & Boyack, 2003), for instance."

# It now states:

"Traditionally, the main classifying methodologies employed for representing bibliographic data have been those based on multivariate analysis such as Multi-Dimensional Scaling (MDS), Principal Component Analysis (PCA) or Correspondence Analysis, for instance (a review on the application of these

methodologies for scientific mapping can be found in Börner, Chen & Boyack, 2003)."

# RV:

Line 42. Gabriel's quote is incorrect, is not 1972, but 1971. This mistake is repeated several timesthroughout the text.

#### AA:

This error has been corrected as indicated by the reviewer.

#### RV:

Lines 44-48. Biplot is not well defined, not all elements are represented with vectors, and axes are oblique. The author/s themselves paint points and vectors on orthogonal axes. They argue that therepresentation assumes projecting a three dimensional space to one of two dimensions. Actually, projecting from a hyperspace of many dimensions as observable variables considered in the study.

#### AA:

We agree with the referee, this definition is incomplete and there are some mistakes in it. In order to correct them we have made several modification in the text. Where it said:

"A Biplot is a graphical representation of multivariate data, where the elements of a data matrix are represented according to vectors associated with the rows and columns of the matrix. Contrarily to a scatter gram, the axes are oblique and not perpendicular. This way, on the one hand, we simulate the projection of a three-dimensional representation over a surface with a minimum loss of information, and on the other hand, it adds interpretative meaning to the cosine of the angles between vectors, which represents the correlation between variables. Therefore, when vectors are perpendicular, the cosine equals zero and the variables are independent. But if they are very close or represent a 180° angle, they have a highly positive or negative correlation."

# It now says:

"A Biplot is a graphical representation of multivariate data, where the elements of a data matrix are represented according to **dots and** vectors associated with the rows and columns of a matrix. Contrarily to a scatter gram, **the axes are not perpendicular**, **as they** simulate the projection of an **n-dimensional** representation over a surface with a minimum loss of information, **adding** interpretative meaning to the cosine of the angles between vectors, which represents the correlation between variables. Therefore, when vectors are perpendicular, the cosine equals zero and the variables are independent. But if they are very close or represent a 180° angle, they have a highly positive or

negative correlation."

#### RV:

Also do not refer to the central feature of Biplot who claim to use (JK). This feature is the scalar product of the markers reproduces the matrix element. This concept is fundamental to geometric interpretation in terms of distances, angles, orthogonal, etc..

#### AA:

This comment has been introduced in Section 2.2 when we describe the JK-Biplot type.

#### RV:

# Page 4

Lines 15-21. Most citations included have nothing to do with the JK-Biplot they use:

- Wouter et al. (2003) use a GE-Biplot. It has nothing to do with the JK. This is a Biplot to represent the genotype-environment interaction and it is interpreted just in a opposite way. The same goes for Yan, W. et al. (2000) who used GGE-Biplot.
- Battley, PF, et al (2001) is an article that used the JK biplot, although not named in anytime, but should not be used as a reference for the interpretation of the biplot because of is wrong. He states: The principal components biplot was used to assess. The length andproximity of the vectors reveal the correlations between different organs: technically, theyare the eigenvalue loadings of the principal components analysis. It is completely false.
- Galindo, Vaz & Nijkamp (2011) use a Logistic Biplot that has nothing to do with the JK, this is a Biplot for dichotomous data. Oddly, no article is cited Veiga de Cabo and Martín-Rodero (2011) using the Logistic Biplot for evaluating degree of implementation of 2.0 technologies in scientific journals and, however, cite an article of economy.
- Alcantara y Rivas (2007) use a HJ-Biplot (Galindo, 1986) not JK

# AA:

In this stage of the paper we are not referring to any of the types of Biplot analysis but introducing the methodology and mentioning its wide spread and use among a variety of discipline. We use the JK Biplot as an example, but our intention is not to introduce that single type of biplot. However, in order to indicate this the following changes have been made in the text. Also, we have deleted the citation to Battley et al (2001) and introduced the one to Veiga de Cabo and Martín-Rodero (2011).

In page 4, line 5 where it was written:

"Not as widely expanded as other techniques such as the above mentioned, it

was first proposed by Gabriel (1972) and has already been tested in many and very different scientific fields such as: Biomedicine (Wouters et al, 2003; Gabriel, 1990), Zoology (Battley et al, 2001), Agriculture (Yank et al, 2000), Economics and Business (Galindo, Vaz & Nijkamp, 2011), Tourism (Pan, Chon & Song, 2008) or Political Science (Alcantara & Rivas, 2007).""

# It now says:

"Not as widely expanded as other techniques such as the above mentioned, it was first proposed by Gabriel (1972) and has already been tested **in its different variants and types** in many and very different scientific fields such as: Biomedicine (Wouters et al, 2003; Gabriel, 1990), Agriculture (Yank et al, 2000), **Library Science (Veiga de Cabo & Martín-Rodero, 2011)**, Economics and Business (Galindo, Vaz & Nijkamp, 2011), Tourism (Pan, Chon & Song, 2008) or Political Science (Alcantara & Rivas, 2007)."

#### RV:

# Page 8

Line 33. there is a quote (Gabriel, 2002) that is not included in the reference list. - Therefore, the citations are not appropriate at all.

#### AA:

This citation is referred to the following paper:

Gabriel, K.R. (2002). Goodness of fit of biplots and correspondence analysis. Biometrika, 89(2), 423-436.

It has now been included in the References list.

# RV:

Lines 25-28. It is said that a major contribution of this paper is that it is the first application of the methods Biplot in Bibliometrics. The work of Diaz-Faes et al. (2011) is cited in the backgroundgiving less importance, when in fact it is this work that involves the introduction of Biplot methods in Bibliometrics. This work (Diaz-Faes et al., 2011) is misquoted and put in a wrong context. Nohospitals studied, as the author/s claim, but Spanish universities. It should be mentioned asbackground properly.Furthermore, both cited in the text and reference contain errors, lack an author and has to include alink to full text is available as: http://hdl.handle.net/10760/15998

#### AA:

We concur with the reviewer on remarking the importance of this work as the first one which introduces the Biplot analysis in bibliometrics. In order to emphasize this contribution we have reformulated the text in page 4 lines 21-28. Were it said:

"However, no study has been found regarding science mapping where a Biplot analysis was applied. In fact, the only mention to this method that can be found in literature has to do with a brief presentation in which the Biplot analysis was applied to a small set of Spanish hospitals and scientific journals (Arias-Fáez et al., 2011)."

# It now says:

"Within the field of bibliometrics, this methodology was first introduced in a brief presentation in which the Biplot analysis was applied in order to analyze the scientific activity in Health Sciences of a small set of Spanish universities (Arias Díaz-Faes et al, 2011). Other than this, no other study has been found regarding science mapping."

Also, citation and reference have been corrected.

# Methodology

#### RV:

Considering target audience of the article, present the methodology in terms of spectral decomposition makes no sense. This was introduced by Gabriel in the journal Biometrika that is aimed to mathematicians. If one observes the article of Odoroff and Gabriel (1990), which was aimed at doctors, presentation omitted any algebraic development. Should be limited to providing clear rules of interpretation and limit the method to his original quote (properly cited, of course).

#### Page 8

Lines 13-26. The author/s confuse the concept of goodness of fit (cumulative qualites of representations of the columns) with the concept of quality of representation of each row and / oreach column. There may be a acceptable overall quality of representation and be poor quality for some points. The author/s of this article does not even consider. However, is include an appendix with the quality of representation of the points that you have not defined previously (Page 11, lines 7-13).

Table 1. All letters shown in Table 1 are undefined, so thus not transmit any information. Also displayed with a low clarity.

- In summary, section 2.2 must be rewritten and focused in an intuitive and practical way.

#### AA:

Section 2.2 has been fully rewritten, and Appendix 1, in which the methodology is presented in terms of spectral decomposition has been introduced. Also, we have made slight changes in Section 2' introduction. Where it said:

"In this section we will present the Biplot analysis and briefly describe three case studies in which we will apply it. This section is structured as follows. Firstly we give an overview on the Biplot analysis. In subsection 2.2, we describe the classic methodology presented by Gabriel (1971) and we introduce the JK-Biplot based on PCA, which is the one we will use for presenting the application of this methodology in the field of scientometrics. In subsection 2.3. we shortly introduce the software used for developing our applications. Then, in subsection 2.4., we show the results of the three case studies."

# In now says:

"In this section we will present the Biplot analysis and briefly **introduce** three case studies in which we will apply it. This section is structured as follows. Firstly we give an overview on the Biplot analysis. In subsection 2.2, **we give the key points for interpreting a Biplot representation** and we introduce the JK-Biplot based on PCA, which is the one we will use for presenting the application of this methodology in the field of scientometrics. In subsection 2.3. we shortly introduce the software used for developing our applications. Then, in subsection 2.4., **we introduce the three case studies used**."

Also, Appendix 1 which contains the text which was previously in Section 2.2. has also been modified taking into account the differences between goodness of fit and quality representation pointed out by the reviewer. Table 1 has been deleted and all tables renumbered. All mentions to quality representation and goodness of fit all over the manuscript have been revised and corrected if necessary.

# RV:

Page 10

Section 2.3 – Line 11. The name of the software used (MultiBiplot) is not spelled correctly. Taking

into account that there is other program in R with that name, this error leads to confusion.

#### AA:

This error was amended, now the software is named correctly.

#### RV:

Section 2.4. The analyzed data resulting from aggregation of 8, 4 and 6 variables. these variableshave to be described adequately in order to facilitate the reader's understanding of the indicators used.

# AA:

We have introduced a new column in table 2 in which we include a definition for each variable.

# **Analysis and results**

#### RV:

**Examples presented** 

The interpretation of the three examples presented is generally quite poor and in some cases erroneous. Not discussed the contributions of the latent variables to observed variables which is very important in Biplots interpretation.

Second example THE Ranking variables (Pages 13-14, Figure 3):

- It is said that the variables "Citations" and "International Outlook" does not correlate with the rest, while is clear that there is correlation between the variables "Citations" and "Research".
- Michigan, MIT and Columbia universities are not well represented in the in the first two axes. Why is this?

# AA:

In order to meet the reviewer's suggestions we have introduced the following changes.

Regarding the discussion of latent variables and observed variables, we agree with the reviewer, in fact, this is something also mentioned by the second reviewer. Therefore in page 12, line 2, where it said:

"Regarding the variables two groups of vectors can be clearly distinguished in the graph, indicating a high correlation between variables for each group. Therefore, the correlation between %HR and DOC is 0.198 and between CAVG and NCIT is 0.928. On the first one we see all relativized variables such as %GDP, average of citations (CAVG), normalized citations (NCIT) and Human resources (%HR). The second group is formed by variables related with raw indicators influenced by size (CIT, DOC, RES; MILL €)."

# It now says:

"Regarding the variables two latent variables can be clearly distinguished in the graph, indicating a high correlation between the observed variables of each of them. Therefore, the correlation between %HR and DOC is 0.198 and between CAVG and NCIT is 0.928. The first latent variables which encompasses %GDP, average of citations (CAVG), normalized citations (NCIT) and Human resources (%HR) could be defined as the qualitative axis as these measures are all normalized. The second latent variable, which is formed by variables related with raw indicators influenced by size (CIT, DOC, RES; MILL €) could be defined as one of a quantitative measure."

As for the relation between variables in example 2, we have introduced the following changes. In page 13-14 where it said:

"When observing the overall representation, we must point out that, firstly, two variables do not correlate with the rest (Citations and International Outlook) and secondly, two other variables are very closely related to each other (Research and Teaching). In this last case the correlation value is 0.784."

# In now says:

"When observing the overall representation, we must point out that, firstly, two variables do not correlate with the rest (Citations and International Outlook), secondly, Citations, Research and Teaching correlate positively and, finally, two other variables are very closely related to each other (Research and Teaching). In this last case the correlation value is 0.784."

In regard to the poor representation of the universities of Michigan MIT and Columbia, we believe that the reason behind this is that they have significant differences on their performance for variables that are highly correlated. Therefore, in the case of MIT for instance, will is the fourth university when ranking them according to the Research variable, it is number 11 regarding Teaching. Considering the high correlation between these two variables, this kind of behaviour hampers the representation of these universities.

# RV:

Third example University of Granada in 12 scientific fields (Pages 15-16, Figure 4):

- The Biplot is not interpreted in no time, but repeatedly referred to the position of the University of Granada in the rankings. Biplot only shows the activity of the University of Granada in 12 scientific fields.
- Its is said about the position of the scientific field "Technology and Communication" "outstanding for all indicators", while, as the graph shows, this scientific field doesn't have high values for all variables, such as %Q1. Instead of interpreting the graph, simply says: "University of Granda is the top Spanish university In This Field". How can you make such a claim in view of the biplot graph?
- Mentioned in this example "in the case of Granada Physics The Highest Citation Average of all Spanish Universities and this is Reflected in the Biplot". How can you make such information if analyzed only 12 disciplines at the University of Granada and do not represent the other universities?

#### ΔΔ:

In this case, our intention was to interpret the results shown by the Biplot

representation in relation with those obtained by the Spanish University Rankings, this interpretation is needed as values are obtained regarding the national performance. Having said that, the reviewer is right that too much emphasizes is done on the rankings to the neglect of the Biplot representation. In order to amend this error, the following changes have been introduced.

Page 15, last paragraph, where it said:

"- We observe the Information Technology & Communication field (upper right) outstanding for all indicators; nevertheless the University of Granada is the top Spanish university in this field. Granada occupied the first position according bibliometric indicators in national ranking from 2010."

It now says:

- "- Two latent variables emerge from the observed variables. As in case 1, we have on the one hand the qualitative axis formed by TOPCIT, CAVG and %Q1 and a quantitative axis formed by CIT, H-index and DOC.
- It is highly significant the position of the Information Technology & Communication field (upper right) which stands completely by itself and separate from the rest of the fields. This is due to the high values it has for indicators of both latent variabels except for %Q1."

Page 16, 1<sup>st</sup> paragraph. Where it said:

"- On the lower right side we find those fields on which the University of Granada outstands at national and internal level for raw indicators such as DOC, H-Index or CIT. For example the University Granada is the second and third university in Mathematics and Earth Sciences respectively in Spain for the indicator DOC."

It now says:

"- On the lower right side we find those fields on which the University of Granada outstands at national and internal level for raw indicators such as DOC, H-Index or CIT, that is for the quantitative axis. For example the University Granada is the second and third most productive university in Mathematics and Earth Sciences respectively in Spain, explaining its high values for variable DOC."

Page 16, 2<sup>nd</sup> paragraph. Where it said:

"- On the upper left side we find those areas in which the university performs

well for non-size dependent indicators. In this sense, we must emphasize Physics and Agricultural Science for two indicators; TCIT and CAVG. In the case of Physics Granada the highest Citation Average of all Spanish Universities and this is reflected in the biplot. We also find Economics along with the %Q1 variable which had been previously discussed and cannot be interpreted in this representation due to the lack of information."

# It now says:

"- On the upper left side we find those areas in which the university performs well for **qualitative** indicators. In this sense, we must emphasize Physics and Agricultural Science for two indicators; TCIT and CAVG. In the case of Physics, **it shows the best performance for TCIT** of all **fields, as** reflected in the biplot. We also find Economics along with the %Q1 variable which had been previously discussed and cannot be interpreted in this representation due to the lack of information."

#### RV:

- Therefore, is necessary to redo the interpretation of the Biplot graphs, adapt to the information provided and do it correctly.

#### AA:

We believe that the changes aforementioned will be enough to improve the interpretation of the Biplot graphs and we thank the reviewer for his/her helpful comments.

# RV:

#### Page 17

Lines 22-23. And indicated below: "For these reason many authors (Gabriel, 1955) point out the Biplot analysis as a good alternative instead of CA". Obviously this citation does not exist because none of the two techniques had appeared.

#### AA:

This is a citation error, this statement was referred to Gabriel, K.R. (2002). Goodness of fit of biplots and correspondence analysis. Biometrika, 89(2), 423-436.

This error has been amended.

### **Conclusions**

#### RV:

Page 18. Reference is made to the interest of the technique for data mining, but

the data matrices used in the article are extremely small: 21x8, 25x4, 12x6. Must be specifically justified the utility of the method for massive bibliometric data management including the appropriate references.

#### AA:

The use of small matrices in this paper is purposefully done as we only intend to present an introductory paper on the methodology. However, we do in fact, point out the potential of this technique for further analyses with greater data set. We have made the following changes.

Page 18, 4<sup>th</sup> line. Where it said:

"In any case, we believe this type of analyses are of great interest and should be explored by the informetric research community, especially for studies regarding data mining and data classification patterns, similar to those performed in other fields such as Genetics (Chapman et al., 2001)"

It now says:

"Although in this paper we have used small matrices for displaying the biplot analysis potential, we believe this type of analyses are of great interest and should be explored by the informetric research community, especially for studies regarding massive data sets for data mining (Theoharatos et al, 2007) and data classification patterns (Chapman et al., 2001)"

# RV:

Finally it should be noted that when using JK-Biplot can only be interpreted the position of the rows (countries, universities or scientific fields).

# AA:

We agree with the reviewer, in fact, this is appointed in the text in section 2.4., line 5 when we state: "We selected the JK-Biplot type which emphasizes cases representation over variables [...]"

# 4. RECIBIMOS LA SIGUIENTE RESPUESTA DE ACEPTACIÓN DEL MANUSCRITO

12-Sep-2012

Dear Mr. Robinson-Garcia,

Thank you for submitting your revised manuscript entitled "On the use of Biplot analysis for multivariate bibliometric and scientific indicators" to the Journal of the American Society for Information Science and Technology. It is a pleasure to accept your manuscript in its current form for publication. The comments of the referee(s) who reviewed your manuscript are included at the bottom of this letter.

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Sincerely,

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Editor-in-Chief
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Referees' Comments to Author:

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Comments to the Author

Requested corrections have been made.

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.... Continúa

# 7. FINALMENTE RECIBIMOS LAS PRUEBAS DE IMPRETA A REVISAR Y REENVIAR

Dear Mr. Robinson-Garcia,

Attached you will find a copy of your article for the Journal of the American Society for Information Science and Technology [JASIST] for your review. I have also attached some forms you will need to refer to and fill out. If you have trouble opening these attachments, please let me know.

Please address all other questions or concerns to Melissa Evans at <a href="mailto:jasistprod@wiley.com">jasistprod@wiley.com</a>. Please review your proofs carefully. We prefer that you mark your corrections directly on the PDF using the Acrobat editing or note tools, and email them to Melissa Evans at <a href="mailto:jasistprod@wiley.com">jasistprod@wiley.com</a>. If that is not possible, you may print your proofs, mark your corrections directly on the pages, and then either scan and email or fax the corrections to the number listed below. Alternatively, you can send an email with your specific line-by-line corrections.

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