

Writing scientific papers: structure, phases, and publication

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December 2022.

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Recommended form of citation

Codina, Lluís; Lopezosa, Carlos (2022) Writing scientific papers: structure, phases, and publication Barcelona: DigiDoc Research Group (Pompeu Fabra University), DigiDoc Reports , 2022 PCUV02/2022

Funding

This work is part of the development of methodologies within the project "Parameters and strategies to increase the relevance of media and digital communication in society: curation, visualization and visibility (CUVICOM)". PID2021-123579OB-I00 (MICINN), Ministry of Science and Innovation (Spain).

Activity financed by the European Union- NextGenerationEU , Ministry of Universities and Recovery, Transformation and Resilience Plan, through a call from Pompeu Fabra University (Barcelona).



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2022

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Abstract:

This work presents the most important elements that affect the writing of scientific articles, but also those that determine the success for their acceptance and publication in impact journals. It also deals with aspects such as how to respond to peer review evaluations and how to disseminate the article once it has been published. The intended audience is trainee researchers and especially doctoral students who have chosen to carry out a thesis by compendium of publications. However, any researcher, junior or senior, will surely find several elements of interest in this work. It is also appropriate to add that the main academic background is that of social sciences in general and communication studies.

Keyword:

Scientific papers, Academic papers, IMRaD, Academic journals, Scientific journals, Article evaluation, Peer review, Academic SEO

FOREWORD

The work that the reader has in their hands comes from the authors' experience in conducting and participating in competitively funded research projects and in the consequent processes of producing scientific articles for their due reporting. Also, as is logical, from the careful reading and consultation of the bibliography on scholarly communication. But where we want to emphasize is that it is a genuine generation of research projects, even if it is in a format, that of producing guides for young researchers, which is not the usual one.

But we believe that the projects should also serve for this. To provide instruments that can help the training of new researchers, especially pre-doctoral researchers who are doing their thesis in the compendium of publications modality.

To finish this brief prologue, it should be noted that some of these materials were originally published on the website of one of the authors (see references). However, all the contents have been revised and edited expressly for this edition. In addition, numerous elements have been modified, added or deleted. Finally, content and sections have been added that are completely new to various components of this report.

December 5, 2022

1. INTRODUCTION

In this report we propose to present in some detail the complete arc that begins with the writing and ends with the publication and dissemination of a scientific article. However, we will also deal with some aspects of the research of which the article constitutes a report, and on the other, the way to send a manuscript to the academic journal that we consider most appropriate. In the form of a diagram, the arc that we are going to contemplate is the following, in which we have highlighted in blue the parts on which we will focus more:

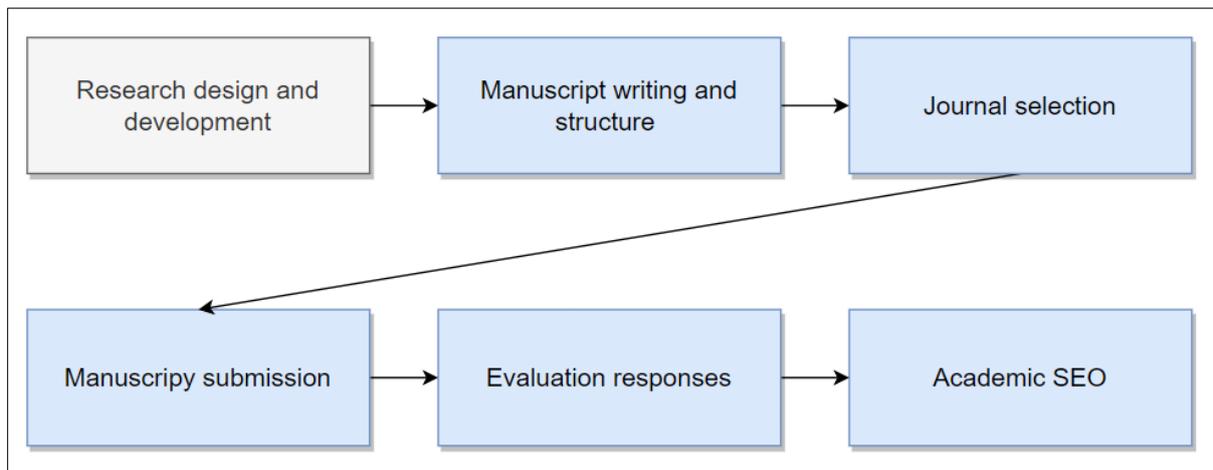


Figure 1: phases covered in this guide (emphasis on the parts in blue). Source: the authors.

We intend to provide keys that can ensure success in each of the mentioned phases. It is not only necessary for a scientific article to have good research behind it. Publishing in prestigious academic journals when there is good research is not difficult, but it is not easy. In addition to having good research behind it, it is necessary to be successful in each phase of the aforementioned chain, which goes from the writing of the article itself to the choice of the journal and, of course, the correct response to the objections that will surely the reviewers of the journals will present.

The proof that it is not difficult, or if we are allowed, that it is not *extremely difficult* to publish, are the thousands or tens of thousands of articles that good level academic journals publish every year throughout the world. But the proof that it is not easy is constituted by the return ratios of the journals, which can reach 90 percent of the manuscripts they receive, or, seen in another way, the *number* of university professors who have given up publish articles after experiencing failures in their first attempts. Failures that led them, because they did not fully understand the foundations of the process, to renounce this dimension of science, which is its communication through scientific articles.

Another expression of the real difficulty in publishing articles is that it is almost impossible for a new author to get published in scientific journals if they do not have the help of a mentor, their thesis director, for example.

From this double verification, namely that it is not difficult (or at least, it is not *very difficult*) to publish scientific articles, but it is not easy, and even less without a good guide or prior training, this work is born. It is a work expressly oriented for new researchers. For example, pre-doctoral researchers who are doing their doctoral thesis in the compendium of publications modality.

But we hope that this guide can also be useful to any researcher who for some reason still does not feel confident in this field of academic activity. Either because he is a recent postdoctoral researcher, or because up to now he has had bad experiences in this activity.

In what follows, we will begin with some necessary terminological clarifications, but immediately we will present the elements that help the publication arc to have the success that all good research deserves: to be reported in an academic/scientific journal of quality and impact.

1.1. TERMINOLOGY

In many works, the terms *scientific article* and *academic article* are treated as equivalent, and we ourselves will use them as interchangeable terms in contexts where the level of generalization allows it. However, there is a difference that sometimes it is convenient for us to identify.

Now, in addition to the previous pair, we also have the terms *manuscript* and *article*, which refer to the same object, but at different moments in its life cycle. The following table attempts to clarify these two pairs of terms:

Pair of terms	Clarification
<i>Scientific article vs Academic article</i>	<p>Academic article is a general term to refer to various kinds of papers published by academic journals. At the same time, these journals are called that (academic) because they deal with topics specific to the academy or group of people (professors, researchers and students) who carry out their work in centers such as universities.</p> <p>Scientific article is a class of academic work that reports on an investigation. While all academic journals publish scientific articles, some also publish other types of work. APA standards, for example, mention theoretical and methodological articles, among others. Some journals also publish <i>letters</i> as well as editorials or editorials. So, the term academic article makes it possible to refer to all these genres at the same time, while the term scientific article refers to one of them in particular; surely the most significant, but not the only one.</p>
<i>Manuscript vs Article</i>	<p>The work that the corresponding author submits to a journal is often referred to as a manuscript. When the work has been reviewed, modified and adapted to the journal format, and finally published, then it is an article.</p>

Source: Codina, 2021

From the first pair of terms, we retain the important idea that a scientific article, as indicated by the APA (2019) standards, is the **report of an investigation**. Then, before trying to write a **scientific article** (or an **academic article** -we have already indicated that we can consider both things equivalent-), it is necessary to carry out an investigation.

It is such a basic element that many recommendations on the subject ignore it. We believe that it is very important to emphasize it. In such a case, before asking ourselves what a scientific article is, we must ask ourselves what makes an investigation **an** investigation? The answer is: the existence of a new **data extraction process** that has been guided by a **methodology**. This leads us to the next point intended to present the components of the first phase. Now, as this report is focused on the writing of scientific articles, we will see the research phase from a thousand meters high.

2. PHASES: FIRST THE RESEARCH, THEN THE MANUSCRIPT

If a manuscript is a research report, **before** planning the production of a manuscript, the research must be designed. This leads us to the need to produce as the first of the phases, the documents that correspond to the **ideation or design** of the research and

where the object of study, the objectives, the research questions or hypotheses and the methods are described for the first time. data collection to be used.

These design elements must have been influenced not only by the creativity and ideas of the team of authors, but also by knowledge of **previous** similar research or in the same field. This is achieved thanks to a review of the literature, which should be reflected in the manuscript, either in the introduction section or in *ad hoc sections* of the future manuscript.

Therefore, the complete phases, in most cases, should include one dedicated to the literature review, with which we have this initial chain: (1) literature review > (2) research design > (3) execution of the investigation > (4) writing of the report (manuscript)... This phase 4 is what we are really dealing with in this report, but we could not fail to point out the previous ones as the necessary context.

The point is that, once the author or the team of authors has designed the research, and they have begun to extract data, in the same or in other documents, each and every one of the information obtained in the **phase must be meticulously recorded. of execution** of the investigation, as well as the circumstances of the **extraction of data or information** (dates, places, tools, procedures, etc.).

When we have completed the extraction of data and information, these will be presented in the most appropriate forms: descriptions, transcripts, qualitative data, quantitative data, tables, images, diagrams, etc. depending on the specific nature of each project.

It is only when the author or the team of authors have recorded in one or more documents both the research **design**, for the purposes of its traceability, and all the **results** obtained, that we can think of writing the manuscript to send to a journal. Only then and not before.

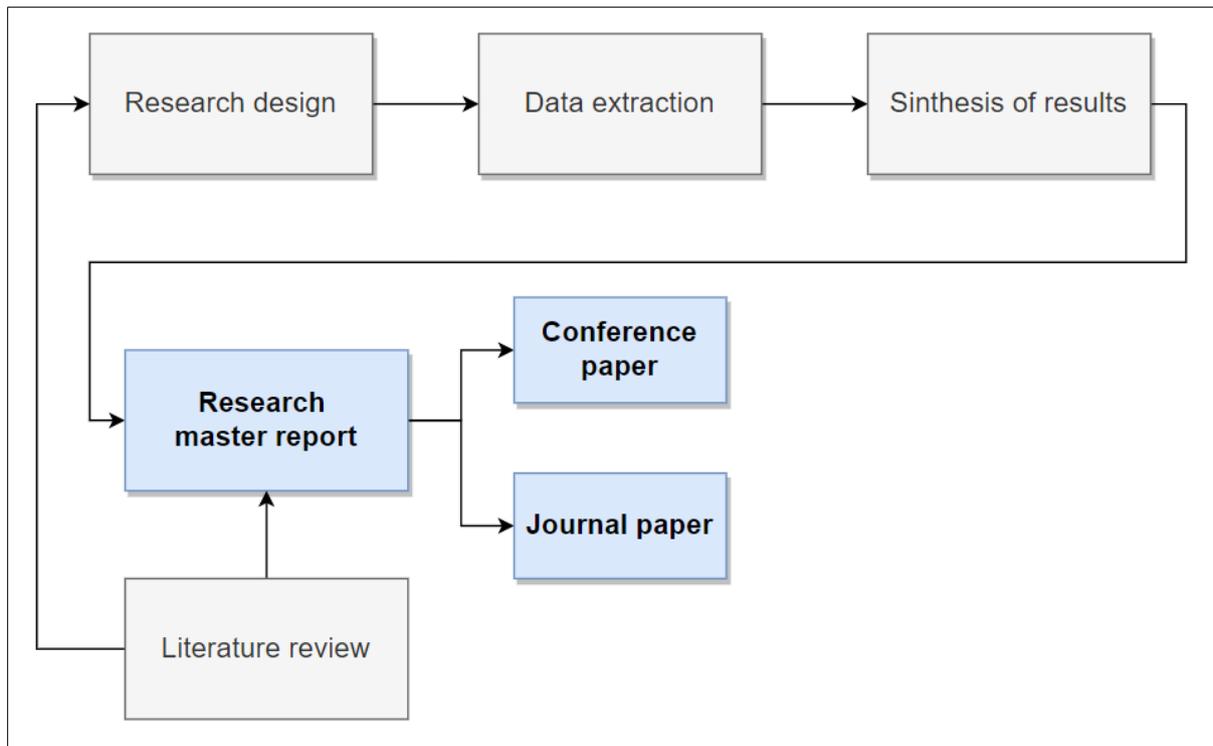


Figure 2. Phases in the production of a manuscript to send to congresses or scientific journals. Source: Codina 2022a

Nor is it optimal to carry it in parallel as we have seen so many times done in environments of social sciences and humanities (or SHAPE - *Social Sciences Humanities & the Arts for People and the Economy*-) -an error in which we believe that is less frequent in the field of STEM (*Science, Technology, Engineering and Mathematics*), from which we can learn at least some things (although the other way around is also true).

In **summary** : it is once the investigation or a phase of it with sufficient autonomy and **intrinsic value is completed** , that we can think of writing a manuscript adapted to the journal that we have selected. But neither before, nor in parallel. At least as advice for doctoral students and young researchers.

2.1 BACKGROUND: WHAT WAS DONE BEFORE? WHAT IS THE MAINSTREAM? WHAT THEORETICAL FRAMEWORK DO WE ADOPT?

In order to design the processes and schemes for our data collection, we have had to start from at least some theoretical bases. It is true that, according to some methodological approaches, data collection (interviews, for example) must be carried out with as little prejudice as possible, but it is also true that it is almost impossible not to have at least a prior conception of what we wish to investigate.

It is even more true that a highly recommended way to proceed is to carry out a literature review in order to make informed decisions about the object of study and the methods to analyze it.

In any case, we will need to demonstrate in the manuscript that we have sufficient knowledge of the field in which we want to develop our research, which is demonstrated by reviewing, mentioning, and citing other similar previous research carried out in the same field.

Therefore, we will have to incorporate into our manuscript an **essential component** in scientific (and academic articles in general). This is the component that we can functionally call **background** and that can be found as part of the introduction or in specific sections, for example, in the section called *Literature review* . Other names may be: *Theoretical framework* , *State of the question* , etc.

The three things are not exactly the same, although they all share the fact that they refer to **previous research** in the same field. Nor should we be confused by the fact that they are added to the manuscript once the investigation is finished and at the time of writing the report. We should have taken this background into account at least from the moment the research was **designed** .

2.2 PROCESS

So, if we consider the complete design, a first version of the logical chain in the production of a scientific article will be this: (1) literature review > (2) research design and data extraction methods > (3) execution of the research and the data collection process (4) compilation and analysis of results > (5) - now yes ! - **writing of the manuscript** .

One consequence of the above is that it is not advisable to approach the process of writing a manuscript as a hasty task that can be carried out in **weeks** . Undoubtedly, there will be those who do so, but in almost all probability, the manuscripts produced in this way will have their claims rejected most of the time.

The reasonable calendar, on the other hand, is neither of days nor of weeks, but of **months because we are obliged for ethical** reasons (always superior to pragmatic ones) to produce **significant results** academically or socially (and preferably both) and this would be difficult to achieve if we act in improvised and hasty ways. Furthermore, it is the only way to ensure success in the publication of articles in impact journals. And it is exceedingly good for the health of science that it is so.

How many months **exactly** can the writing of a manuscript take then if we consider that it is only the last in a chain of processes? The answer, which nobody will like, is: it **depends** . And this is so because each investigation or each project implies intrinsic aspects of difficulty that are the ones that ultimately decide the duration in each case. However, in order not to leave the answer in a disappointing "it depends", we could speak of between **3 and 9 months** for all phases as a range that surely covers quite a few plausible cases.

3. AUTHORSHIP

Arrived at this part, the next element that we want to deal with is **authorship** . Specifically, who or who can appear as **authors** and, something that sometimes generates **misunderstandings** to which more absurd: what should be the **order of signature** in the case of two or more authors.

3.1 WHO CAN BE AUTHORS

Committee rules on publication Ethics -COPE- (2017), which are the ones we are going to follow here, indicate the following:

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 Item critically for important intellectual content ; and (3) final approval of the version to be published .

Now, if we analyze it carefully, we can see that the COPE standards consider that, since an article is the report of an investigation , there are **two dimensions** to consider in the contributions to an article:

- **Research:** this dimension includes the contributions that can be made either (1) in the design of the research, or (2) in the acquisition of data, or (3) in the analysis and interpretation of the data. .
- **The manuscript:** in this other dimension are the contributions that can be made either (4) in the manuscript of the article or (5) in the critical review of it in intellectually important aspects.

From here, the COPE (2017) tell us that **substantial** or **critical** contributions are necessary **in any of the two dimensions** . In addition, contributions must be made to both dimensions: **research + article**.

Finally, there is also a **third** condition: all the co-authors must have given their **approval** to the **final version** of the manuscript before sending it to the journal.

3.2 ORDER OF SIGNATURE: APPROXIMATIONS AND INTERPRETATION

- **SDC approach** : the order indicates the importance of the contributions. In this case, the first author is credited with the most important contribution and the order of the signature to the right indicates contributions of decreasing importance. This interpretation is known as the **SDC approach** from the expression *sequence -determines- credit* (Tschardtke , 2007).
- **FLAE approach** : the first and last author have the same importance . In this interpretation, increasingly common due to the influence of experimental sciences, he considers the **first** and the **last** author to be equally important. It is based on the author/director relationship. This interpretation is known as the **FLAE approach** from the expression *first-last-author-emphasis* (Tschardtke , 2007).
 - A variation of the *FLAE approach* consists of considering the **first** , the **last** and the **corresponding author** (if it does not coincide with any of the previous ones) of the same importance. Of the authors between the first and the last, it is considered that their contribution is decreasing as their signature moves to the right.
- **Alphabetical order**: the contributions of the authors are of equal importance. It is usually indicated by an express declaration in addition to the alphabetical order itself. This equality in contributions (or alphabetical order) has three variations:
 - It affects all positions, from the first to the last.
 - It affects authors in certain positions. Sometimes, the pre-eminence of the first author is maintained (he leaves the alphabetical order) and from the second (or a determined position) until the end it is considered that the other contributions have had the same importance.
 - It affects authors between the second and the penultimate position. In this case, the first and the last author have preeminence over the others, while the authors between the second and the last have the same importance.

3.3 CO-AUTHORSHIPS CORRELATE WITH SUCCESS

In the articles that are generated due to a thesis by compendium, it is usual that there are at least two authors: the doctoral student and the director (and in this order of appearance). But, in addition, it happens that multiple authorships present a good correlation with different indicators of **success** . The most **productive** authors tend to co-author. Articles with multiple authors tend to receive more **citations** .

They also tend to be more successful in **evaluation processes** . In some journals, articles with multiple authors may even be preferred (although there are some journals that set a limit).

Last but not least, to increase the collaboration of other national universities or **internationalization**, co-authorship is essential. As we can see, the question is that, at

least as far as scientific production is concerned, it makes less and less sense to **publish articles alone** .

While there may be several **structures** in writing **academic articles** , when it comes to **scientific articles** , there is one that clearly dominates. This is the **IMRaD structure** or its **IMRaDI variant**.

On this occasion, in addition to this, we will deal with the **style** and **components** of a **scientific article**, following the scheme that we proposed in section 2 of this document.

4. IMRYD AND IMRYDI STRUCTURES

As we have pointed out on other occasions, the most effective structure and, at the same time (for this same reason) the most recommended structure for **scientific articles** is the so-called IMRYD. We will consider its components and their meaning in what follows.

4.1 WHAT IS IMRAD ?

The model called **IMRaD** is a widely accepted standard in the academic communication ecosystem that establishes the structure and sections of **scientific articles** (Solaci et al., 2004; Wu, 2011). It owes its name to the following sections:

- Introduction
- Methods
- Results and Discussion

Now, IMRaD is the nucleus of a structure that is many times broader. Specifically, the frequent variation is actually the following:

- Introduction
- Materials and Methods
- Results and Discussion
- Conclusions

Lately, surely due to the influence of theories on the **social responsibility** of science (especially if it is financed with public funds), and the need for its **accountability**, the **IMRaDI** structure is also used , which corresponds to:

- Introduction
- Methods
- Results and Discussion
- Implications
- Conclusions

However, both IMRaD and IMRaDI are actually, as we have already pointed out, the **core** of a type of article that has other sections. The following table shows what they are and the meaning of these sections:

Sections	Characteristic content
Introduction	Presentation of the purpose and objectives of the work, the object of study and the framing of the research problem, including theoretical or practical implications. Review of academic background (previous investigations, although this review can be expanded in its own section). Presentation of hypotheses or research questions as the case may be. Terminological clarifications if it is the case.
Methods (variations: Materials and Methods/Design and Methods)	Presentation of the most significant characteristics of the object of study. Explanation of the methods used to obtain and analyze the data or information, documents, etc., which constitute the evidence base. Explanation of the sampling procedure when appropriate (quantitative or qualitative methods), or the selection and construction of the case and its significance when appropriate (qualitative methods). Details of the analysis instruments or procedures. Details of the experimental design, field study or case study or documentary analysis, as appropriate: conditions, instruments used, etc. Any additional aspect about the materials and methods depending on the type of qualitative, quantitative or mixed research that is required to guarantee or generalization (research quantitative) or the transferability (qualitative research) of the results.
Results	Presentation of the results obtained in various formats, but always in synthesis mode, that is, avoiding raw data. Tabular presentation, statistics, graphs, narrative, diagrams, etc. Analytical or explanatory description of the nature of the different outputs obtained. Application of statistical analysis when appropriate. Application of qualitative analysis when appropriate. The complete data or <i>data sets</i> can be made available to the evaluators, and once the article is published, its way of access from the article must be included.
Discussion	Reasoning on the central contribution of the work and its significance for the advancement of the discipline. Description of the different contributions achieved by the results. Identification of similarities and differences with other studies, if applicable. Review of the support for the hypotheses, if applicable. Review of the answers to the research questions, if applicable. Reasoning about its

Sections	Characteristic content
	generalization or its transferability. Strategic scope of the results. Study limitations. Possible future research.
implications	This is a recently added component in some journals. As far as we know, it is not mandatory in most journals and many do not even contemplate it. It must collect the academic implications, for example, how do the reported findings affect the theory?); but above all, social, eg, what recommendations can be given to the professionals, decision-makers, etc. , affected? Also : what recommendations or good practices can we present?
Conclusions	It should be noted that this section is not normative, neither in the IMRyD model nor in the APA standards. However, most journals (and reviewers) expect it, so it is highly recommended to consider it. Some journals also consider it one of the determining criteria for the quality of a paper, an additional reason to consider it almost mandatory. It may consist of a review of the objectives and research questions with a concrete synthesis of each result. It can also consist of a type of executive summary, with an assertive record where the main significance provided by the research is highlighted. Sometimes, it is requested that it be presented in a structured way, through numbered lists or specific sections of well-differentiated items. In many journals, a section made up of Discussion and Conclusions is accepted, since sometimes it is not easy to indicate what corresponds to what, except that in the Conclusions it is not accepted to add new issues or citations.

Source: Codina 2022b

Given the above, the pragmatic reason why we are supposed to use IMRyD(I) is because it is the structure that most academic-scientific journals expect. Adopting this structure therefore **increases** the chances of **success** .

But another reason, even more important, is that it is a structure that requires **transparency**, and is thus the best **creative discipline** to which a researcher can submit.

It is impossible to apply IMRaD(I) to a manuscript that does not report **authentic research**, because the sections do not allow such a thing. That is why we say that it imposes the best discipline for a researcher, at any stage of his career, but especially for a researcher in training.

The borderline that is sometimes difficult for those starting out in research to understand, for example someone starting a doctorate, is that **research is not study**. Investigating **implies** studying, but it will never be investigating if there is not (1) a **design and data extraction process** . And then, the subsequent process of (2) **systematizing** results and (3) **highlighting** their meaning and implications. The attentive reader will have discovered that 1 corresponds to Materials and Methods, 2 to Results, and 3 to Discussion and Implications.

5. STYLE

The first piece of advice for a novice researcher or a pre-doctoral researcher is the following: just as learning to write poetry requires reading a lot of poetry, learning to write scientific articles requires reading a lot of scientific **articles** . There is no other real path, so that everything that follows is a poor contribution compared to the real solution that is the one we have just said.

That is, and so that there are no doubts, we trust that what follows may be of some use, but without reading many articles it is impossible to acquire the **style** that identifies a good job, or at least such a good job. as valued by most **editors** and **reviewers** of **academic journals** around the world.

Let's go to it, in addition to the previous structure (IMRyD), what characterizes the scientific-academic style are the following attributes:

- **Straight**
- **Connected**
- **Supported by evidence**
- **Consistent**

We will try to explain what these attributes mean in the following table:

Style	Explanation
Straight	A direct style means that we use assertive type sentences and that we expressly avoid complex constructions. Ideas can be very complex, but sentences are not. Avoid subordinate clauses, in particular. Simple and direct syntactic structures should be preferred. Structures of the type: a sentence, a single subject. The paragraphs should group few sentences and all related to the same idea.
Connected	In a scientific article everything is connected. Each paragraph justifies the one that follows, and each paragraph maintains a connection to the one that precedes it. This link that runs throughout the article is expressed through connectors that must be present in most of the paragraphs at the beginning of them .
Supported by evidence	The affirmations made in the article must be endorsed either by the knowledge acquired thanks to the investigation (results, implications, conclusions) or by previous investigations and evidence, which is manifested in that both the introduction, as well as the theoretical framework, the methodological framework, the discussion and other sections must be supported by citations. In other words, as pragmatically as possible, in most of the article (with the exception of the Conclusions section) there must be citations to evidence that supports what is stated in each section, or be endorsed by the research itself.
Consistent	Consistency is the superior quality of logic by which any form of reasoning that contains contradictions is disqualified. In a scientific article we must not allow inconsistencies. The concepts are clearly and unequivocally defined and are used in the same way throughout the work.

Source: Codina, 2019a

Other desirable qualities of a scientific article are the following:

- **Transparency:** all aspects of the process of selecting cases or selecting the sample or object of study, as well as data collection and analysis must be clearly explained.
- **Traceability:** scientific work must be able to be replicated by other researchers if necessary. To do this, the transparency that we refer to above must take this

need into account, that is, the explanations must be given in such a way that not only each step is understood, but also in such a way that, if another researcher wanted, they could repeat them in a similar way. reasonably equivalent.

- **Persuability:** An academic paper has an obligation to be persuasive. You must have the ability to convince inquisitive and critical readers that everything was done to the best of its ability. Actually it is an emerging quality, it appears when we take into account all the previous elements, especially transparency and traceability (or replicability). Keeping in mind this desirable emergent quality can guide us throughout the process, and especially can guide us when writing the manuscript.

5.1 VERB TENSES

What tense should we use in an academic article? The APA standards in their 7th edition provide an effective and very direct answer, which we collect in the following table:

<i>Paper section</i>	<i>Recommended Tense</i>	<i>Example</i>
Literature review	Past	Quin (2020) presented
	Present perfect	Since then, many investigators have used
Method	Past	Participants completed a survey
	Present perfect	Others have used similar approaches
Results	Past	Results were nonsignificant Scores increased Hypotheses were supported
Discussion	Present	The results indicate
Conclusions	Present	We conclude Limitations of the study are

Source: APA Style 7 ed. (p. 119)

Figure 3: Verb tenses according to APA

The above table for some reason does not include the Introduction section. But, presumably, we can say that it is appropriate to use the present: «This work presents...», «The research question is...», «The problem we want to address deals with...», etc.

Regarding the active or passive voice, both can be used, although almost all the recommendations always advocate the active voice whenever possible.

5.2 COMPOSITION

The main components of a scientific article are, without claiming to be exhaustive, these three:

- **Text**
- **Boards**
- **Graphics**

We have said "without claiming to be exhaustive" because it can actually contain any morphology of information, especially since scientific publications have digital as a privileged format. So, a scientific article can have audio, video, photographic records, etc. The **text** is usually the **main component**, and what we have referred to in previous sections applies to this component. But **it** should not be, with rare exceptions the **single component**.

On the contrary, a good scientific article must have at least two other components, and this in a very prominent way: **tables** and **graphs**.

At **STEM** (*Science, Technology, Engineering and Mathematics*) we believe that it is almost impossible for a manuscript to be accepted without presenting a complete section made up of tables and graphs. On the other hand, in some branches of **SHAPE** (*Social Science, Humanities & the Arts for People & the Economy*), especially in the humanities (but not only) it can still happen that an author or group of authors send a manuscript to a scientific journal consisting only of text. The chances of it being accepted will then be very low.

There are several reasons for this. First, a good research report should present the results in a synthesized way. Raw results without more, perhaps in the form of long textual paragraphs are an invitation to reject the work. Instead, these raw results can be part of the *data set* or annexes.

In the body of the manuscript, the inquisitive and critical reader to whom we have referred before, expects to find ways of **synthesizing** results that are highly significant. And among these forms, the two best are **tables**, on the one hand, and **graphs**, either as such (eg bar graphs) or in the form of conceptual **diagrams**.

Another reason is the **transparency** and **persuasibility** to which we have already referred. A work consisting only of text is less transparent, because its inquisitive and critical analysis is more complicated. On the other hand, it is more difficult to be contradictory (without being obvious) in a job where the results are shown using tables and diagrams. All this, in the end, adds persuasiveness.

The conclusion is that almost **no** academic-scientific work (we would like to say «no» work, but as a precaution we leave the «almost») can be **complete** without at least the three main components that we have already mentioned at the beginning of this

section. If, in addition, by its nature, it must include others (audio or video records, eg), they are welcome. The **digital format** of scientific journals has come to stay and should be valued whenever there is an opportunity.

5.3 OTHER STRUCTURES IN ACADEMIC ARTICLES

We have already pointed out that articles that report research results, although they are the most frequent, are only one of the possible **subclasses** of the class of **academic articles**.

When these are of another type, for example, theoretical works, there are other possible structures, such as the one identified with the initials **IDaC** and that we can all recognize almost intuitively, since they correspond to the blocks of:

- **I**ntroduction
- **D**evelopment and
- **C**onclusions

The block designated as **Development** is where the authors present the themes or facets A, B, C,... that constitute the body of their article. For their part, the Introduction and Conclusions play a very similar role, *mutatis mutandis*, as in IMRaD.

For his part, Reese (2022) in a recent work in which he intends to provide clues about **conceptual articles**, and which has been published in one of the most influential international journals of social communication (*Digital Journalism*), proposes a somewhat more developed structure (to which it does not give a name), but which has these elements:

- Introduction
- General theoretical vision and synthesis of the literature
- Developing
- Discussion
- conclusions

IDyC continues to form part of this broader proposal, as we can see. But, if it depended on us, we would always propose this version of Reese (2022) for any **theoretical**, **conceptual** or **methodological work whenever possible**. The main reason is for the second of the points that it includes ("General theoretical vision and synthesis of the literature"). Since there is no new data collection, at least it corresponds to present a theoretical foundation that is as solid as possible, and this is supposed to be in charge of the indicated point.

In any case, let us not fail to point out, although it is surely unnecessary at this point, that IMRaD(I) is the structure that should be applied when the article reports a **research paper**. Although an investigation implies a data collection process, it does

not imply that the data have to be quantitative or that they are derived from an experimental design. Therefore, IMRaD is not limited to STEM, far from it. SHAPE have all the possibilities in the world to adopt IMRaD in their research reports.

It should also be remembered that **other** formats, not necessarily research, also have a place in most academic journals and also play an important role in advancing science.

6. SELECT THE ACADEMIC JOURNAL TO SUBMIT SCIENTIFIC ARTICLES

Let's remember it again: a scientific article is the **report** of an investigation. Thus, once we have completed an investigation, which can be self-contained, or part of a broader project (a doctoral thesis, for example, or a funded project), we can now take the next step, which will consist of selecting the candidate journals to which to send our manuscript.

6.1 JOURNALS TO SEND OUR MANUSCRIPT

never submit the same manuscript to **more than one journal** (at the same time). Many journals expressly warn this. But, even if they don't, it is a fundamental rule that while a paper **is under review** in one journal, it cannot be sent to any other.

6.2 WHY SHOULD WE SELECT SEVERAL JOURNALS?

Why do we use the plural then? The reason is simple. There is no guarantee that we will be successful with the first journal to which we submit the manuscript. If you are thinking that the quality of the research is the guarantee, think again. It is relatively frequent that a job is not accepted without the reasons having to do with quality. In fact, the anecdotes of Nobel Prize winners in science who initially saw their work rejected in a journal, or glorious Nobel Prize winners in literature who were unsuccessful with either the first or the second publisher to which they sent their book, are famous.

To go down to an earthlier level, we can mention causes for rejection in manuscripts, which are independent of quality, such as the following:

- The journal has already recently published several articles on the same topic, or on the same methodology. Then, editors may consider that they should give space to other topics so as not to lose influence in other areas.
- The subject of our manuscript or the fact that it presents negative results, can make the editors foresee that it will receive little attention, for which reason it will have few citations. For this reason, they may prefer other works for a little that have an excess of originals.

- For having chosen the wrong journal, a mistake from which the editors will get us out again with their rejection.
- Due to errors in formal aspects of the manuscript, eg, poor anonymization, or an adjustment to the format requirements of the journal, etc.

In addition to the above, which can largely be prevented with the issues that we will see in the following section, other reasons for rejection may come as a result of deficiencies in the evaluation process (peer review), among which we can cite the following:

- **Evaluations by non-experts** . Despite the fact that the name of the process, "peer review", refers to an evaluation carried out by experts of at least the same level of competence as the authors, this does not always happen. It is something that any experienced author has verified in a more or less painful way. Almost all of us have at some point received a typical rejection of this situation, especially when two reviewers are involved (most journals use two reviewers, others may use three or more) and the journal editors limit themselves to transferring decisions, without come in to examine the quality of the evaluations. Evaluators should decline the invitation to evaluate papers on topics in which they are not experts, but all of us who have accumulated enough years as authors can attest that this is not always the case.
- **Dishonest, biased or erroneous evaluations** . Evaluations are made by human beings. We cannot expect perfection. Sometimes there are dishonest testers, although luckily it is very rare. Other times, they are evaluators opposed to a theory or an academic current that is carried away by its biases, and other times they are simply evaluators who have not read well or have not understood the work and their judgment is then erroneous.
- **Jealousy, and Conflicts of Interest** . This reason is also rare, we do not want to promote conspiracy theories, but it is something that also happens. An evaluator may be hostile to a paper that he feels invades his own specialty and, worse, possibly does not cite him; or an evaluator can reject a job so as not to help teams with which he considers that he is in competition, etc.

6.3 MOST EVALUATIONS ARE VALUABLE

We must not give the impression that most evaluations are poor, because they would not be true. Surely most of them are **accurate** , serve to **improve** manuscripts and **improve science** in general. It is also evident that they are a good filter for works devoid of any relevance. But we wanted to make it clear that authors have an obligation to anticipate that our work may be rejected even if we have legitimate reasons to believe that our research is of quality.

Of course, our manuscript can be rejected because it has real **deficiencies** that, for some reason, we were not able to detect. The best thing that can happen to us is that they can be corrected in a new version of the article that we can send to another journal. If the reviewers have done a good job and have reasoned well where these

deficiencies are, the new version will be much better and your chances of being accepted in the new journal will have increased.

6.4 HOW MANY CANDIDATE JOURNALS?

How many journals should we think of? The ideal would be to have three or four journals ready, but with the hope of not having to use more than one or two. Again, resorting to our experience, although it is true that we should not "throw in the towel" either with the first rejection or with the second, from the fourth rejection, surely the most sensible thing to do is to think of giving this material another outlet.

If we reach a fourth rejection, it implies that at least 8 experts have said that our work is poor. It's too strong a signal, even allowing for potential evaluator flaws, to be ignored.

6.5 PROCESS

We are going to indicate several procedures for the selection of our group of 3 or 4 candidate journals, starting with the most obvious:

- **Trusted Expert Advice** . In the case of a manuscript of a thesis by compendium, the first source of trust is the director or directors of the thesis. As experts in the field, they surely have well identified the main journals in the area of our research. In this section we can, of course, include the advice of other trusted colleagues with good publishing experience in our field.
- **The most relevant journals that have appeared in reviews of the literature** . Surely, as part of the research project we have carried out one or more reviews of the literature. In them we have probably observed some recurring journals on our topic.
- **By consulting databases or thematic repertoires** . For the field of social sciences and humanities, we can consult Scopus, Web of Science, Scimago and ERIHPLUS, as well as in the case of our country and LATAM, DialnetPlus . In the case of social communication, we can consult the **GRECOS guide**, a list of journals specialized in communication developed by the Cybermedia Observatory (Observatorio de Cibermedios) of the DIGIDOC group of the Universitat Pompeu Fabra.

6.6 CRITERIA FOR SELECTING CANDIDATE JOURNALS

It may happen that we have more than three or four candidate journals, or that even if we have just that ideal number, we need to decide on a submission order. Since we can only submit the manuscript to one journal at a time, it will help us to have criteria to establish preferences. The ideal would be to be able to choose the journal by the subject and by the editorial quality of the journal. But almost everything in academic communication is much more complicated.

The criteria that seem most important to us, without committing ourselves to say that the order is significant, except perhaps the first, are the following:

- **Themes and methodologies.** The theme or scope of the journal is the most obvious criterion. Even, for scientific honesty, it should be above other criteria, such as the quartile. Our obligation is to send the manuscript to the journals that focus more and better on the subject of our research, since it will be the way for it to have the best chance of being read by other specialists in the field, or by professionals in the same sector. It is evident that other factors being equal, it would be reasonable to prefer a journal with a higher impact index, but the theme or scope of the journal should be the first factor. Another related aspect is the methodologies. Some journals do not declare a preference for any methodology, but others may indicate some as preferred or may even declare that they reject articles from certain methodologies. The monographic numbers through calls for articles (*Call for Papers* , or CFP) are another important decision element. If our work fits into a CFP, this may be an opportunity.
- **periodicity** _ Other factors being equal, notably the theme, in general, we will prefer journals with at least two issues per year. If they have four or more, even better.
- **Overture.** We should prefer journals that are either *open access* natively (golden route), or contemplate *open access* policies through hybrid policies or through the so-called green route through self-archiving. In the latter case, it is advisable to ensure that the release of the article for self-archiving does not require excessive deadlines. Currently, many journals allow self-archiving the day after publication or in very short terms, with the limitation of not being able to use the final format of the journal, but rather that of the authors with the latest changes incorporated.
- **Journal indexing** . The better indexed the journal is, the more potential visibility for our article, so it's an important element. The journals with the highest visibility are indexed in Scopus or WoS, but the journals that are indexed in databases such as ERIHPLUS and DOAJ are also very important. For our country and LATAM, DialnetPlus is also very relevant. For its part, the important repertoire MIAR (UB) can inform us in detail about the indexing of each journal, to which they assign an index that indicates their potential visibility for our work.
- **Requirements of the thesis, project or accreditation.** Sometimes we have no real choice. If the articles that make up the compendium in a doctoral thesis

must meet certain indexing criteria, these are the ones that we must consider. The same is true for the opening. Some project funding bodies require that the results of the research be published in *open access journals* or that they include self-archiving methods. Another factor is the requirements of the accreditation or evaluation processes of academic careers. We will have to consider this then above all other considerations.

- **Impact Index** . For many, without a doubt, it is the first criterion. And if the accreditation conditions in which the author may be found are decisive, it is logical that this is the case. But it is not the first scientific criterion, nor is it the most rational. But it is not unjustified. It is quite logical to pursue publication in journals that are well located in the impact indices, which leads us in such a case to prefer journals located in the so-called quartiles 1 or 2 (Q1, Q2 in slang). As well as journals indexed in databases such as Scopus or WoS. Now, statements like DORA and Leiden tell us that the quartile is an indicator at the journal level, **not the article level** . Therefore, it says nothing about the importance of the article. This supposed importance would rather be in charge of the citations received, for example. But if a researcher is in the process of accreditation or evaluation to improve his contract, he has no choice but to consider what his evaluating agents (his department, a government agency, etc.) require in this area when selecting which journals send their work.
- **APC** . Last but not least, we have the APCs or *Article Processing Charge* . Some journals are of the native open access type by charging the publication costs to the authors. Suffice it to say that if we cannot charge the APCs to a project, or the journal does not contemplate exemptions in these cases, the cost thereof is logical to take into account. The preference then, logically, will be for journals with lower APC or, even better, that do not have APC. The price range of the APC starts from about 1,000 euros up to 3,000 or more in journals from international publishers. There are other types of costs that are not always declared as APC, but they are costs that must be covered anyway, so they must also be taken into account. Some journals, instead of declaring APC, establish costs for layout and/or translation. In these cases, the range is somewhat lower, since it can go from 400 to 900 euros.

6.7 EXAMINE RECENT ISSUES AND CITE SCIENTIFIC ARTICLES

In addition to the above criteria, it would not make sense to choose a journal as a candidate without first **examining** at least the **latest issues** of the journal and better still at least the last two years. This is an exploration in which it is not necessary to read the articles, but it is necessary to examine at least the **title** and **abstract** of the research articles published in the last two issues. If any of these works show any affinity to ours, then it's a good idea to examine these articles in the detail they deserve.

This leads us to the following question: is it convenient to **cite articles** from the journal to which **we are going to send** the manuscript? The answer is ambivalent, because it is yes and no at the same time.

Let's first look at the **no**. We should never cite articles if they are not directly related to our work. In addition, it is not convenient for journals to have a high self-citation rate, because they can be expelled from international databases. Thus, under these criteria, the short answer is **no**, but the more nuanced one is **no necessarily**.

Now the **yes**. It is perfectly possible that our manuscript contains citations to articles from the journal to which we are going to send it "naturally". For elementary reasons, these quotes should stay where they are. In addition, it is possible that when examining the journal to decide on the submission, we discover some interesting work that is directly related to ours, so, of course, it is a good idea to incorporate it. Given these considerations, the short answer is **yes**; and more nuanced on this point is: **yes**, but not in a very high number.

A simple rule is that our manuscript should contain at least one or two references from the journal to which we are going to send the manuscript. But it must be stressed that the main criterion is the **adequacy** of these citations to the theme of the manuscript. It is much better not to put any before than to hammer them. All references must be mentioned in the body of the paper and this inclusion must scrupulously respond to an intrinsic thematic justification that adequately connects the quote with its context .

6.8 WHERE WE SHOULD NEVER SEND A MANUSCRIPT

With all this, we have to say where NOT to ever send a manuscript. To do this, we must say a few words about **predatory journals**. These are fake academic journals where everything or almost everything is a fraud. They only intend to charge APC to unsuspecting authors.

To avoid predatory journals, we should prefer journals and publishers known by the experts we can consult, among which we can include not only our colleagues, but also the library staff of our institution, or journals that are indexed in databases such as those mentioned. higher.

7. FROM SUBMISSION TO PUBLICATION

Next, we will describe each of the elements involved in the process of sending and publishing an academic article. To do this, we will first see aspects such as the title, abstract and keywords of the article, offering some recommendations that will help make our work as attractive as possible for editors; Secondly, we will explain the steps to follow to submit our article to a journal, which includes its anonymization, how to present the *data set* and how to write a *cover story . letter* to the editor(s). Third, how to face a peer review of our article .

7.1 TITLE, ABSTRACT AND KEYWORDS

Something that corresponds to talk about here is these three components that are usually ignored despite their decisive importance:

- **Title**
- **Summary**
- **Keywords**

On many occasions, potential readers of the article will only have those three elements at their disposal, and **not** the entire article. Therefore, possible subsequent readings and citations will depend on the care with which these components are treated. Therefore, it is very important to give them all your attention. The following table examines them in some detail:

Component	Explanation
Title	<p>The title should focus on the subject and object of study and may optionally mention the methodology. According to academic SEO analysis, short titles are preferable in general and also those that are assertive (not in the form of a question). Apart from these general aspects, the adaptation of the title to the journal can be determined by the emphasis placed on certain facets of the subject or object of study, so that the thematic preferences or the preferential orientations of the journal are well collected. The three check questions with which to check the quality of a good title according to the Web of Science Academy (2022) are the following:</p> <ul style="list-style-type: none"> - Does the title convey the key characteristics of the article? - Is the title likely to arouse interest and encourage the reader to read more? - Does the title exaggerate the scope or findings of the study? <p>Naturally, the answer to the first two questions must be yes. Otherwise, it must be corrected until we can answer in the affirmative. The third question, and this is fundamental, should be no . A title that exaggerates the findings or the scope of the paper will attract attention - and this is good - but it will cause frustration and anger in the reviewers and this will mean a certain rejection of a paper that, with a more balanced title, could be accepted.</p> <p>A fourth question that we would add (the first three are from the Web of Science Academy) is the following:</p> <ul style="list-style-type: none"> - Does the title reflect the key aspect of the article or what gives it its main value? <p>The first of the questions should be valid for the same. But, sometimes, the titles are so neutrally expository that their true contribution goes unnoticed and this is also a danger. We can negatively condition the entire reading of the article by one of the editors or evaluators if the title fails to show this value. Answering these checking questions adequately is not an easy task. The temptation to settle the issue quickly, after all the investigative efforts is great. But you have to spend time. You may want to try several titles, discuss them among the authors, discuss their pros and cons, and maybe even rethink it after a day or two.</p>
Summary	<p>The first of the recommendations here is to strictly abide by what the journal provides. These provisions can refer to the maximum number of words in the abstract, and even to its structure (by the way, all journals should require structured abstracts, but this is not the case). If the journal does not indicate anything about it, the most common size is 200 words. Apart from the possible specific indications of each journal, it is important to carefully write the abstract so that it includes the key aspects of the manuscript, the opportunity of the research, the main objective, the methodology used (if considered relevant) and the essential points reached. in the results, all expressed through sentences</p>

	with an assertive register. The use of abbreviations or references is discouraged and must have an entity in itself as an autonomous reading.
keywords -	As in the previous case, journals usually specify a maximum (and sometimes a minimum) number of keywords. The usual range is between 4 and 8 keywords. As in the previous case, it is very important to choose the keywords appropriately as they will influence the visibility of the work. In addition to the logical criteria, that is, that it represents the content of the article well, we can think about which keywords we would like our article to be found for (as long as they faithfully reflect the content, of course). Candidates for the keywords that make references to characteristics of the object of study, its relevant context, materials and methods.

Source: own elaboration from APA and Web of Science Academy among others

7.2 PREPARATION OF MANUSCRIPTS: ANONYMIZATION, COVER LETTER AND DATA SET

Once we have finished our article and we have chosen the journal to which we want to send our work, it is necessary to apply a series of actions that, when properly applied, will help our research to pass, at least, the first acceptance filter, which gives it , usually the director or one of the editors of the journal. This first acceptance decision allows our manuscript to pass to the evaluation phase.

The first action that we will talk about in this section is **anonymization**. In STEM, it is not always necessary to anonymize manuscripts, since they apply a single-blind version of peer review -or even open evaluation- (Hames , 2007). But in the social sciences, almost all journals apply double blindness, that is, the authors do not know who the reviewers will be and the reviewers do not know who the authors are (Hames , 2007).

Anonymization, in this case, is the action that consists of sending to the journal, a version of our manuscript in which its authorship is not shown. The reason why this anonymous version must be sent is to achieve full transparency in the development of the evaluations that will be made of the submitted manuscript. In this way, these evaluators, not knowing the authorship of the researchers, will be able to make a report on the article without being conditioned. Attaching our anonymous article is an essential requirement when it is sent to a journal.

Likewise, there are different degrees of anonymization. Depending on the journal, this degree will be higher or lower. Normally, it is requested that the name of the authors not appear and that the document sent does not have metadata in which the name of the author or authors can be indicated and this would correspond to an anonymization that we can call medium degree. Other journals, on the other hand, can also request that, in the event that the article has citations by the authors

themselves (self-citations), both the citations in the body of the document and the references at the end, these are also anonymized, and this would correspond to a high degree of anonymization.

In any case, we advise authors to carefully read the guidelines of the journals on the submission of manuscripts, since they normally explain in detail what this anonymization should be like. Failure to comply with these guidelines may be grounds for rejection by the editors, in the first phase of manuscript selection.

The second aspect that we will talk about is the **cover letter**. This is a formal letter addressed to the editor/s of the journal where we present the work developed. In general, it must be a convincing letter that values the research carried out. It should include the main findings and the importance of these. *a cover A well-developed letter* is an essential element that will help us pass the first acceptance filter of our manuscript.

Many journals and publishers have recommendations on how to write a cover . letter. Some of the most recommended style books to develop cover letters can be found on the websites of publishers such as Taylor & Francis, Sage or Emerald , among others.

Sample cover letter

[Your Name]
[Your Affiliation]
[Your Address]

[Date]

Dear [Editor name],

I/We wish to submit an original research article entitled “[title of article]” for consideration by [journal name].

I/We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, I/we report on / show that _____. This is significant because _____.

We believe that this manuscript is appropriate for publication by [journal name] because it... **[specific reference to the journal's Aims & Scope]**. _____.

[Please explain in your own words the significance and novelty of the work, the problem that is being addressed, and why the manuscript belongs in this journal. Do not simply insert your abstract into your cover letter! Briefly describe the research you are reporting in your paper, why it is important, and why you think the readership of the journal would be interested in it.]

We have no conflicts of interest to disclose.

Please address all correspondence concerning this manuscript to me at [email address].

Thank you for your consideration of this manuscript.

Sincerely,

[Your name]

Cover template letter by Taylor & Francis. It can be downloaded from the following link: <https://bit.ly/3U2ZY9F>

Although it is true that it is not mandatory to write a *cover letter*, we consider that it is highly advisable since, in general, editors tend to receive many manuscripts, of which they only accept a small part for their subsequent peer review.

Being able to value our research in a few paragraphs to convince the editor of the importance of our article through a cover letter multiplies the possibility that our manuscript will pass the first acceptance filter for publication.

The third and last element that the researcher must take into account if he wants to have a better chance of success in the publication of his article is the **data set**. The data set is the document where the raw results of our data collection are found.

In general, when we send an article to a journal, it is not mandatory to accompany it with a file in the form of a *data set*, however, incorporating it as complementary material can condition the final decision of its acceptance by the editors.

In addition, incorporating the *data set* into the submission of the article has several advantages: (1) it gives greater rigor and robustness to the research by offering complete data collection and thus managing to transfer the editor in the first instance, and the evaluators, in the second instance, the complete research work, and (2) it gives greater transparency to our research by offering the evaluators all the data with which we have worked, being able to refer to this document if they need it to review a specific issue during their evaluation process.

Likewise, it is increasingly common to find *data sets* uploaded to **data repositories** such as *Figshare*. This is an increasingly widespread ethical practice among researchers (including ourselves) who advocate open science.

Basically, uploading the *data set* to this type of repository not only makes it possible to achieve the transparency, rigor and robustness that we were talking about, but also makes these data available to science in general, and to any researcher in particular for that you can use them for your research.

Normally, if the *data set* is uploaded to a *Figshare*-style repository, first of all, it must be uploaded anonymized and once it has been accepted for publication in the journal, it is edited including its authorship. Also, once this data set is published openly, it becomes a citable document, thus increasing the visibility of researchers and their work.

7.3 REVIEWS OF SCIENTIFIC ARTICLES

The **result of a peer evaluation** usually consists of one of these three situations:

- **Rejection**, this is the article will not be published because the evaluators agree that the work is not suitable for publication. Of course, this is the source of the greatest frustration, but even this is an opportunity, as we will try to argue later.
- **Accepted with minor changes**. There is agreement among the reviewers that the article is valuable and should be published, but one or more of the reviewers propose changes that affect the writing, the format and, in general, changes that do not affect the core of the research or the Article.
- **Accepted with major changes**. The reviewers agree that the article is potentially valuable, but one or more of them proposes changes considered important. In this case, the final acceptance of the article is conditioned to the ability of the authors to deal with these changes and transfer them to a new version of the article that will be evaluated in a second round,

7.4 CONDITIONAL ACCEPTANCE WITH MAJOR CHANGES

This is the kind of response that requires the maximum **efficient reaction capacity** from the authors, so we focus on this one. It is, of course, the one that implies the greatest intellectual challenge, which is why it is the one that we must treat with the greatest care and the highest degree of self-demand. Publishing in quality journals does not have to be extremely **difficult**. But what is guaranteed is that it is not easy.

The two main enemies of a proper reaction to a revision that includes major changes are **procrastination**, and if it is accompanied by **frustration** and a bruised **ego**, even worse. The almost inevitable first reaction is a **refusal** to even consider the proposals, but if we continue down that road, that is, by refusing to consider the proposed changes, we are going to crash.

The second reaction may be the temptation to *throw in the towel*: "if there are so many objections, we will withdraw the work." But it goes without saying that the latter would be a monumental mistake and should never be considered. If you have ever felt this temptation, do not blame yourself too much, think that it affected the very Einstein, who withdrew an article in offense upon receiving the evaluation report.

So, to address these potential initial **attitude issues**, let's proceed as follows:

- First of all, we will avoid **rushing**, but just as carefully we will avoid **procrastination**. It is vital to deal with the evaluation as **soon as possible**. First, because if we let a lot of time go by, we will lose momentum (the moment, as a physicist would say) and motivation, and second, because editors usually give a short deadline to send the new version of the article.
- In any case, it is important to read the objections **carefully**, and if necessary we will read them twice, until we are completely sure that we fully understand the scope of each one of them, especially the most critical ones. Rereading the objections will help us refine our responses, thus finding the best possible version of them.
- Before you assume that you will **reject** an objection, think twice, our spontaneous reaction may be in that direction, however, accepting an objection can be much more of an **opportunity** than anything else. However, if you feel, after careful consideration, that you should reject an objection, do so and concentrate your efforts on giving reasons for the objection.
- In addition to agreeing on everything with the co-authors, we can **consult** with trusted **colleagues if we have doubts or in any case to consolidate our answers**. Scientific activity is collaborative work and this is also manifested in this way.

7.5 TABLE WITH OBSERVATIONS AND ANSWERS (OYR TABLE)

The next step, once armed with the appropriate attitude, is to prepare a **table** where we will transfer all the objections and proposals received. The reason is that, if the recommendations of the best publishers to their authors insist on something, it is that they must account for **all** the comments received.

Nothing better, nor more transparent, nor more persuasive than setting up a table for these purposes. We will call it **OyR Table** (for Observations and Responses). Its function is double, since it consists of:

- Properly **analyze each** and every one of the observations submitted by the evaluators;
- **Demonstrate** that we have been able to deal with all the observations and **respond** to each one of them.

It is important to understand that the **editor** of the journal, the person to whom we must answer, acts as a representative of the interests of the journal and its readers, and therefore is interested in publishing quality papers, so it will be the first to that we must convince ourselves that we have been able to give an adequate answer to all the objections.

In some cases, the editor decides based on this answer, but may re-solicit the reviewers in a **second round** , so we will also keep in mind the need to convince the reviewers in our answers. Two very important issues in the whole process:

- Demonstrate that we have taken the observations very seriously and that we have the **capacity** to respond to all of them, either by accepting or rejecting them, in the latter case, in a particularly **reasoned manner** .
- Maintain at all times a very **polite** and **respectful language record** in our responses. It is even a good idea to explicitly thank those that are especially accurate and that help make our manuscript better.

However, the **O&R table** can have the following structure:

- One **row** for each of the **atomic observations** of each of the evaluators (between 2 and 3, typically).
- A **column** for the evaluators' observations and another for our response, as well as a column to be able to number each observation to make it easier to refer to each observation later.

The next step will obviously consist of taking each of the evaluations and **analyzing** them carefully, paragraph by paragraph, in order to identify and separate each single objection and assign it to one of the rows of the table. This task can be carried out first by the corresponding author (usually the first author) but must then agree with the other authors.

The table is above all an instrument of internal work. As we will see later, it can be sent, suitably adapted, along with the article if we see fit. If the journal asks for a list of changes, we can extract this list from the table, and there is no need to send the table as such. Other journals, instead of a list of changes, ask for a document with track changes activated, or with changes highlighted in some way, etc.

7.6. RESPONSE LETTER

The response letter or **response letter** is the letter that is sent to the editor of the journal together with the new version of our article. It will have these components:

- A few words of **thanks** for the work of the evaluators, it will never hurt, especially if they have indeed done a good job, as often happens.
- The **new version** of the article. Note that some journals require changes to be marked, for example by tracking changes or with a different color.
- If considered convenient, information about the new version of the article can be **provided** . In these considerations we can highlight the main changes that we have carried out.
- Instead of a new version with track changes, you can ask us for the new document in final format but with a **list of changes** . We can send the **O&R table** with all the answered observations, one by one, regardless of whether we have accepted them or not, or instead prepare a list with only the changes made.

7.7 STRATEGIES TO FOLLOW ACCORDING TO THE TYPE OF OBJECTIONS

In the preceding sections we have seen the **final result** of our response work to the evaluators. In what follows, we will consider the strategic issues that can lead us to this goal.

First, we are going to distribute the evaluators' observations based on their location on two different axes:

- **First:** are the evaluators' objections or proposals **adequate** ?
- **Second:** do the objections or proposals imply a **new** investigation?

To decide on the **first axis** , we must first determine if they are proposals that solve errors, defects or inadequacies in the manuscript or in the way of explaining the research or the methodology. They can also be proposals to improve or complete the analysis of the data we already have, that is, they can be plausibly applied without the need to open a new research process. In all these cases they are proposals that will improve the manuscript and this is for our benefit and that of the public we are addressing. This is what it means to be **suitable proposals** . We must make an effort to incorporate them.

On the other hand, some proposals may imply the need to carry out a different investigation from the one that is being evaluated or imply doing a different investigation. In this case, there is only one option: we must reject them.

It should be noted that, unfortunately, there are frequent cases in which the evaluator loses sight of the fact that his mission is **not** to broaden the scope of the work, but to evaluate what is before him. **COPE Council** standards (2017) are very clear on this point:

- *Item es **not** the job of the reviewer to extend the work beyond its current scope*

The following is the capture of the specific point of the COPE Guidelines (COPE Council 2017) that we have cited above (link in the image and in the bibliography):

Suggestions for further work: It is the job of the peer reviewer to comment on the quality and rigour of the work they receive. If the work is not clear because of missing analyses, the reviewer should comment and explain what additional analyses would clarify the work submitted. It is not the job of the reviewer to extend the work beyond its current scope. Be clear which (if any) suggested additional investigations are essential to support claims made in the manuscript under consideration and which will just strengthen or extend the work.

Figure 6. Source: COPE Council, 2017

To decide on the **second axis** , we can ask ourselves the questions posed by COPE in its guide on evaluation ethics in relation to the evaluator's proposals:

- Do they involve **expanding** the work beyond its **current scope**, eg, do they involve new data collection or additional research?
- Are we proposing to change the object of study?
- Are we being proposed to use another methodology?

different investigation , which is beyond his functions. These kinds of proposals must be rejected without complexes. Of course, we must explain our reasons very well. And success is not guaranteed. No one has said that peer review is infallible.

7.8 ETHICAL ISSUES: RECOMMEND CITATIONS

A relatively common situation occurs when an evaluator recommends adding **certain references** as part of their recommendations. This, of course, may be due to a timely motivation, that is, it may be detecting a real gap in the references used in the manuscript. In this case it must be taken into account. But it can also hide abuse. Although it is not very frequent, it can happen that the evaluators take advantage of their role to obtain their own appointments or for their group.

The recommendation of the experts (cf. *Web of Science Academy*) is that the recommendations to add references should only be made if they do **not condition** the **acceptance** of the article. If the authors detect poor adequacy of the references, and

at the same time presume that the acceptance of their work is in danger if they are not included, they must claim the protection of the editors and denounce the imposition of the evaluator.

8. ARTICLE PROCESSING CHARGE (APC)

For this section, we partly recovered content in which we have discussed the criteria for selecting candidate journals for this publication dedicated, among other things, to the **APC**. Remember that these acronyms respond to the expression **Article Processing Charge**, that is, charge for processing articles.

APCs always exist, both in traditional journals and in open access journals, but they tend to be more closely related to the latter, because some of them, as a funding model, bill authors for APCs. This is one continuous source of **misunderstandings and even demagogic** manipulations . The best known of these is the one that ensures that authors, in addition to working for academic journals for **free** , **sometimes have to pay to publish** .

8.1 NOBODY WORKS FOR NOTHING

Processing an article so that it can be published by a scientific journal has associated costs, something that is often forgotten when some wonder, not without naivety, why publishers receive income if the authors work **for free**.

It's a naive question because **publishers** have employees and suppliers. The former expect to collect their fees and the latter, their invoices. For scholarly communication to exist, some costs have to be borne by **someone** . Three possibilities:

- They are assumed by **subscribers**: traditional model. It is not a model without criticism since it goes against open science, on the one hand. On the other, for the simple reason that we will never find a solution that does not generate bitter criticism in the circus academic world.
- They are assumed by the **authors**: *open access model* + APC. We will see it below.
- They are assumed by the **universities**. The case seems, *a priori* , more neutral, but it also generates some suspicions even if they are not justified (inbreeding, bureaucracy, etc.), nor does it imply that *someone does not end up paying* . It is paid by taxpayers if the university is public, or by students via enrollment, if it is private. But someone always pays. The opposite would be to believe in *parapsychology*.

8.2 THE AUTHORS DO NOT WORK FOR FREE EITHER

The **authors**, for their part, receive their salary from the universities or research centers in which they work, and **within** whose working hours and as **part** of their

duties they research and **write** their articles. So it is not true that authors work for free. This work of the authors is **not** an extra that they do in their leisure time. It is at the **core** of their **work dedication** for which they are supposed to get paid every month. In addition, in most of the universities in our environment, the authors see their contracts improved from evaluations in which the publication is one of the key points.

And what about pre-doctoral researchers -you may ask-? Some of these have scholarships or grants, but **not all** . Pre-doctoral researchers publish articles as part of their training, and in exchange for a small number of them, typically between two and three, they receive an academic title of doctor.

The important point is that pre-doctoral researchers also obtain **compensation** for their publications: for a doctoral degree, which can be the door that leads to new contracts or other types of opportunities; on the other hand, theses by compendium exempt doctoral students from having to write hundreds of pages. In short, no one works in the field of scholarly communication for nothing, no matter how it may seem.

As an elementary rule, except in *conscriptive relationships* , when we see that an operating model is perpetuated in time and space, with members having relative freedom to leave and enter the system, it is because everyone gets something.

8.3 WHO REALLY PAYS FOR APCs?

We have always given the impression that the APCs, being paid by the authors, are paid by them out of pocket. It must be clarified that although this may be the case at times, it is not always, and surely not most of the time. On many occasions, as far as we know, the APCs end up paying for the financed projects, which in turn are financed with public funds.

Among the most significant **expense items** that a journal incurs, we can cite the following (Hames , 2007; Baiget, 2020):

- Internal evaluation and selection processes and admission or rejection of manuscripts.
- External evaluation processes (*peer review*), relations with the evaluators and the corresponding author.
- Edition, revision of the style and orthotypography of the manuscripts, as well as verification of data, references, etc. once accepted.
- Sending and proofreading of galley proofs.
- Preparation and layout of the article.
- Publication in digital format and , where appropriate, in printed form, plus transport costs in the latter case.
- Maintenance of the digital platform of the journal, including management of DOIs , permanent urls , etc.

- Dissemination and promotion actions of the articles
- Grants for APC-exempt authors.
- Attention to the general public and authors and evaluators.

In the penultimate point we have pointed out that some publishers also cover the **exemptions** (*APC waivers*) or discounts that they make to authors with fewer resources through the APC. This is a very important point that all publishers with APC should consider in order to incorporate elements of social responsibility into their revenue model as much as possible.

All of the above is part of the so-called **Article Processing charge** or APC. The APCs have an amount ranging from several hundred euros to several thousand, depending on countries and types of journals. Anglo-Saxon journals tend to have higher APCs than those of other countries (eg, Spanish ones) and science journals, higher than those of social sciences and humanities.

The range of the APC usually goes from about 1,000 euros to 3,000; with about 1,000 euros as one of the most common rates, at least in Social Sciences and Humanities.

8.4 RECOMMENDATIONS FOR PRE-DOCTORAL RESEARCHERS

The point for pre-doctoral researchers, if they are doing a thesis by compendium, is that it is convenient for them to pursue doctorates in departments or faculties that have recognized research groups.

These groups frequently obtain funding and it is common for a portion of this funding to go to cover APCs. In general, for the same reason, they should have thesis supervisors who are part of these groups and who participate in funded research, so they can upload the APCs of the articles if their research is part of the project.

If the predoctoral researcher does not have the possibility of uploading APCs to a funded project, they must assess whether it is worth facing APCs to obtain their PhD or prefers to choose journals free of them. In this case, the logical thing to do is to look for open access journals without APC (there is a choice, luckily) or traditional journals but with self-archiving policies that are as open as possible, in order to disseminate the article outside the journal's platform, even in the author's format, and at the same time comply with open access.

8.5 SERVICES FOR AUTHORS

Created the need, created the offer. This is how markets emerge. Authors have a certain list of needs that they can try to satisfy on their own, or that they can outsource. In this, like others, we have a market that we can call **white** and another that we can call **black** .

The white market. We call the white market that way because it offers legitimate services, among the most common:

- Search and identify the most suitable journal for each investigation
- Review the style and structure of the manuscript
- Translate the manuscript into other languages, usually English
- Review the English version when the author is not a native
- Adapt the manuscript to the observations of the evaluators

Some or all of these services are covered by independent companies, but they are also provided by some publishers of scientific journals. Let's see that none of your services involve writing the manuscript. This is always the responsibility of the authors.

Some examples are the services for authors of Taylor and Francis or Wiley, for what they do to publishers, and those of Enago or Chovet for what they do to independent companies.

The black market. We will not dwell long on this. Just point out that the offer of this market includes completely illegitimate services (for a reason we have said that it is the black market). We do not know if, with the legislation in hand, in addition to immoral they are illegal, but if they are not, they should be. In this case, the services include the writing or purchase of articles and doctoral theses in exchange for remuneration. We have no record, but in addition to the academic fraud that they represent in themselves, it is to be assumed that most of these works will consist of more or less elaborate plagiarism.

Some of these services, as if to remedy themselves, emphatically advertise that their work is free of plagiarism. Of course, given the initial fraud involved in selling theses or articles, the credibility that they are not plagiarized works is really zero.

9. ACADEMIC SEO

We can define **academic SEO (ASEO)**, as the set of practices that aim to increase the **academic and social impact** of academic productions. For part of what follows, we follow a couple of previous works dedicated to TOILET (Rovira et al., 2021; Codina et al., 2021), to which we refer those interested in delving into this part.

Here, we will point out that the main procedure by which academic SEO tries to achieve its objectives is through the **visibility** of academic production. The reason is so simple that it is almost embarrassing to state them: for a work to have an impact, it must first be **read**, and in order to be read, it must first gain **visibility**, that is, it must reach its potential audience as effectively as possible.

The **academic impact** is mainly measured by **citations**, which is mediated by an **author-author relationship**. That is, an author cites works by other authors. This relationship is at the base of new investigations. In turn, it is the basis of scientific progress, given its **cumulative nature**.

For its part, **social impact** requires that the work reach broader audiences. Specifically, **professionals** and **policy makers** , but also **journalists** , **politicians** and non-university professors, always on a case-by-case basis. That is, the social impact implies a relationship between **authors** and **broad audiences** , and generates a diversity of products, among which we can point out recommendations, interventions, policies, guides, good practices, etc.

9.1 THE ESSENTIAL INITIAL ELEMENT: DIGITAL IDENTITY

The digital identity is an initial element that affects the academic career of every author, from the beginning of it . It consists of establishing a single authorship format, in order to have a **unique identity** as authors, as well as using a **signature** made up of two strings. Additionally, we can create profiles that reinforce this identity and even record possible variations in our author name. To ensure that all our production is properly assigned to us, we must follow three steps:

First : use only two strings as a format for our author identity. Let's take the case of an author or an author whose full name (in his ID) indicates *Name1 Name2 Surname1 Surname2* (eg José Luis Codina Bonilla). To convert this name made up of four strings to a name made up of just two, there are several solutions, all of which require the use of hyphens when there are more than two components, to prevent databases from indexing the same name in different ways. different in each case. Some of the logical choices are as follows:

- Name2 Surname1 (Lluís Codina)
- Name1 Surname1 (José Codina)
- Name1-Name2 Surname1-Surname2 (José-Luis Codina-Bonilla)
- Name1-Name2 Surname 2 (José-Luis Bonilla)

Note that in each combination there are always two strings and only two, no matter how many words there are in total. It will be each author who will choose the certain way in which they combine their first and last name. If the combination of a simple first name and a unique last name gives you a distinctive identity, you will not need other combinations. But if this is not the case, it is when you can use some of the others shown that the stop dash will be essential.

Second: always use the same strings, let's publish where we publish and whatever we publish. For example, do not publish sometimes as "Luis Codina" and other times as "Josep-Lluís Codina", etc.

Third : register our profile and all other variations of our author name in the **ORCID identification system** . For authors from specific fields, it may be advisable to also register in other identification systems (but without ever ceasing to use ORCID) as well as in the main international databases WoS and Scopus.

9.2 ACADEMIC SEO PRE vs POST

The other point that we want to mention here is that there are at least two theoretical moments of academic SEO intervention, namely, **before** and **after** the publication of the works.

prepublication

This phase intervenes during the production of the academic work, typically during the **writing** of the manuscripts. It refers to optimizing the content of the article thinking about the indexing and interpretation of its content by academic search engines.

In this phase, it is about optimizing the use of keywords in the **title**, in the *keywords*, in the **abstract** and in certain places of the **body** of the article, such as in the tables, captions, section titles, etc. This phase will depend on whether the article is filtered and considered relevant for certain searches, just those that use those keywords. For this phase we refer the reader to the previous section of this report where we deal in detail with the properties of an optimal title and abstract.

post publication

This phase appears once the work has been produced and made public in some way. It has two main elements:

- **Spread**
- **Diffusion**

Propagation consists of depositing (self - archiving) articles in at least one open repository once published by the journal. It can be an institutional repository (highly recommended) like the ones that universities usually have, or even in the generic repository of the EU (Zenodo) or in thematic repertoires. It is optional to use portals from private initiatives such as ResearchGate or Academia.edu.

Dissemination consists of promoting the maximum **dissemination of** the article through **social networks**, both academic and conventional, and thus provide it with the maximum possible visibility. Other additional actions will depend on the possibilities of the author or the research group: publish reviews on the group's portal, eg, include it in *newsletters*, etc. In theory, the increase in the probability of citation will depend on all this visibility.

9.3 THE CASE OF GOOGLE SCHOLAR: ONLY CURATED PROFILES

Google Scholar deserves specific consideration. Given its enormous adoption by researchers around the world and in practically all areas of knowledge, it is very useful to open a profile in Google Scholar and make it public, as an act of **transparency**. Also, of course, as part of a personal "branding" strategy.

However, in this case, the inherent **commitment** acquired by the author who makes his Google Scholar profile public is to **curate** it (Lopezosa et al.2022). You can't have a Google Scholar profile without checking it regularly to make sure that citations and attributed works are accurate to the author.

Either the author adjusts his profile so that each new citation or each new article must be validated manually, or he **checks**, one by one, each automatic notification of new **citation** or new **publication** that arrives from Google Scholar. What is **inadmissible** is making a profile public and at the same time tolerating the **erroneous assignments** that Google Scholar is going to make to it in an apparently inevitable way, given the frequent errors of its bot . There is a very clear responsibility here to **cure** the profile or **close it** . It is also true that curation has another side: that of **recovering** articles for our profile that Google Scholar has not been able to assign us automatically. However, **healing** must always be present.

10. CONCLUSIONS

We have tried to offer a broad overview of the key aspects that affect the success in the writing of scientific articles, including in our consideration issues that remain *before* (the research-report relationship) and *after* (submission and evaluation) of the actual writing of the article. Article.

In any case, knowing as well as possible all the dimensions of the conception and the writing of scientific articles should be part of the training of any researcher. It is unrealistic to pretend to have a complete training as a researcher without also knowing all these aspects of academic communication because research that is not communicated does not exist.

On the other hand, we have highlighted from the zero point of this report, it is important to understand that a scientific article is the report of an investigation. And reporting an investigation implies providing elements of transparency and traceability, and for this reason it is important to know the meaning of the IMRyD structure and the like, and the keys to attend to and respond to the evaluators' reports.

Finally, it is part of our responsibility that the results of the research reach wide audiences and have, as far as possible, not only academic but also social impact, and here academic SEO actions are valuable.

In short, in a 360-degree training of a researcher, aspects related to academic communication should never be left aside. For this reason, all doctoral students, even if their thesis is not by compendium, must try to publish at least one article as part of their doctoral thesis. If this is so, the authors of this guide would be extremely happy that this guide has put a grain of sand.

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This paper is a result of the project "*Parameters and strategies to increase the relevance of media and digital communication in society: curation, visualization and visibility (CUVICOM)*". PID2021-123579OB-I00 (MICINN), Ministry of Science and Innovation (Spain). (PID2021-123579OB-I00)



This work presents the most important elements that affect the writing of scientific articles, but also those that determine the success for their acceptance and publication in impact journals. It also deals with aspects such as how to respond to peer review evaluations and how to disseminate the article once it has been published.

The intended audience is trainee researchers and especially doctoral students who have chosen to carry out a thesis by compendium of publications.

However, any researcher, junior or senior, will surely find several elements of interest in this work.

It is also appropriate to add that the main academic background is that of social sciences in general and communication studies.

