

# Strategies for writing a research paper

# Estratégias para escrever um artigo de investigação

#### 1. Introduction

Writing and publishing good research papers is essential for many reasons: not only advancing researchers' academic careers but above all for disseminating research findings and advancing the state of empirical knowledge. In addition, publications are a measure of the academic productivity needed for promotion. Another reason is that most researchers become experts in a given research area, and they are recognised as such by their peers when they contribute actively to the literature, helping to advance the state of empirical knowledge (El-Serag, 2006).

Research is not complete until results have been published, especially in the case of publicly funded research (Audisio et al., 2009; Davidson & Delbridge, 2011). Conversely, a track record of prior publications is essential for any competitive grant application (El-Serag, 2006).

Publishing the best possible research papers is also the main goal of journal editors, who value papers of interest to their readership that show originality, importance, clear research questions, correct methods and excellent style (Johnson, 2008). When evaluating your research, editors consider whether your paper, if published in their journal, is likely to be heavily cited, thus enhancing the standing and reputation of their journal (Davidson & Delbridge, 2011). Editors and reviewers spend hours reading manuscripts and greatly appreciate receiving papers that are easy to read and edit. They dislike long, wordy papers in a poor style with conclusions not justified by data, showing an inability to follow the 'authors' guidelines' and containing careless, sloppy mistakes (Johnson, 2008).

In point of fact, most submitted papers need substantial improvements before they can be published, and, unfortunately, many of them get rejected because they do not fulfil basic conditions for publication. Therefore, this paper seeks to provide some basic strategies for writing research papers and help especially novel researchers to improve papers before submitting them to journals. Sharing thoughts and experiences is the very essence of academic activities, and this can be quite rewarding if it substantially contributes to improving researchers' chances of publishing results.

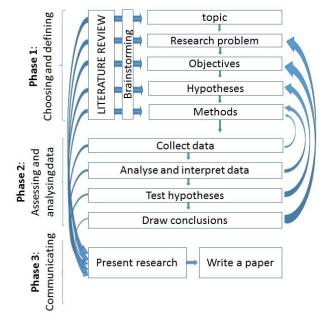
#### 2. The research process

A paper is the outcome of three different processes: research, writing and publication. Although this paper focuses on the writing process, it is important to understand the processes that you need to follow before and after writing. A good paper is the outcome of well-conducted research, careful writing and successful publication processes.

The research process is, in most cases, the implementation of a previously designed research plan. As shown in Figure

1, the research process is divided into three phases, each one comprising several steps. Phase one, choosing and defining, is theoretical or conceptual and based on a literature review. In this phase, you choose and define the fundamentals of your research: topic, research problem, objectives, hypotheses and methods. Much search, brainstorming and adaptation may be necessary during this phase. Regardless, you should not go on to the next phase – for instance, collecting data – before making the right decisions regarding research problem, objectives, hypotheses and methods.

Figure 1 - The research process



Source: Own elaboration.

Phase two, assessing and analysing data, is empirical, as well as analytical, and it deals with data collection, processing, analysis and interpretation. Hypotheses are tested, and conclusions are drawn in order to address the research problem and objectives of the study.

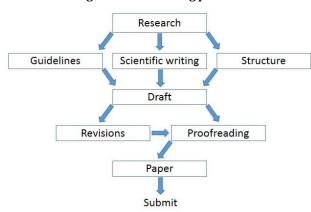
Phase three deals with 'communicating' your research. This is the time to communicate your findings to the research community. There are several ways of doing this, including writing a report, making a presentation in a conference or writing a paper.

## 3. The writing process

Ideally, you should start the writing process as a logical consequence of the research process. As a matter of course, during the research process, you produce drafts of your research methodology and findings that you now need to transform into a paper. The following sections provide some strategies that may help you to convert your research into a well-written and appropriately structured paper. Figure 2 shows a chart of this process.



Figure 2 - The writing process



Source: Own elaboration.

### 3.1 Follow the journal's guidelines

It is strongly advised that, before you start writing your paper, you decide which is your target journal (Rosenfeldt, Dowling, Pepe & Fullerton, 2000; Johnson, 2011; Saper, 2014). Then read carefully the 'journal guidelines' or 'authors' guidelines' provided by that journal (Chiswick, 2004; Johnson, 2008; Davidson & Delbridge, 2011). The reason for this is that you need to adapt your paper to the journal guidelines from the very beginning because these deal with content and form, therefore affecting the entire paper and making it a difficult task to adapt to the journal's norms after the paper is written. By following guidelines appropriate to your type of study, you are likely to improve your paper and thus increase your chances of being published (Davidson & Delbridge, 2011). On the contrary, submitting papers without following journal guidelines dramatically increases the possibility of rejection.

Besides following the guidelines closely, reading some papers in your target journal also gives you an idea of the structure, norms and general organisation of papers approved for that journal. Another advantage is to identify the research interests of editors and the research areas of recently approved papers (Saper, 2014).

In the case of the *Tourism & Management Studies* journal the guidelines provide information about length of papers (6,000 words), abstracts (150 words) and keywords (5 words), as well as structure (introduction, methodology, results, discussion, conclusions and references), citation style and organisation of the list of references (APA style).

## 3.2 Use an adequate paper structure

An appropriate paper structure is a fundamental tool for developing and presenting research, and it makes it easier for readers to understand the content of papers. This can vary in small ways depending on the research field and journal guidelines, but it is commonly accepted that research papers should have a title, abstract and keywords and be divided into sections, including introduction, methods, results and discussion, conclusions and references (Rosenfeldt et al., 2000; Chiswick, 2004; Børresen, 2013). *Tourism & Management Studies*' editors prefer to include results and discussion in the same section. There must be a logical and understandable link between sections (Chiswick,

2004; Andonie & Dzitac, 2010) in such a way that all sections – as indispensable parts of the whole – communicate with each other and contribute to the unity and internal consistency of the paper. A logical flow must exist not only from section to section but also from paragraph to paragraph and from sentence to sentence (Andonie & Dzitac, 2010). Each element of a paper's structure is analysed and discussed below.

#### 3.2.1 Title

According to El-Serag (2006), 'The title should be informative and specific to the study, and should contain key elements that advertise the paper's contents. The use of subtitles allows the insertion of additional information' (p. 20). Choosing a good title and subtitle is fundamental for a paper's success, as they are the first elements to catch the attention of editors and readers, and they tell them what the paper is all about. This first contact with the topic of the paper determines if the paper falls within the scope of the journal or the readers' interests, and it is decisive in their immediate decision to dedicate some time to exploring or reading it. Through the title and subtitle, it is also possible to deduce what type of paper it is and whether its topic is attractive to a broad audience, for instance, if it is a theoretical paper, an empirical or theoretical and empirical paper or a case study. Purely theoretical papers have a higher rejection rate, unless the authors truly innovate and firmly ground their theories. Quite often, case studies have an extremely high rejection rate because they have validity only within restricted contexts, and they are not attractive enough to reach a broad, international audience.

Titles (and subtitles) should address the content of the paper and be short, simple, easy to understand and attractive to the paper's audience. It is important that titles contain some strong keywords dealing with the content of the papers, to ensure that the titles are detected by fellow researchers searching literature databases (Davidson & Delbridge, 2011).

# 3.2.2 Affiliation

Next follows the affiliation of all authors. Journals have different requirements regarding the affiliation, but authors' names, universities and faculties or schools, countries and e-mails are common. Some journals also demand degrees and telephone and fax numbers of authors. In the case of the *Tourism & Management Studies* journal, the information regarding affiliation should be as follows for each author: name, university, faculty or school, department/research centre, postal code, city, country and e-mail address. In the case of the corresponding author, the complete mail address must be added.

The inclusion of this information is extremely important for the indexation process of the SciELO Citation Index/Web of Science, including the attribution of empirical production to the correct institutions, research centres and countries of publication. For publication purposes, authors need to use always exactly the same name without any variations from paper to paper, otherwise the indexing machines will treat these as different names (even with the slightest variation)



belonging to different authors. The same applies to the names of institutions.

Authors should submit two versions of their paper: a DV version (director version) with the full affiliation of authors and an RV version (review version) without the affiliation or any other information regarding the authors. Make sure that direct identifiers are removed from the data (Davidson & Delbridge, 2011) and properties of the Word document. This is important for the implementation of blind refereeing, which obviously means the authors must be kept anonymous.

Concerning research, teamwork is preferable to individual work, and journals usually prefer papers with multiple authors, especially teams involving different nationalities.

#### 3.2.3 Abstract

The function of the abstract is to give a quick overview of the contents of the paper. The abstract is the only part of the manuscript read by the vast majority of readers (El-Serag, 2006; Audisio et al., 2009; Shidham, Path, Pitman & DeMay, 2012), and, through it, the reader decides if it is worth reading the entire paper. According to Andonie and Dzitac (2010), an abstract should be concise and include motivation, problem statement, approach, results and conclusions. In the Tourism & Management Studies editors' view, objectives also need to be stated clearly, and all key information must be included. For Johnson (2008), an abstract should be structured per the specific journal's format within the word limit, without acronyms and abbreviations. The word limit for abstracts varies from journal to journal, usually from 150 to 250 words, so it is important to adapt the abstract to the target journal's guidelines for structure and length.

Together with the title and keywords, the abstract should be written last to make sure that it includes the most important aspects of the study. These three parts of the paper are strongly interconnected, and they reflect the ability of the researchers to concentrate the key aspects of their study into a limited number of words.

## 3.2.4 Keywords

Keywords are usually limited to five basic pieces of information containing one or more words, and they need to be carefully chosen in order to include the very essence of the paper. Keywords are fundamental elements for the dissemination of your research, as strong keywords enhance the likelihood that your paper will be retrieved by a search engine out of the huge number of published papers, when someone searches for a specific topic using a keyword (Audisio et al., 2009).

# 3.2.5 Introduction

Some authors write the introduction at an early stage as a guideline to the further development of the paper. In this case, they need to review this section and make all necessary changes when the rest of the paper is ready. Others prefer to write the introduction in the final stages of the paper. Davidson and Delbridge (2011) succinctly explain some of the most important aspects of this section:

The purpose of the introduction is to explain to the reader what the research question is, how it is original, how it is important and succinctly outline how the study intends to answer it. It is critical that the paper starts with a brief introduction to the topic, which clearly describes how and why the research question has arisen. Provide adequate background information using relevant literature to acquaint readers with the topic but do not include a detailed literature review. Explicitly state the importance of your research as the reader may not necessarily make the leap in logic that is obvious to you. The introduction should end with the aims being clearly stated. If the study is addressing a hypothesis, then the hypothesis should be stated here too (pp. 62–63).

This quotation contains all the basic elements of the introduction, of which the most important are contextualisation, originality, research question, importance of research, objectives and hypotheses. The originality, or 'How does your research add to the literature?' (Audisio et al., 2009), is fundamental, as in most cases it determines if your paper is worth sending on to be reviewed or not. It can be seen as the added value that your paper brings to the stock of knowledge in a given research field. The research question – which, in the opinion of Davidson and Delbridge (2011), constitutes the core of the paper – needs to be formulated in the introduction and must be robust and well defined (Davidson & Delbridge, 2011).

As the introduction is critical to attracting the readers' attention, it should consist of short sentences (Shidham et al., 2012) and be brief, coherent, logical and stimulating – but not confusing to the reader – as well as creating a receptive mood (Chiswick, 2004). Concerning length, a typical introduction does not exceed one or two pages.

#### 3.2.6 Literature review

Reviewing what others have written on your topic is a fundamental step in any research, and it serves a number of purposes:

- Identifying what has already been done and has contributed significantly to your topic;
- Identifying what still needs to be done in order to justify the originality and importance of your research;
- Establishing links between your research and the most relevant research on the topic (i.e. by comparing your study to previous research, you can point out similarities and contradictions);
- Defining relevant concepts for your study;
- Identifying relevant theories, research designs, approaches and methods used in the study of similar research problems that can be appropriate for your study.

The literature review needs to be the first step of your research because, without it, you cannot prove the originality and appropriateness of your study. However, one thing is reviewing the literature for an academic dissertation and another is presenting a literature review in a paper. In the latter case, it must be brief and contain only



the most relevant references, especially the most updated ones – to satisfy some or all purposes mentioned above.

Sometimes a paper is based on a research project (for instance a dissertation) finished some years ago, and it does not use references from the last three or four years. Of course, depending on the research area, references thus are outdated, which is a possible reason for rejection. To avoid this situation, you must update your references before submitting your paper.

#### 3.2.7 Methods

This is the most important section of any research paper because it determines the empirical validity of the study. Methodologies need to explain how results were obtained, and they should allow a researcher in that field to repeat the study (Saper, 2014).

Editors or reviewers reject papers when they consider that the research methods used are not appropriate or not strong enough. For the Tourism & Management Studies journal, methodologies are given first-class status, and any paper is rejected that does not use proper methods (at least in the reviewers and editors' opinion) in answering the research question and accomplishing its objectives. While there may be an opportunity to re-analyse the results, perhaps using more appropriate statistical tests, the methods cannot be changed without re-doing the research: what is done is done (Chiswick, 2004). You need to write about the methods in the past tense with adequate detail to repeat the study design and validate results (Johnson, 2008). Provide details of the selection and description of study participants, data collection processes and methods used in analyses. When in doubt, provide more (rather than fewer) details (El-Serag, 2006).

Any research problem to be solved needs appropriate methods, depending on the topic and research field. In some cases, qualitative research methods may be adequate, while in other cases, quantitative methods are required. Another possibility is to use a combination of methods.

Qualitative research methods are traditionally used in social sciences, and they use smaller samples aimed at achieving an in-depth understanding of human behaviour. The most common is interviews, which can be structured, semi-structured or unstructured. These data samples do not allow extrapolation to entire populations, but they can be important in formulating hypotheses that can be tested in another step using quantitative data. In fact, qualitative and quantitative methods are quite compatible, and they can be used in mixed-method approaches. Triangulation is the use of a combination of two or more research methods in the study of the same phenomenon in order to validate data through cross verification and to enhance confidence in results. In most cases, this is the preferred methodology in social sciences.

When using quantitative methods, you need to explain the size of the sample of the statistical population under study and the procedures for selecting this sample. Specify if the sample is statistically representative, allowing inferences from the sample to the general population. You should use

appropriate methods to calculate ideal sample sizes. When you cannot work with a random sample, you need to work with a sample that is as representative as possible: the more representative, the better. One strong reason for rejecting a paper is if editors or reviewers consider that the sample used is not ideal. In this case, the validity of the study is restricted to the group of individuals who constitute the sample.

A pilot test is quite important for evaluating feasibility and making all necessary corrections or improvements to surveys, before you carry out any large-scale quantitative research. At least one of the authors needs to have an indepth knowledge of research methods and statistics. When applicable, it is important to enlist the help of a statistician at the outset to determine sample size, power analysis and appropriate statistical methods (Johnson, 2008).

# 3.2.8 Discussion of results (or findings)

The results section is a critical part of the manuscript (Shidham et al., 2012). The presentation of results is the outcome of the application of methods to primary or secondary research resources. Some basic rules can help you to present your results in the best possible way:

- Interpret results and their implications, instead of simply presenting them in a descriptive way;
- Use primary data, which is more relevant than secondary data;
- Use a combination of text and visual aids such as graphs, tables or figures – these need to be well designed in order to make sure the reader understands the results more easily. Presenting the data in graphs has the advantage of clarity and impact, and it can bring out relationships between various parameters (Rosenfeldt et al., 2000);
- Keep graphs (or other visual aids) simple (Rosenfeldt et al., 2000);
- Do not repeat information presented in tables and figures in the text (El-Serag, 2006); instead, analyse data in qualitative terms without being repetitive (Davidson & Delbridge, 2011);
- Check that tables, graphs and figures are correctly labelled with numbers and titles and that they are cited in the previous paragraph; make sure that you indicate the source of your data;
- Write results in the past tense, in a logical sequence (Johnson, 2008);
- Match the arrangement of data to the methodology and communicate as much information as is relevant (Shidham et al., 2012);
- Do not omit unexpected results or results that do not satisfy your hypotheses; report them and discuss your analysis (Davidson & Delbridge, 2011);
- Avoid abbreviations if possible, but define them if used (Shidham et al., 2012);



 When using quantitative methods, first present results of descriptive analyses, followed by results of inferential analyses (Fortin, 1999).

## 3.2.9 Conclusions

The conclusions section is the most important part of your paper and the one that readers remember best. You have the chance to say the last word on your subject and leave a good final impression of your research.

Here are important rules to follow in the conclusions section:

- Link your conclusions with the introduction conclusions must have a direct relationship to the objectives stated in the beginning of the paper and answer the research question(s) and objectives, as well as confirm or refute hypotheses;
- Compare your conclusions to previous research and point out implications and contributions of your paper to advancing knowledge in your field of research;
- Avoid any repetition of results presented in the previous section and any ambiguity or speculation;
- Make your conclusions solid, synthetic, brief, clear and convincing;
- Explain study limitations and make recommendations for future research.

#### 3.2.10 References

You need to structure the list of references according to your target journal's guidelines. This is one of the sections that require the most attention and control by editors and the one that usually presents the highest number of inaccuracies. Authors and journals cannot publish papers with missing or incomplete references without compromising their reputation.

There are different styles for organising and presenting references. The most common in social sciences is probably the APA style. If you cannot afford to buy the Publication Manual of the American Psychological Association (the most accurate and complete document on the subject), it is advisable to check out materials on APA style guides that are available on the Internet. In organising your list of references, here are some important rules to follow:

- Follow journal guidelines;
- Include only references cited within the text;
- Double-check references for accuracy:
- Ensure that all information in the references list is complete and accurate (Davidson & Delbridge, 2011);

# 4. Style matters: Use adequate academic writing

Writing a paper using adequate academic writing involves many rules, and it is an extremely challenging task. To start with, you need to ensure you have relevant findings to communicate to readers. In fact, it is with the readers in mind that you have to find the best possible way of communicating your findings and arguments. Readers should be able to read and understand your paper without

much effort (Gerstein, 2013). The following guidelines from different authors can help you to find the most adequate academic writing style for your paper:

- Use sentences that are short, clear and direct; use formal and carefully structured wording and make sure the subject of each sentence appears early in the sentence (Fahy, 2008);
- Do not insert large chunks of information between subjects and verbs (Chiswick, 2004);
- Make your ideas clear and your arguments easy to follow (Fahy, 2008);
- Ensure that the information you wish to emphasise comes at the end of each sentence or clause (Chiswick, 2004);
- Avoid repetition, wordiness, long sentences and excessive adverbs and adjectives (Johnson, 2008);
- Select, in general, for 'active' rather than 'passive voice' in verbs (Fahy, 2008) since the active voice is more concise and crisp (Johnson, 2008);
- Utilise the spell-check function in your word processing programme (Davidson & Delbridge, 2011);
- Write to enhance the elements of careful word choice: clarity, simplicity and accuracy – clarity means choosing the simplest and most accurate word to express each idea; accuracy means choosing the precise word to express what you mean; clarity is improved if, once having chosen a precise word, you use the same word consistently throughout and do not substitute inexact synonyms (Fahy, 2008);
- Double-check grammar, style, spelling and references; shorten and cut down your paper at every chance, editing for crispness, with a focus on accuracy, clarity and brevity (Johnson, 2008);
- Ensure you use research terminology correctly; do not confuse or misuse terms (Davidson & Delbridge, 2011);
- Turn long paragraphs into short paragraphs, long sentences into short sentences and long words into short words (Davidson & Delbridge, 2011).

### 5. Revision and proofreading

When your paper is complete, revise it thoroughly and make all necessary changes. If multiple authors sign the work, all of them should revise the entire paper and not only their contributions. A complete paper needs to be subjected to multiple revisions before submission.

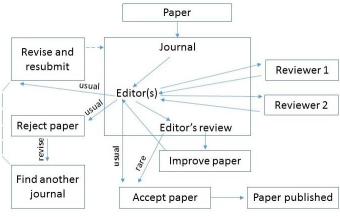
If English is the intended language of your paper and it is not your mother tongue, you will need translation or proofreading services provided by a native speaker with skills in academic writing (Børresen, 2013). In this situation, some journals demand a proofreading certificate.

#### 6. The submission process

Having a good research paper that complies with your target journal's guidelines is only the first step of the submission process, as shown in Figure 3.



Figure 3 - The submission process



Source: Own elaboration.

Most journals require a confirmation that your paper is original and that it has not been submitted to other journals at the same time. As mentioned earlier, in order to implement the double-blind review process, journals need an RV version without identification of the authors. After submission, the editors make a first evaluation of if the paper fits in the scope of the journal and complies with journal rules. If this is not the case or if the editors find any other obvious reason to refuse publication, the paper is immediately rejected. Otherwise, the editors send the RV version to two reviewers who are experts in the paper's topic. If the paper has a strong statistical component, at least one of the reviewers must be an expert in the methods used. Each reviewer evaluates the paper according to different parameters and sends a report back to the editors. To give an example from the *Tourism & Management Studies* journal, the parameters evaluated by the reviewers on a scale from 1 (very weak) to 5 (excellent) include importance of the topic and innovativeness of the research, objectives, literature review, methods, results, structure, academic writing and contributions to the field. If the editors decide to reject the paper, it cannot be submitted later to the same journal. If the decision is 'revise and resubmit', you can revise the paper according to the suggestions of the reviewers and resubmit it to the same journal. Another option is for you to use the feedback of the reviewers to improve your paper and submit it to another journal. Any paper selected for publication needs to be reviewed by the editors after receiving the peer reviewers' evaluations. Acceptance without suggestions improvements by the reviewers and editors is nearly impossible. The most usual process is that the editors send the reviewers' suggestions and their own suggestions for improving the paper to the authors. In this case, the authors need to revise the paper along the lines suggested by the editors and reviewers and send the paper back to the editors along with an improvements report. Normally, the editors accept the paper for publication if suggestions have been successfully implemented.

# 7. Concluding remarks

Preparing a research paper for publication requires methodical work that involves three processes, each one with exact rules and steps. Provided you have done solid research, it is quite important to adopt strategies that will increase the likelihood that your paper gets accepted for publication. Our main purpose was to explain these strategies in order to help authors to write good research papers.

Many authors have addressed the topic of writing good papers. However, we believe this paper contributes to the literature by:

- Presenting strategies based on a combination of our experience as journal editors and the existing literature
- Integrating the writing process into a broader context together with the research and publication processes
- Developing our own models of these processes to represent the processes in charts
- Writing a paper can be a wonderful and rewarding experience, especially when you see your first, or next, paper published.

## References

Andonie, R. & Dzitac I. (2010). How to write a good paper in computer science and how will it be measured by ISI Web of Knowledge. *International Journal of Computers, Communications & Control*, 5(4), 432–446.

Audisio, R. A., Rolf, A., Stahel, R. A., Matti, S., Aapro, M. S., Costa, A., Pandey, M. & Pavlidis, N. (2009). Successful publishing: How to get your paper accepted. *Surgical Oncology*, *18*, 350–356.

Børresen, T. (2013). How to write a good scientific paper. *Journal of Aquatic Food Product Technology*, *22*, 435–435. doi: 10.1080/10498850.2013.827558

Chiswick, M. (2004). Writing a research paper. *Current Paediatrics*, 14.513-518.

Davidson, A. & Delbridge, E. (2011). How to write a research paper. *Paediatrics and Child Health*, 22(2), 61–65.

El-Serag, H. B. (2006). Scientific manuscripts: The fun of writing and submitting. *Gastrointestinal Endoscopy*, 64(6), 19–22.

Fahy, K. (2008). Writing for publication: the basics. *Women and Birth*, 21, 86-91.

Fortin, M.-F. (1999). O processo de investigação: da concepção à realização. Loures: Lusociência.

Gerstein, H. (2013). Writing science that your colleagues can read. *Journal of Diabetes and Its Complications*, 28, 4–5.

Johnson, T. M. (2008). Tips on how to write a paper. *Journal of the American Academy of Dermatology*, 59(6), 1064–1069. doi:10.1016/j.jaad.2008.07.007

Rosenfeldt, F. L., Dowling, J. T., Pepe, S. & Fullerton, M. J. (2000). How to write a paper for publication. *Heart, Lung and Circulation*, *9*, 82–87.



Saper, C. B. (2014). Academic publishing, part III: how to write a research paper (so that it will be accepted) in a high-quality journal. *Annals of Neurology*, 77(1), 8–12.

Shidham, V. B., Path, F. R. C., Pitman, M. B. & DeMay, R. M (2012). How to write an article: Preparing a publishable manuscript! *CytoJournal*, 9(1), 1–12. doi: 10.4103/1742-6413.92545.

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