

The Academic Journey: 12 Stages to Scientific Recognition

A jornada acadêmica:
12 etapas para o reconhecimento científico

Mayara Regina Munaro¹

Ana Cristina Munaro²

Maria do Carmo Duarte Freitas³

Abstract: The process of academic writing and publishing an article in high-impact scientific journals is a complex task. Writing is not a natural activity and the publication system, based on peer review, requires a lot of determination and persistence from the researcher. As in a cyclical journey of a fictional character, the researcher goes through stages until reaching his glory, that is, the publication of his research. This study is an account of a lived experience that uses the twelve stages of Joseph Campbell's journey of the hero as a reference for the process of writing and submitting scientific articles. The objective is to contribute and motivate, in a relaxed way, researchers in the process of reflection and systematization of scientific writing and dissemination. The expectation is to make the activity related to the process of disseminating scientific research more fun and lighter.

Keywords: academic writing; academic research; monomyth; publication; scientific article.

Resumo: O processo de redação e publicação de um artigo acadêmico em periódicos científicos de alto impacto é uma tarefa complexa. Escrever não é uma atividade natural e o sistema de publicação, baseado na revisão por pares, exige muita determinação e persistência do pesquisador. Como em uma jornada cíclica de um personagem fictício, o pesquisador percorre etapas até chegar à sua glória, ou seja, a publicação de sua pesquisa. Este estudo é o relato de uma experiência vivida que utiliza as doze etapas da jornada do herói de Joseph Campbell como referência para o processo de redação e submissão de artigos científicos. O objetivo é contribuir e motivar os pesquisadores, de forma descontraída, no processo de reflexão e sistematização da escrita e divulgação científica. A expectativa é tornar a atividade relacionada ao processo de divulgação da pesquisa científica mais divertida e leve.

Palavras-chave: escrita acadêmica; pesquisa acadêmica; monomito; publicação; artigo científico.

¹ Universidade de São Paulo. São Paulo, SP, Brasil.
munaro.mayara@gmail.com; <https://orcid.org/0000-0002-5301-4946>

² Pontifícia Universidade Católica do Paraná, Curitiba - PR,
Brasil. acmunaro@gmail.com; <https://orcid.org/0000-0002-5973-0142>

³ Pontifícia Universidade Católica do Paraná, Curitiba - PR,
Brasil. carmemk2@gmail.com; <https://orcid.org/0000-0002-7046-6020>

Recebido em: 01/12/2022

Aprovado em: 15/12/2022

Revisado em: 22/12/2022

DOI: <http://dx.doi.org/10.1590/S1414-40772022000300002>

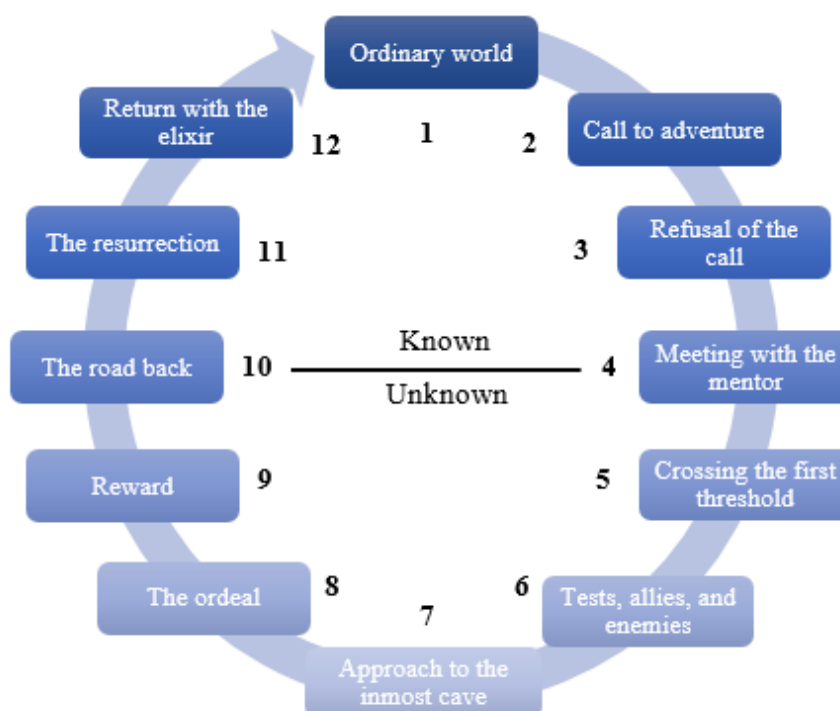
Este é um artigo publicado em acesso aberto sob uma licença Creative Commons
<https://creativecommons.org/licenses/by-nc/4.0/>

1 Introduction

Academic writing is based on scientific evidence, seeking to answer a specific research question through pragmatic reasoning, methods consistent with objectives, and a systematic search strategy. In contrast, storytelling is a type of subjective narrative, with characters and a plot that seeks to involve the reader through a story and that has biases, both from the reader and the writer. Despite being opposed, both styles are devices of persuasion and construction of facts, they seek to inform, prove points, instigate questions, and inspire change. In this way, scientists also tell stories. Scientific discourse is as human as other literary discourses (SANCHÉZ; ALEXÁNDER, 2011).

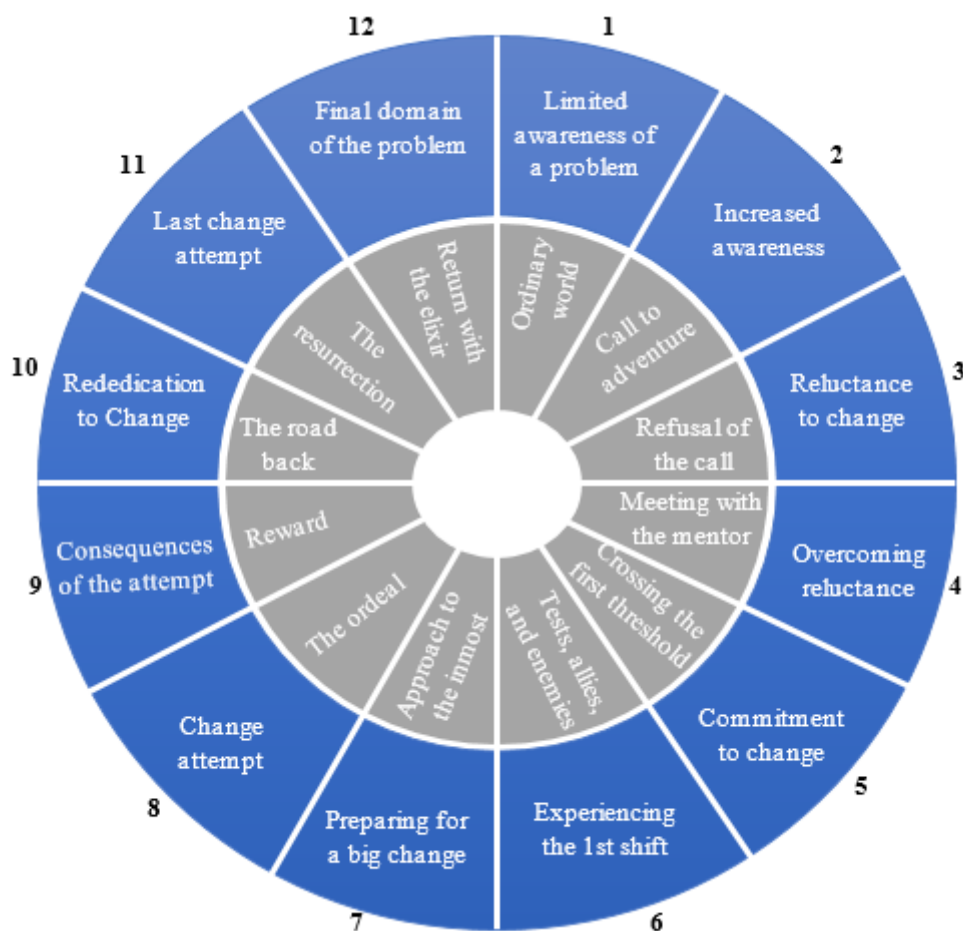
Science and literature have similar purposes (SANCHÉZ; ALEXÁNDER, 2011). The structure of an article, like that of a short story, is intentional, closed, and requires, for technical reasons, to be well thought out (MARTÍN, 2018). In the cyclic journey technique developed by the anthropologist Joseph Campbell in 1949, the monomyth, legends, myths, and fables follow a 12-stage structure for building the script of a story divided into three common phases: departure (stages 1-5), initiation (stages 6-9) and return (stages 10-12) (CAMPBELL, 2004). The character of this journey goes through transformations, starting from a known world (stage 1) to completing his mission and returning to his world (stage 12) with a lesson learned (Figure 1).

Figure 1 – The twelve stages of Joseph Campbell's hero's journey



These twelve stages of the hero's journey, when well understood and used, serve as a reference for building the script of a story. If science and literature have common goals, the twelve stages can guide the journey of writing and publishing an academic article (Figure 2). From the awareness of a problem (stage 1), the researcher seeks to solve it according to common scientific knowledge and available scientific tools, until a satisfactory answer to the presented question (stage 12). By relating the hero's journey of a story to the scientific publication process, the academic transforms his skills and competencies as a researcher throughout the writing, submission, and dissemination of his research. This article explores how the twelve stages of the hero's journey work as a reference for the academic's journey, in the process of writing and publishing a scientific article in high-impact scientific journals.

Figure 2 – Relation between the hero's journey and the scientific publication process



The twelve stages of scientific recognition

Equating scientific activity with the hero's journey will be presented with an emphasis on understanding how to overcome each stage of the process of writing a scientific text. The twelve stages of this journey will be explored until reaching the researcher's goal: publicizing his research. Figure 3 presents the academic journey, from the formulation of a new research problem to the publication of the study.

Figure 3 – Twelve stages of the scholar's journey toward scientific publication



In the sequence, the details will follow the logic: Academic's Journey [Hero's Journey].

2 Status quo [discovery of a new world]

To write, start by reading, but read like a writer (MARTÍN, 2018). This careful reading of publications in journals in the area is essential to update the recent literature on the research topic addressed; learn the specific style of scientific communication; know the journals where the work can be published; see how the articles were structured; to have fluid, clear, organized writing, with a well-developed idea, without redundancy or inappropriate language; to have a theoretically or conceptually sophisticated text in ideas rather than in the form of writing.

The researcher must be aware that reading is also about writing. A text becomes difficult to read because it is poorly written and not because it is sophisticated (MARTÍN, 2018). If the idea is not correctly communicated, it will not be understood in its potential and, generally, will be disregarded, as no one has the patience to develop the idea that the author himself did not know how to develop, increasing the chances of rejection of the article. Any scholar's journey begins with many hours of reading.

3 New Research Problem [stepping out of the comfort zone and calling for adventure]

From readings published in interest, the definition of a research gap is facilitated. The writer also needs to consider issues such as interest in the topic, whether he has the skills and resources to fulfill the objective, whether the problem makes a significant and original contribution to the subject, whether the method is suitable for the proposed objective, and what the possible consequences of the question are both in future research directions, about controversies and concerning existing publications in the research field.

The definition of the research problem is crucial in the writing process and learning. For the academic, it is the stage of doing original and objective research, organizing their time, and starting to establish a research method. A clear and well-defined research question guides the literature review and type of research strategy. The greater knowledge of research in the area facilitates the definition of research gaps. In this way, the beginning of research is a constant self-learning about having discipline, organizing data sets, writing for a certain audience and scientific journal profile, and being as productive as you want.

4 Initial insecurity [refusal to call]

Writing is not a natural and easy task. The beginning of research needs a lot of organization and methodological definitions to guarantee the reliability and replicability of the results. It is at this stage that many questions need to be answered regarding the scope of the study. Is it qualitative research? Quantitative? Are the problems clearly defined? Is the approach appropriate for the defined research question? Is the study context clearly defined? Does the sampling method follow statistical principles? Is the sampling selection strategy defined and does it represent the sample population? Which method of data collection is the most appropriate? Is the data analysis method defined? Is the analysis undertaken appropriate for the question posed?

Answering these initial questions is not easy, but the definition of a systematic and rigorous protocol for collecting and analyzing data is the first step in writing scientific research. Science is the application of a method, so this planning phase should require time and dedication from the researcher to minimize rework and inconsistent results. However, the research strategy can be changed during the development of the adopted method because no research is cast, on the contrary, research is a living organism and adaptable according to the data and the first results obtained.

5 Meeting with the advisor [in the face of the initial impasse, the academic needs a little push]

The writing process is a dialogic and collective activity (MARTÍN, 2018). The exchange of ideas with peers, members of research groups, professors, and researchers, and, above all, with the supervisor (especially for students of graduate programs), is fundamental for the resolution of impasses and the evolution of the research. As in brainstorming, in the face of initial inquiries, sharing data, doubts, and information is a research step that helps in the assimilation of ideas to find a plausible and relevant objective for the area of study.

It is worth noting that scientific research encompasses activities accompanied by significant affective dimensions. For the academic, it is memorable and emotionally complex, and physically, and intellectually challenging. The scientific text is the result of the systematization of the informational content acquired by the author throughout its reading and interpretation. In this way, it is an object configured and formulated from numerous factors, and the support of a network simplifies this process of choices and reflection. The researcher also needs to understand that science is not about certainties; on the contrary, it is about reducing hypotheses, doubts, and questions about a subject, increasing the indications of a more coherent answer to the chosen problem.

6 Commitment to research [crossing between the known and unknown world]

The adoption or development of a systematic research protocol, from the formulation of the question to the improvement and updating of the review, is at the heart of scientific writing, as it avoids the risk of bias and ensures a replicable, scientific, and transparent process of results. Carrying out a literature review is essential so that the new research and all those involved share a common base of understanding. Based on the knowledge of what others have done, it is possible to carry out original and relevant research (MARTÍN, 2018).

In the review process, the researcher begins to organize his ideas, annotate citations, translate important excerpts, and write a draft article. There is no rule of where and how to start the article writing process. Each researcher will determine a process that works and adapts to the particularities of the research and their personality. Martín (2018) defined eight different moments of writing: writing as self-reflection; writing of research results; writing for communication; writing for the first publication; writing for editing and improving ideas; writing for submission to a journal; writing in reviews during the evaluation process; and, written after rejection. The researcher needs to absorb that scientific writing is continuous re(writing) that needs to guarantee a logical and organized sequence of data and information.

The format of the article is a factor that helps in the organization of data and the choice of journal. In many journals, the Introduction, Method, Results, and Discussion (IMRD) format is adopted, combined with the abstract and conclusions. Editors and readers argue that the four-part standardization structure and pre-established content in each section of the study facilitate writing, reading, and subsequent citation of the article (MARTÍN, 2018). It is worth noting that, contrary to the methodology and presentation of the results, the discussion and conclusions have an argumentative and not descriptive tone. Furthermore, try to triangulate the title, problem, and objective so that they converge; use as many keywords as allowed and associate them as if explaining the article to a person who has not read it.

7 Uncertainties [imposter syndrome]

The first version of an article is never what will be sent for publication, much less what will finally be published. The publishing process requires multiple writing and editing before it is acceptable for submission and approved for publication. Writing can feel daunting: endless proofreading, continual review, the feeling that it is never good enough, the discovery that we do not write as well as we thought we did, and the constant need to update data and references. Writing is a process that requires dedication. It is only in the perseverance of multiple writings that skills are learned, trained, and perfected (MARTÍN, 2018).

Writing is essential for research progression. Discover your writing style and do not expect perfection at any time, especially in the first versions of the article. It is advisable to leave spaces in the text to add information, references, or discussions; write the sections with more information first; and save drafts in dated or well-marked versions. Therefore, practice detachment and relate to your text as a work that is always unfinished.

Writing is an iterative and interactive process between data collection, storage, analysis, and interpretation, and thinking is at the heart of actions. A researcher's work is multidimensional and there is reciprocity between these activities: reading leads to planning and then planning will result in further reading, for example. It is important to always keep three study components in mind when interpreting findings: the initial research questions; the sample (with its limitations); and data analysis.

8 First submission [the ordeal]

At this stage, the researcher needs to make a final check of the manuscript, according to the journal chosen for submission. Once the draft writing process is completed, the review must have: i) adequacy, which allows for fluid communication, both in tone and in the form of delivery; ii) consistency, so that the text produces meaning; iii) cohesion, for a logical-semantic connection of the text; and iv) grammatical aspects that meet the agreement between the grammatical elements of the sentence. Frame 1 presents a checklist of items that need to be checked before submission (VERA, 2021).

Frame 1 - Checklist of the formal aspects of a manuscript

Formal aspects
Is the title clear and does it fit the content properly?
Does the text include a summary that presents the central aspects of its development?
Are keywords explained and treated as concepts within the text?
Does the text require a glossary of technical or specialist terms?
Does the introduction clearly and accurately present the objective, the problem addressed or the starting point of the article, as well as the description of the research strategy?
Is there a progression of ideas and information?
Are there resources such as explaining and exemplifying concepts and creating and consolidating discipline-specific vocabulary?
Is there a clear use of connectors to unite or establish logical-semantic relationships between different parts of the content?
Is there a plot or an informative progression of ideas?
Are there argumentative strategies to consistently expose the author's points of view?
Are conclusions supported by reasons explained and illustrated with arguments?
Do the conclusions refer to the results or the central question of the text?
Are tone, style, and lexical selection appropriate for an academic text?
Is there conceptual accuracy in the terms used?

The choice of journal is fundamental because where to publish will define what to publish (MARTÍN, 2018). There is a wide range of scientific journals in different areas of knowledge and some criteria for selection need to be evaluated, such as indexing the journal in prestigious databases; the number of citations received by the journal; and the geographic axis

or language of publication. It is recommended to make a list of possible publication journals, considering the objectives and scope of the journal; the acceptable format and size of the article; and the journal's ranking indicators. A journal's impact factor is something to consider, but sometimes journals with lower impact factors have exactly the right audience for your research. A good article is not defined only by its content, but specifically by writing suitable for the journal in question. Furthermore, in highly prestigious journals, the requirements of editors and reviewers tend to be higher, which can positively affect the proportion of publication refusals.

9 First rejection [the probation the academic must pass]

Statistically, a submission has between a 30% (at best) and a 5% (in high-profile journals) chance of being accepted, so rejection is the norm (MARTÍN, 2015). Initially, submissions are reviewed by the editor and may be rejected at different times during the review process. Only articles that meet scientific and editorial standards and fit the journal's objectives and scope will be sent for external review and/or peer review.

The three most common rejection errors are i) the format of the manuscript (size, grammar, structure); ii) scientific academic writing; iii) originality and relevance of the study (MARTÍN, 2015). Following the guidelines for authors provided by the journal is a *sine qua non* for submission. If the journal sets a limit of 8000 words, you must adjust your study to this format. Otherwise, contact the editor and plausibly explain the inadequacy of your study to the journal's rules, and wait for the editor's acceptance or refusal. In addition, academic writing must have precision, clarity, and formality in its language. In this way, information and knowledge are presented impartially and objectively. The relevance of a study is related to the target audience, the authors with whom the subject is debating, and the specific bibliography that serves as a basis of common understanding for discussion among peers and readers. In this way, the researcher is someone who builds relevance (MARTÍN, 2018).

If there is no response from the editor within 2-3 months, a diplomatic inquiry into the status of the manuscript is appropriate (HITES, 2021). In general, expect rejection. Perhaps the article is outside your area of expertise or the scope of the journal. However, rejection is not a reason for paralysis or discouragement; it is just another natural stage in the scientific publication process. Even if rejected, you will usually get comments that will make the article better and you a better scientist.

Continuous (re)writing is the key to success. Avoid resubmitting a rejected article without reviewing it, even if it is for a less prestigious journal, as reviewers may be requested

by different journals, especially if the subject is very specific. Remember that high-impact journals publish proportionally more articles that have been resubmitted from another journal and that resubmissions receive more citations than the first ones (MARTÍN, 2018). Be patient, take a deep breath, understand where studying needs improvement, and continue to improve your research and academic writing.

10 Reflections and new breath [stage that symbolizes the transformation into a more resilient researcher]

Article writing only stops when it is published, and writing takes training and perseverance. Carefully read and send the editor's letter to all co-authors. Calm down and reread the version of the article you submitted, assimilating the points raised by the reviewers. Wait a few days before starting your response (if necessary) or reviewing your study. Most of the time, authors will agree on the reasons for rejecting the study.

After a rejection, you may need to reorganize your writing routine or some aspects of your research. Plan a roadmap of the items you need to develop, such as discussions about certain concepts, presentation of data, readings that were recommended and that need to be included, translating a certain paragraph, updating some data, changing some figures, etc. (MARTÍN, 2018). It may be interesting to start with the easiest or quickest tasks to solve, so a list or organization of tasks differentiated according to the level of difficulty can be a useful form of organization.

Writing time is an individual, intimate, and much-needed time (MARTÍN, 2018). It is only in reading, writing, discussing, evaluating, editing, and continuous correction that your ideas improve. This stage generates significant self-learning, both in terms of study improvements and in terms of the skills and competencies of the researcher involved.

11 Article rewriting [stage that reflects a sense of recognition and continuous improvement]

The editor's letter will explain the level of review that the reviewers and the journal expect. The spectrum of responses from an editor after peer review of their manuscript can range from acceptance without modification to total rejection (HITES, 2021). Acceptance without any changes is very rare, but if it is a minor revision, celebrate, because it is only necessary to satisfactorily respond to the reviewers' comments, and the article will be accepted without further external review. In the absence of the word 'minor', the editor demands that

major revisions are necessary and will give a longer period for your manuscript to be reviewed and resubmitted. Even if the answer is rejection, there is the possibility of resubmission to the same journal, especially if the editor is on your side. If at least two reviewers say 'reject' try another journal or reconsider the core of the article (HITES, 2021).

Regardless of the 'major to reject and resubmit' response, carefully reflect on the comments that reviewers and the editor have made about your work, most of the time, free of charge, to improve your study and scientific publication. Therefore, the reviewer response document is a slow and thorough job. Appreciate the reviewers' suggestions and time. It is imperative to include and respond to all peer reviewer comments, however irrelevant or misleading. If a reviewer says something is unclear, try to interpret it as best you can, or leave answer options if your interpretation is ambiguous. If you disagree with a reviewer's suggestion, please explain carefully why you did not make this change. If possible, it is better to give in than to argue. Include comments from all reviewers in a unified response document so that the next set of reviewers have all the information in one document. Insert all the answers in the manuscript as well, and do not forget to check that the textual agreement and the numbering of figures and tables remain consistent. Above all, do not miss deadlines. If you need extra time for the one provided, send an email to the editor justifying your request. Usually, the frequency of delays in the publication of a manuscript is a result of the delay of the authors, not the reviewers (MARTÍN, 2018).

12 New submission [highest point of the journey]

It is at this stage that the academic/hero receives feedback if their work has improved and has met the suggestions of reviewers and supervisors. However, before you resubmit your revised study, check:

- a) Whether the study has a complete and up-to-date reference list;
- b) Whether the study cites articles published in high-impact journals;
- c) If there are no excessive citations of conference articles or proceedings papers, dissertations, or theses;
- d) If the focus is an international publication, use international references;
- e) If the chosen journal of submission has cited articles;
- f) Whether the instructions provided in the journal's "guidelines for authors" have been met.

Make a cover letter! Some journals also want you to include a paragraph about what your article is about and why it should be published. A well-written cover letter ensures the editor's attention and interest in your study. In addition, have a suggestion list for potential reviewers of your work, as many journals require reviewers to speed up evaluating studies. Note the average time lapse given by the journal between the submission of an article and its actual publication. Reputable journals respond within 1 to 2 weeks if the article has been submitted for review or rejected by the editor. Follow the status of your study on the submission platform, if the time established by the journal has passed, send an email requesting the status, but do not overcharge the editor. Often the delay is due to the lack of available reviewers in your area of study, so be patient.

13 Accepted article [return with the elixir]

If everything works, you will receive a response from the editor asking for another round of review or acceptance of your work. In the case of further revisions, please continue to respond to the reviewers' suggestions to improve your study. In the case of acceptance of the study, congratulations! The researcher will receive the page proofs that show what the printed article will look like. Pay attention to page proofs, requesting a deadline extension if necessary. This is the last chance to review the article, so do not hesitate to make changes.

Acceptance symbolizes the researcher's success, achievement, and change. It is the moment of effective recognition of the academic/hero during the journey of academic writing. Publishing is not perfection. The publication of an article is the complex result of several stages and decision-making that involve individual efforts and collective work. Both writing and publishing need to be understood as a non-linear, but systematic, collective, and polyphonic process. Writing is a way of thinking; the originality of your study depends on it. The journey shows that it's not just about writing, it's about knowing how to publish.

14 Final thoughts on the Academic Journey

Scientific research produces and transmits new knowledge, enabling innovation and the development of science and technology in all its branches. Research enables the continuous solution of problems faced by society and, in this sense, transforms a technical problem into an ethical one (GUILLEMIN; GILLAM, 2004). Throughout the journey, the researcher must have the sole objective of developing integral and responsible research, considering the methodological and systematic rigor of data collection and analysis and the ethical principles

of doing research. Publication at any cost has serious consequences for the researcher's professional life and may lead to de-publication and retraction due to methodological errors (FRONTIERS EDITORIAL OFFICE, 2022).

Ethics in scientific research must be understood in all its dimensions, from (a) procedural ethics, which involves the approval of an ethics committee to carry out research involving human beings or animals; to (b) everyday ethics that arise in carrying out the research; and (c) ethics articulated in codes of ethics or professional conduct (GUILLEMIN; GILLAM, 2004). The researcher must understand that doing and publishing science requires a lot of responsibility. To Guillemin and Gillam (2004) ethical and rigorous research must have reflexivity. Being reflective means recognizing and being sensitized to the ethical dimensions of research practice and being aware and prepared for ways of dealing with the ethical tensions that arise. A reflective researcher considers both the production of research knowledge and the research process in their scientific publishing journey.

Like academic writing, a reflective research process means an ongoing process of critical scrutiny and interpretation concerning research methods, data, researcher, participants, and the research context. May the academic journey always be synonymous with continuous improvement, both in terms of the development of science and problem-solving, and of the researcher, as an ethical and reflective professional.

References

CAMPBELL, Joseph. **The hero with a thousand faces**. Princeton, New Jersey: Princeton University Press, 2004.

FRONTIERS EDITORIAL OFFICE. Retraction: proxalutamide reduces the rate of hospitalization for COVID-19 Male Outpatients: a randomized double-blinded placebo-controlled trial. **Frontiers in Medicine**, Lausana, Suíça, v. 10, n. 9, p. 964099, 2022. Disponível em: <https://www.frontiersin.org/journals/medicine/volumes>. Acesso em: 29 out. 2022.

GUILLEMIN, Marilyns; GILLAM, Lynn. Ethics, reflexivity, and “ethically important moments” in research. **Qualitative inquiry**, América do Norte, v. 10, n. 2, p. 261-280, 2004. Disponível em: <https://journals.sagepub.com/toc/qix/10/2>. Acesso em: 29 out. 2022.

HITES, Ronald A. How to convince an editor to accept your paper quickly. **Science of The Total Environment**, Oxford, v. 798, p. 149243, dez. 2021. Disponível em: <https://www.sciencedirect.com/journal/science-of-the-total-environment/vol/798/suppl/C>. Acesso em: 29 out. 2022.

MARTÍN, Eloísa. Letters of rejection. **Current Sociology**, Cambridge, v. 63, n. 7, p. 937-942, 2015. Disponível em: <https://journals.sagepub.com/toc/csi/63/7>. Acesso em: 29 out. 2022.

MARTÍN, Eloísa. Ler, escrever e publicar no mundo das ciências sociais. **Sociedade e Estado**, Brasília, v. 33, p. 941-961, 2018. Disponível em: <https://www.scielo.br/j/se/i/2018.v33n2/>. Acesso em: 29 out. 2022.

SANCHÉZ, Upegui; ALEXÁNDER, Arbey. **Manual de redacción académica e investigativa: cómo escribir, evaluar y publicar artículos**. Medellín: Fundación Universitaria Católica de Norte, 2011.

VERA, Elvia Etefanía López. **Guía para la producción de artículos académicos con fines de publicación**. Veracruz: Universidad Veracruzana, 2021.

ERRATA

Na página 414, onde se lia:

“Mayara Munaro¹”

Leia-se:

“Mayara Regina Munaro¹

Ana Cristina Munaro²

Maria do Carmo Duarte Freitas³”

Na página 415, onde se lia:

“¹ Pontifícia Universidade Católica do Paraná

Curitiba | Paraná | Brasil.

Contato: munaro.mayara@gmail.com

Orcid: <https://orcid.org/0000-0002-5301-4946>”

Leia-se

“¹ Universidade de São Paulo. São Paulo, SP,

Brasil. munaro.mayara@gmail.com; <https://orcid.org/0000-0002-5301-4946>

² Pontifícia Universidade Católica do Paraná, Curitiba - PR,

Brasil. acmunaro@gmail.com; <https://orcid.org/0000-0002-5973-0142>

³ Pontifícia Universidade Católica do Paraná, Curitiba - PR,

Brasil. carmemk2@gmail.com; <https://orcid.org/0000-0002-7046-6020>”

Avaliação: Revista da Avaliação da Educação Superior, vol. 27, n. 3, p. 729.