ΣΟΦΙΑ–SOPHIA

DOI: http://dx.doi.org/10.18634/sophiaj.16v.1i.977

Criteria for Selecting a Scientific Journal to Submit an Article: A brief Guide to Avoid 'Burning' a *Paper*

Critérios de seleção de uma revista científica para postular um artigo: breve guia para não "queimar" um *paper*

Alixon Reyes Rodríguez*
Rodrigo Moraga Muñoz**

*Pedagogy in Physical Education. AFSYE Research Group, Adventist University of Chile. Chillán, Chile. alixonreyes@unach.cl ORCID ID: 0000-0001-9587-0930.

**Pedagogy in Physical Education. AFSYE Research Group, Adventist University of Chile, Chillán, Chile. rodrigomoraga@unach.cl ORCID ID: 0000-0003-3946-4884.

Article Information

Received: Nov 29, 2019
Revised: Dec 08, 2019
Accepted: January 12, 2020

How to cite:

Reyes, A. Moraga, R., (2020) Criteria for Selecting a Scientific Journal to Submit an Article: A brief Guide to Avoid 'Burning' a Paper. *Sophia*, 16(1), 93-109.

ISSN (electronic): 2346-0806 ISSN (printed): 1794-8932

UNIVERSIDAD La Gran Colombia
Founded in 1951

Abstract

Scientific dissemination is essential to consolidate academic dialogue and scientific-technical development. Now, much of the research that is done and disclosed does not produce the expected impact since the avenues of disclosure are not the most appropriate in some cases. The purpose of this work is the propositive revision of selection criteria of scientific journals in order to apply for articles for publication by new authors. Thus, it proposes a guide for the choice of a scientific journal that meets the best conditions in the field of visibility, access, impact and quality of information.

Keywords: Research, Selection Criteria, Scientific Journal, Article, Publication.

Resumo

A divulgação científica é essencial para consolidar o diálogo acadêmico e o desenvolvimento técni-co-científico. Agora, grande parte da pesquisa realizada e disseminada não produz o impacto espera- do, uma vez que as rotas de divulgação não são as mais adequadas em alguns casos. Este trabalho tem como objetivo propor uma revisão dos critérios de seleção de revistas científicas, a fim de solicitar artigos para publicação. Assim, gera uma série de indicadores que orientam a escolha de uma revista que atenda às melhores condições no campo da visibilidade, acesso, impacto e qualidade das infor- mações.

Palavras-chave: pesquisa, critérios de seleção, revista científica, artigo, publicação.

Introduction

It is necessary to say that research does not end with the presentation of results in a certain project, but with the publication and dissemination of the same (Ganga, Castillo and Pedraja-Rejas, 2016; Lopez, 2013; Mantilla-Villarreal, Fontalvo, Velasco-Bayuelo, Algarín, Rodelo-Salcedo, Barranco and Caballero-Uribe, 2010; Day, 2005). For researchers such as Ávila and Martínez (2012), not publishing what is investigated is equivalent to the non-conclusion of the research. Thus, publication and dissemination are extremely important links in the process of knowledge transfer and in the validation of research.

Publication, as a premise of the system of dissemination of information and scientific communication [science as certified knowledge (Merton, 1977)], has to do, in the first place, with the philosophy of science (scientific *ethos*, in Merton) and with what scientific knowledge is. This is key because there is a binary relationship in a kind of back and forth that starts from the scope of the researcher and radiates to the close groups, that is, students, peers, the research group, university, the science and technology system of the corresponding country, the system that leads to the international community, etc. In addition, the publication has to do with the scientific dialogue generated by the findings, and, in a concrete way, with indicators that point to the efforts made by institutions (universities, research centers, labs, among others for attached purposes) to specify educational quality assurance in processes associated with teaching and research. In fact, in countries that are part of the agreements in which the Bologna Project and its Latin American correlate *Alfa Tuning*, scientific publication has a priority at the requirement level and has that connotation (Herceg, 2012), configuring this element as a key indicator for accreditation processes (Niles, Schimanski, McKiernan & Alperín, 2019; De la Hoz, 2016; Anzola, 2012; Perceval and Fornieles, 2008; Boville, Argüello and Reyes, 2006). Publishing also becomes a necessity as it is one of the requirements of university institutions for the qualification of advanced training programs (understood as postgraduate), either at the master's level or at the doctoral level [Márquez-Benavides and Baltierra-Trejo, 2017; Universidad Nacional Autónoma de México (Unam), 2011; Angarita and Mateo, 2011], in addition to the investment made by university institutions in the development of researchers.

Publishing, as a product of research, will result in a development cycle that starts from the personal and radiates to the collective. The collective is understood as that primary group with whom the researcher and publisher relates, whether collaborators, work colleagues, students, etc., but which also generates an institutional impact as it consolidates the research experience, producing knowledge, generating new ways of advancement, opening development perspectives and increasing the concrete flow of products in relation to the knowledge production cycle. In addition, those who research and publish generate a certain impact on a scientific community that enters into dialogue in relation to the findings, and we refer here evidently to a plethora of consultants of the research in question; it is this disciplinary reference group that is nourished by the contributions and shares the same codes, granting the respective recognition (Vessuri, 2007). This is an important challenge, because it implies leaving the domestic dimension in the communication of research and its results (Devís-Devís, Villamón and Valenciano, 2014; Rojas, 2008). So, publishing is not an exercise in egolatry, but on the contrary, it is a necessity in the academic and scientific world today.

The need for publication is perceived more when it is understood that there are needs declared by the communities that deserve attention, needs of the institutions, of governments, and although it is true that research is being done in universities, in scientific institutions, in research centers, in

laboratories, among others, it is no less true that not everything that is investigated, is published, and that not everything that is published is located in high-impact sources (Lam, 2016; Jimenez, 2011).

The channels of dissemination of the science that is produced, can be books, scientific journals, technical reports, conferences or presentations at congresses and other events of a scientific nature in which the conferences and papers are presented as a result of research, among others (Jiménez, 2011; Manterola, Pineda and Vial, 2007). In this variety, scientific journals are scientific-editorial agents (Martinovich, 2019) that occupy a place of importance given the dynamism with which they enhance the academic-scientific dialogue, the impact they generate, and the endorsements that allow the validation of the products that are finally published as first (understanding that the validation systems and the criteria of legitimation of the different fields of knowledge are particular). Pire (2015: 1) argues that a scientific journal is a periodical publication that collects the progress of science, including advances in new research. In this sense, given that scientific journals have become a favorite channel for scientific dissemination, it is valid to consider that, whoever considers applying for a research paper to publish in a journal, needs to have clear criteria to select the most appropriate journal.

Background and Findings

When searching for information on the subject, the researcher will find articles, books, blogs, portals, which offer information in relation to recommendations for writing an article (Rivas, 2017), standards for authors (in journals), criteria for indexing journals in international indexes, criteria for the selection of journals by communities and databases (Ruíz-Pérez, López-Cózar and Jiménez-Contreras, 2006; López-Cózar, Ruíz-Pérez and Jiménez-Contreras, 2006). Valuable data can be extracted from all these sources when preparing an article in order to be published in a scientific journal, but a person interested in publishing would have to write down as he/she finds information that is disseminated.

In the search process it has been found that there are not many works dedicated exclusively to carefully examine guidelines or criteria for the selection of scientific journals. There are some which consider the subject as a secondary issue when placing the writing of scientific articles in the first line. This is not demerited, but, on the occasion that summons us, it is considered that, as important as the writing of a scientific article, it is to know which journal to address and apply to publish. Why? As already mentioned, much of what you research is not published and not everything that is published finally reaches adequate visibility. Much of this happens because new researchers do not have the necessary and sufficient tools to select suitable scientific journals, understanding that it is, among other things, a topic of training, mentoring and progressive development (Vessuri, 2007). Although, such a situation is evident, it is no less true that, either due to ignorance (Cáceres, 2014), or due to inexperience, or fear of rejection, or due to lack of guidance and technical support, or to the fact that possibilities are smaller in societies with economic, scientific-technological and political restrictions (Cepeda, Pazmiño and Medrano, 2018; Ibañez, 2016; Marin, 2016; Marcellán, 2016; Poch and Villanelo, 2016; Paez, 2010; Albornoz, 2007), sometimes, good works end up in journals of dubious quality, and therefore the visibility and impact that these can have in the social and scientific field is restricted. The projection and visibility of a research are important, not so much for the prestige they generate for the researcher and the institution he/she supports, but for the impact that, at a social level, it can have. And there is the game of science. Prestige will be a consequence of the above.

Among the findings, we have that Murillo, Martínez-Garrido and Belavi (2017) suppose as recommended criteria for the selection of journals, those that follow below: thematic orientation of the journal; prestige of the journal; time frames for the evaluation process; periodicity. In a second finding, in the report of the Professional Association of Information Specialists (APEI), Baiget and Torres-Salinas (2013), argue that the appropriate selection of a journal should be oriented based on topic, prestige of the journal, impact factor, evaluation and publication deadlines, dissemination, electronic availability, costs to be published. Lubbers (n.d.), proposes six aspects to consider when selecting a journal, these being: analysis of the type of journals according to the field (multidisciplinary or disciplinary), review of the hierarchy of journals according to impact indicators and the prestige of researchers who have published in the journal, review of the journal according to prestige (based on rates of acceptance and rejection of manuscripts), review of the journal's information (thematic line, rules for authors, etc.), references of other researchers who have published in the journal, review of the contents of the journal, and finally, review of the evaluation process of the journal.

According to López (2013), who offers some indications in this regard, the selection of the journal must meet the following criteria: evaluation system of the journal, institution that accredits or sponsors the journal, reputation of the journal in the scientific community, editor or editor responsible with the support of thematic editors, continuity of the journal, strict publication according to periodicity declared by the journal, consolidation of the journal, quality indexes that the journal has and the impact factor of the same. However, a work dedicated exclusively to considering the issue of the criteria for selecting a journal is the one carried out by Márquez-Benavides and Baltierra-Trejo (2017), a work in which a matrix for selection is proposed. The authors argue that there are at least six criteria that must be considered to select a journal, namely:1) the impact factor of the journal [(without it being an exclusion criterion that a journal lacks it) bearing in mind that Scopus and Scimago have their own and equivalent indicators]; 2) the average acceptance time; (3) the number of articles published annually; (4) the type of indexation; 5) that the candidate journal is cited in the article to be published; 6) article publication charges. Note that, although it is true that there are coincidences in the criteria that the reviewed authors mention, it is worth noting that there are criteria that are considered by some and not by others. Moreover, the order of importance in which they are placed is not the same either.

When a researcher has a research paper ready, he/she usually wonders, where do I post? In addition to this, other questions arise: Is my work good enough to be accepted by a journal? What type of journal accepts manuscripts of the type I present? What are its characteristics? etc. Precisely, a characterization of the journals will allow to dispel certain doubts regarding the nature of this type of means of science dissemination and the possibilities that the researcher has to achieve the publication of his/her work identifying and verifying quality patterns of the article in relation to the standards of the journal to which the paper is postulated. The first thing we must bear in mind is that scientific journals are means of dissemination of science, that is, what is published in these journals ends up being the result of a research process, the rigorous and logical application of scientific methods, analysis, discussion, verification, validation, among other aspects, this being one of the main differences with respect to magazines, trade journals, newspapers, among others. Thus, the journal involves a system of evaluation of science.

When talking about the selection of a scientific journal to submit an article, the author must keep in mind certain criteria so that its selection is adequate in terms of timely publication,

of the visibility and generation of the academic-scientific dialogue that initiates its scientific communication. If you don't use criteria to select, you will probably be dazzled by the first journals you get when you rummage through them. Therefore, the criteria become the guidelines that allow to purify the search for the most appropriate scientific journal in order to postulate an article product of the research and not waste an article. Thus, a search based on criteria will yield key indicators on the basis of which a decision is made. In this way, this exercise offers a series of criteria that can guide the search and selection of the most appropriate scientific journal. These criteria aim to include those of a bibliometric nature (which stand out for being quantitative), but also those of a qualitative nature. At the same time, they do not claim to be exclusive, on the contrary, they do intend to become guidelines for researchers.

Suggested Criteria for the Selection of a Scientific Journal

Among the suggested criteria for an author to do the search and review when deciding on the journal to which they will try to apply for their work, are:

* *Editorial line and topic of the journal:* When authors are going to apply for a work, they must consider the editorial line of the journal and the thematic orientation. This is because if your work has no affinity with the editorial line, then it will be rejected, not because the work is bad, but because it does not correspond to the editorial line. This situation also does not suggest that researchers should change these criteria for each journal they review, but choose the one with which they share thematic purposes and criteria. When authors search for information, they will surely come across multidisciplinary journals (e.g., social science journal), disciplinary journals (e.g., journal of physical activity sciences), and mono-thematic journals (e.g., journal of biomechanics, journal of otolaryngology, Latin American journal of metallurgy and materials). On that account, authors must contrast that the topic of their work corresponds to the thematic orientation of the journal, otherwise, no matter how good their work is, it will be rejected. Journals can also be distinguished by their assiduity to publish monographic issues, special issues, among other modalities, and their format may vary: printed, electronic and mixed.

**Indexation:* One of the first (and most important) criteria considered for the selection of a scientific journal is indexation, that is, if the journal is accredited by national and international indexes of scientific journals, being included in databases and repositories (institutional, national, international), being the most popular indexes, at least in Latin America, *WoS (ex ISI), Scopus, Scielo, Redalyc* and *Latindex*. It is important to consider that each country has a system of accreditation of scientific journals, generally resident, either in executive ministries of education and science, in systems for the promotion of science and technology, or in national science and technology funds of the respective countries. These also evaluate and accredit journals at the national level, generally using standardized criteria with the index. Indexation is awarded by the index to which it has been applied when a journal, after being evaluated, stands out for complying with a minimum number of requirements that guarantee the quality, the visibility of the publication, the evaluation and arbitration protocols, among other aspects of scientific relevance. It is thought that an indexed journal has a higher level of scientificity and impact than a journal that is not, hence universities and national and international systems of research, science and technology, endorse publications of this type. Work is being done so that refereed journals are consolidated and aspire to indexing. Of course, from this platform a thorough review of the journal is suggested, and this in view of the fact that, as García suggests (2006:44):

> If, because the journal is not indexed, we should a priori consider all articles bad and discard them, we are wrong. If, because the journal is indexed, we should accept all articles as good, this is also wrong.

In fact, it would be worth highlighting the issue, given that, characters like Randy Schekman, Nobel Prize in Medicine in 2013, said: "(...) the reputation of big magazines is only guaranteed to a certain extent. Although they publish extraordinary articles, that's not the only thing they publish. Nor are they the only ones who publish outstanding research" (quoted in, Barsky, 2014: 1/1). It may be the case of a more non-indexed refereed journal that publishes high-quality works, but the journal still needs to comply with some other requirement to achieve indexing, and these are criteria that do not have to do specifically with the quality of the articles but with elements related to the very platform of the journal that must be corrected as soon as possible. These elements must be important to the author, but not limiting when selecting the journal. Now, one way to determine the indexation of the journal is to review the indexes in which the journal claims to be indexed. One issue is that the journal declares to be indexed and another very different that it actually is. To determine this, look for the corresponding index and check according to the ISSN of the journal (whether it is printed, electronic or mixed). This can be done in the specific portal of the corresponding index or in some matrix of journal analysis [an example: Information Matrix for Journal Analysis (MIAR)]. This is because the indexes update from time to time the information referring to the validity of the indexation, or not, and generally do so more frequently than journals do with their own websites.

**Language:* The language or languages in which a journal publishes are fundamental, as it could be an element that restricts or creates possibilities to a researcher. An author might try to submit the article in English, which is the language in which the largest number of high-impact indexed journals are published, and the language in which the largest number of scientific articles are published annually (Niño-Puello, 2013; Martel, 2001), or could submit the work in one or more other languages he uses, in which there are also high-impact scientific journals. But, generally that decision is taken into consideration of the visibility and impact that the article in question may have. It is worth highlighting a fact that illustrates what has been said. According to an investigation by De Pablos, Tuñez and Mateos (2015: 288-289):

> In Spanish, 13.8% of the journals included in GSM lists, 5.2% of the journals indexed in Scopus and 5.6% of those in the WoS database are published. In English, 59.7% of the journals indexed by Google, 88.7% by Scopus and 86.9% by Web of Science.

Now, this does not mean that the publication in Spanish should be abandoned. On the contrary, it represents a challenge in that it must be strengthened and enhanced with research products published in journals with visibility that generate an impact at the academic-scientific and social level. The publication in Spanish becomes, according to Cuello (2017), more than a necessity, an obligation and an opportunity for the community due to the democratization of knowledge and for the development of Latin American academia.

**Periodicity:* The scientific journal is a periodical publication, and that implies that it will be published every so often. So you will find journals that are published monthly, others that come out every two months, others publish quarterly or every three months. The most common are journals that have a biannual periodicity. There are annuals, and there are also those of continuous periodicity. The periodicity of the journal demarcates the time in which each new issue comes to light. So, when authors submit a work, they must

consider the period of time in which the journal comes out, and whether the waiting time influences the current research results or not. It is worth noting that journals of continuous publication publish the works once they are accepted (and modified, in case it would have been necessary according to the verdict of the referees) and the process of editing the text is finished. Within the context of periodicity, it is worth reviewing the journal's publication history and the number of articles it publishes per year and per period. Seeing this data will allow us to notice the behavior of the journal in terms of periodic consistency (that it publishes in relation to the declared periodicity), but also in terms of the possibilities of publication of an article. If the journal publishes few articles per issue and per year, then there is greater restriction.

**Validation process:* Also known as refereed journals. This has to do with the process of evaluation of manuscripts, considering specific elements that the journal declares in the various regulations it indicates (among which are writing, design, implementation of methods, protocols, instruments, results, contributions, among others). It is worth considering the system used for the evaluation (double-blind, single-blind, open review system). The most used is the double-blind system, which implies dual ignorance, that is, neither the evaluators know who the author of the manuscript is, nor the latter knows who the evaluator is (Schonhaut, Millán and Podestá, 2017). It is perhaps among the systems used that most protects the process and the one that offers the greatest security in the evaluation of manuscripts, as long as it reduces the possibility of conflict of interest, or the possible manipulation of the evaluation due to certain affinities. The evaluation of the manuscripts protects the scientific nature of the works to be published and ensures the quality of the journal. Rodríguez-Gázquez (2011: 171) argues:

> No scientific journal, no matter how famous, has the ability to publish all the articles it receives, so it is necessary to make a careful selection of the material that comes to it, choosing the one that is innovative, made with scientific rigor and that has the greatest potential impact on readers. Additionally, editors are under pressure that scientific papers published must be of high quality in order to give the journal credibility.

In relation to this same topic, Devís-Devís et. al. (2014: 724), state that transparency in the manuscript evaluation process (and not just the duration of these processes) "allows potential authors to make informed decisions regarding the selection of journals in which to publish their research."

** Visibility and access:* The visibility of a journal is important as the researcher must remember that it is a question of disseminating and socializing the findings. In fact, one of the requirements for journals indexation (in any of the indexes) goes through the issue of the visibility of the journal. For example, the journal is required to have its own website, whether it uses the *Open Journal System* [(OJS) be "an open source software developed for the editorial management of journals that commit to open access -*Open Access*- Devís-Devís et. al. (2014)] or not, but that has its own page that facilitates direct access to potential readers. In addition, the researcher must inquire about the databases, repositories and catalogs in which the journal is located because this will allow it to be much more visible. Access is another aspect to take into account because it has to do with the possibility that a reader has for access to the document in question. There are journals that work with the open access system, while there are journals that opt for the payment of a subscription to have access to the full text, or payment for a particular article. This is known as restricted access. If authors want their article to be accessible

then they will opt for a journal that works with the open access system, and that implies gratuity at the time of being consulted by a reader anywhere in the world if you have access to the network. It implies that whoever wants, can then download the file, copy it to another device, print it, read it, cite it, etc. (Soto and Vega, 2011).

**Periods of evaluation and issuance of verdict:* This data is important because the researcher will have to consider the periods that a journal is given for the process of evaluating a manuscript. There are journals that are given as a deadline 15 days, there are those that finish the process in a month, there are others that declare a period of 3 to 6 months. But there are others that respond even in 1 year, or in 1 year and a half, maybe longer. When a journal does not declare the time of evaluation and issuance of verdict with respect to a manuscript (which is not usual, but still happens), the author could get an idea by averaging the periods declared by the journal when reviewing the articles of the last issues of the same. There look for the declaration in which the date of receipt of the manuscript and the date of acceptance are made clear. The researcher may have information only on the period of the approved articles, and will not know the information regarding the failed ones. Consider that this information will only be referential, because each article has its particularities. It is worth clarifying that there are journals that place as data the rejection rate of manuscripts. Knowing this information is relevant since some works (with certain types of results) in particular, could lose validity or topicality in case of not being published at the time, and even more so when it comes to important information that gives or subtracts seriousness and prestige to a journal. In this regard, González and Mendoza (2012: 1) clarify: The duration of the editorial process is an important criterion in international indexes that value the quality of scientific journals, and it is also a decisive element of the authors when choosing the journal to publish their articles. Now, do not think that, because a journal has a high rejection rate, it becomes a candidate not to consider for your article. On the contrary, it is usually a journal that has a significant concentration of works received (to the point that some even suspend the reception of new manuscripts during certain stages or times of the year) and applies a rigorous referee process. One more fact to highlight:

> 20% of the journals that are currently published receive 80% of the works, a number that increases in Social Sciences where the journals present in the most prestigious international databases (JCR or Scopus) are less. This fact leads to high rejection rates, reaching, in some cases, an index of around 90-95% (Delgado-Ponce, 2017: 1/1).

Given the quote, it is also worth noting that other studies suggest that there is no correlation between a high rejection rate and the impact factor of the journal (Rocha da Silva, 2015). In any case, the important thing is that the article produced is a quality article, and you can opt for a publication in high-impact journals, not only from the bibliometric point of view, but also for the expected social and academic impact.

**Types of articles publishable by the journal:* This information is relevant as long as the type of work it publishes is made explicit by the journal. Here the researcher will find diversity, and this is articulated in some way with the thematic orientation of the journal. Original research, essays, stories of pedagogical experiences, book reviews, reviews, systematic reviews, retractions, interviews, among others. ResearcherS must check whether the article they have prepared is considerable for the journal they are reviewing based on the typology that the journal prioritizes.

** Standards for authors:* Each journal establishes minimum guidelines to consider when applying for an article. These have to do with the format of presentation of the works, the structure of the same according to the type of article in question, the editorial line and the thematic orientation of the journal, the

extension of the document, the citation rules, the construction of a list of references, the number of references allowed, the sources and their size, information on graphs and tables, among other important elements. Note that the first review of a manuscript is the one made by the editor of the journal to consider whether the work is presented according to the established guidelines and whether or not it is suitable to be evaluated by the referees. Hence, it is necessary to review the rules or guidelines to postulate a text of these characteristics.

* *Preliminary review of published articles:* Reviewing the latest articles that a journal has published can be a didactic exercise while the researcher can verify if the journal has published articles similar to the one being postulated, either in terms of the type of text (original research, systematic review, essay, pedagogical experience, among others), or in terms of the quality of the document, which may very well include magnitudes in sample proportions, instruments and their validation, analysis of results, etc. These data may offer the researcher some indication because of the probabilities of his/her work in relation to a specific journal.

* *Associated costs:* The issue of costs has become one of the most complex issues in the context of scientific dissemination and knowledge transfer. This is because the movement that has emerged around open access has placed as an agenda item the commercial model of scientific publication, which, associated with cost trends for institutions and universities, supposes amounts that grow annually and generate a kind of commodification of knowledge (Díaz, Ramírez and Díaz, 2019). This is evidenced in two key elements: the costs for subscribing to journals, indexes and databases, and the costs for publishing articles. Both dynamics finally affect the researcher because it makes research more expensive and creates a dangerous cocktail around scientific publication. Whoever tries to publish should consider that, there are journals that, although declaring themselves as publications with the open access system, they estimate a cost per article once it has been approved by the journal in the corresponding referee process. 2 things can happen: a) the author does not have the funds to pay for this amount; b) the author can afford it personally, or has a financial disposition given his/her link with an institution that finances this type of expenditure as it is interested in the publication of its researchers. It is worth noting that, when a journal has good editorial practices, the cost associated with the publication of an article is relatively low and is not related to advantages or preferences at the time of being evaluated, nor does it predispose in any way to the referees of a certain work to favor its evaluation. That's not the approach. Generally, journals that opt for this requirement do so much more because of the production and maintenance costs of the magazine (King and Tenopir, 2001). So, researchers will have to decide if they can apply considering that, if their work is approved, then they will have to pay the cost associated with the production of the article in the corresponding number.

* *Calls:* Many journals make calls for the submission of articles. The researcher must be attentive to such calls and consider them in the light of what is required, and this insoout as the calls are diverse, that is, for current numbers, for monographs, for special issues, or for a dossier. This data should serve therefore, the calls generally have an expiration period, unless it is the call for the current issues of the journal (Cisneros and Olave, 2012).

What about the impact factor?

When talking about the impact of a publication it is necessary to emphasize that two things are referenced. Firstly, to the impact that such publication will have on the academic environment, and secondly, reference is made to a specific indicator used for certain

measurements. Is it important to consider the impact factor when selecting and deciding on a journal? Well, yes.

Generally, researchers do research by selecting the journal in which they consider their work will have greater visibility, in which it can generate a high ratio of queries / citations, and in which the prestige of the journal gives their work an added value. These aspects are assessed in relation to the impact factor. When an article is published in a journal with high IF, the researcher is referenced in the most important knowledge communities, the research group or the institution that supports the publication with its seal acquires notoriety, and this brings him/her closer to the possibilities of competing for external funds of the most important and robust in terms of financing, either nationally or internationally. This includes the possibility of obtaining grants and/or scholarships, among other things (Lameda, Suárez, Uzcátegui and Zambrano, 2015). Thus, the impact factor (IF) is constituted as a bibliometric indicator of relevance in the context of research. Thus, it is an indicator that is calculated according to the average of the number of occasions that in a year an article published in a journal is cited considering the previous two years. In this sense, it is used to award prestige and relevance to a journal.

It is also worth saying that, generally, the IF is associated with the importance of a journal within the journals that share its field, and this is determined by measures of position, being in this case that of the quartiles the one used. Therefore, the researcher will find that a journal, in its evaluation, will have the respective indicator (quartiles): Q1, Q2, Q3, Q4. This means that each of these quartiles manifest the position of the journal compared to the others in its field. So, if you find a magazine positioned in Q1, it means that it is a magazine considered among the most important because it is in the rank with higher IF. However, it is worth considering that, just as the IF has its arguments in favor, it also has some limitations. According to Márquez-Benavides and Baltierra-Trejo (2017), the value of the IF is relative, and this is understood, as García (2006: 44) assumes that considering that a journal or an article has an impact by the number of citations it has produced is a misconception, since there are several factors that alter the results. Among these factors can be: each field of knowledge has a tendency in the context of citations, thus, there will be some fields in which abundant citations are generated (health, for example), while in other fields not, and that does not determine that some works and journals are of greater or lesser quality (Dorta and Dorta, 2014; Aleixandre-Benavent, Valderrama-Zurián and González-Alcaide, 2007). It is argued that the IF is a representative indicator of the cult of the quantifiable to the detriment of the social impact of a research (Fernández-Sola, Granero-Molina, Hernández-Padilla and Aguilera-Manrique, 2011), there is talk of manipulability of the indicator according to the interests of journal editors (Barsky, 2014), among others. In this order of ideas, Campanario (2006: 4) adds

> that comparisons of the impact factors of journals belonging to different areas should be avoided, as the dynamics of knowledge generation, citation patterns and publication mechanisms are, in general, different. In addition, it should be noted that the ISI sometimes uses unclear criteria to include a journal in one group or another.

Other aspect to consider is that, systematic review works tend to be more frequently cited for the type of information they offer; self-citations also have some influence; some journals employ a pattern of behavior (uns written, unreclared) in the evaluation of manuscripts that suggests the 'need' to cite other articles from the same journal (while this increases the JOURNAL's IF); and that is to say, there are institutional and/or commercial interests that are not declared by the most

important indexes that accredit the journals and there is a specific interest in some very particular journals being indexed by the indexes in question that are the ones who measure the IF in turn. In a study carried out taking into consideration the IF as an index (appropriate or not) to determine the degree of evidence of studies on therapeutic procedures in surgical journals, Manterola, Pineda, Vial and Losada (2005: 46-47) concluded that

> (...) empirical studies in relation to the validity of the IF as an indicator lack quality, and it is known that there are multiple variables that can intervene in the calculation of the IF and that can be affected or even constitute biases. For example, the type of journal and its weight, the language of the publication, the name of the authors, self-citations, repeated citations (few articles have many citations and most are cited occasionally or never).

Due to these (and other) limitations, modifications have been generated that point to a measurement with greater accuracy, for example, weighted IF by specialty (Dorta and Dorta, 2014), adjusted FI (measured in much shorter periods), among others (Aleixandre-Benavent, Valderrama-Zurián and González-Alcaide, 2007). While it is true that the IF has a different impact and dynamics in the various fields of science, it can be an indicator that helps the researcher to decide on one or another journal. Now, it is also important to consider that the IF of a journal can vary over time, and you should think about the relationship of the IF for the time you do the review and the time it might take for the article to be published.

Help for Journal Selection

There are technological tools in the form of specific programs designed to help the researcher due to the selection of scientific journals. These programs (which are not infallible) can be consulted *online* and allow searching through a series of algorithms. Among some of these we have:

From the platform of *Web of Science* (WoS) you can have access to a tool called *Manuscript Matcher*, which works with a series of algorithms that allows you to locate journals (in a list they call *The Master Journal List*) related to the topic indicated by the person who consults while intending to publish a text. The tool selects the journal according to the data provided by the person who consults, thus filtering the search and suggesting journals. Through WoS you can also generate the search with *EndNote*, which, is a software with multiple applications. Available at: https://apps.clarivate.com/ mjl-beta/home

a. *Find My Journal:* It is a software that selects journals using a mathematical and objective algorithm to pre-select the best and most suitable journals to publish. Works with *WoS, Scopus, Springer, PubMed*, etc. Available at: https://www.findmyjournal.com/es/inicio/

b. *Journal Suggester:* It is a program that employs semantic algorithms and relates the IF to the search interests of researchers. It works exclusively with journals of the universe *Springer* and *BioMed*. Available at: https://journalsuggester.springer.com/#

c. *Enago Open Access Journal Finder:* It is a software that tracks scientific journals indexed in quality open access that are pre-evaluated to protect it from so-called 'predatory journals'. It works with journals included in the Directory of Open Access Journals (DOAJ). Available at: https://www.enago.com/academy/journal-finder/

d. *Edanz Journal Selector*: It is a program that uses data from *Thomson Reuters*. Similarly, it allows to make a comparative analysis of the journals according to impact indicators. Available at: https://www.edanzediting.com/journal-selector

e. *MIAR:* The Information Matrix for Journal Analysis (MIAR, for its Spanish acronym) is not technically a software for journal selection, but it does collect data to identify, filter and analyze journals according to their indexation, ISSN and their location in databases, indexes and repositories. It can be consulted at: http:// miar.ub.edu/

f. *Journal/Author/Name/Estimator* (Jane): Program that uses *PubMed* as a search engine, and filters journals and articles through the *Medline* and *DOAJ*platforms. It also works with an indicator called 'Article Influence' (AI), which measures the number of citations of an article during the first 5 years after its publication. Available at: http:// jane.biosemantics.org/

g. *Journal Guide*: It is a program that gathers databases of journals and allows comparison considering some quality indicators of the journals according to their indexes. Available at: https://www.journalguide.com/

h. *Journal Selector*: It is a program that, unlike the previous ones, does not work with impact indicators, but with specific criteria associated with the internal management processes of the journal, for example: Evaluation system of the journal, access system, lapse in the evaluation of manuscripts and issuance of verdict, etc. Filters journals associated with the database *Cofactor Journal Selector*. Very useful for the selection of journals according to these criteria, it can be consulted at: http://cofactorscience.com/ journal-selector

i. *Springer Journal Selector*: It is a program that compares journals according to IF and journals with open access system. It only filters magazines associated with the Springer publishing house. Available at: https://www. springer.com/gp/authors-editors/jour- nal-author/journal-author-helpdesk/prepa- ration/1276#c1258

j. *Elsevier Journal Finder*: It is a program that filters journals exclusively from *Elsevier.* It uses the criterion of selection by the system of access to the journal (open or restricted), locating journals according to thematic lines. Available at: https:// journalfinder.elsevier.com/

In addition to the programs already mentioned, there are academic social networks that function as spaces for the exchange of information and publications, in which there are working groups between researchers who share information in relation to scientific journals, whether disciplinary or multidisciplinary. For example: *Mendeley, Academia, Research Gate, ResearchID, Epernicus, Labroots, My Science Works,* among others. A researcher can also locate information by visiting national repositories on the institutional portals of the national science and technology councils, commissions or funds of the respective countries in which information is generated on databases and accredited and indexed journals. Finally, researchers are urged to consider the need to remain in permanent contact with the invisible academic community, since it is a community that is constantly feeding on new processes, new technologies, advances in which scientific dissemination is at the forefront, and this may involve new means of dissemination, new formats such as the scientific book, among others.

Conclusions

In the first place, it is highlighted that, despite this is considered a list of criteria that pose a complex scenario for publication, the researcher should not think that it is impossible to publish. In fact, according to the *UNESCO Report on Science Towards 2.030* (2015), at the date of publication of the report, 1,272,118 scientific articles were published in the world (indexed in WoS journals) with an upward trend. This allows us to infer that scientific publication is not impossible, and can become a rewarding task for the novice researcher venturing into the context

of dissemination of science. Secondly, knowing and managing criteria with which a researcher can select suitable scientific journals that report visibility and generate social and scintiometer impact, will help reduce the pressure to publish in researchers, and will help to channel publications much better due to the scope of the same in the types of journals in which the works are postulated.

Thirdly, doing the exercise of systematizing and selecting a journal to apply for their work will provide tools to researchers to strengthen their research proposals while keeping informed about the current state of the art in the field under study, while enriching the teaching work as long as this will impact on the consultation of students both in undergraduate and postgraduate. That is, having a more informed teacher will result in more informed students with greater search tools when selecting sources and resources. Ultimately, the search exercise to select a journal will provide bibliometric elements that will help the researcher and the institutions themselves based on the networks and academic-scientific dialogues that are naturally woven in that context. And finally, achieving publication is an academic achievement of relevance for the academy that brings benefits in various dimensions, the most important of them: the generation of academic-scientific dialogue given the production of knowledge. This will allow the researcher to participate in a cycle of knowledge production.

References

Aleixandre-Benavent, R.; Valderrama-Zurián, J. C. and González-Alcaide, G. (2007). El factor de impacto de las revistas científicas: limitaciones e indicadores alternativos. *El profesional de la información*, 16 (1), 4-11.

Albornoz, M. (2007). Los problemas de la ciencia y el poder. *Revista CTS*, 8 (3), 47-65.

Angarita, J. L. and Mateo, M. del C. (2011). El reto de acometer un doctorado: Modelos de Doctorado y Tesis Doctoral. *ORBIS*, 7 (20), 149-177.

Anzola M., G. (2012). La investigación en el proceso de acreditación institucional en la UDCA. *Revista UDCA Actualidad y Divulgación Científica*, 16 (1), 1-2.

Avila, R. and Martínez, R. (2012). ¿Publicar o no publicar? La importancia de las publicaciones en los programas doctorales. *Revista Digital de Investigación y Postgrado de la Universidad Nacional Experimental Politécnica "Antonio José de Sucre"*, 2 (1), 56-67.

Baiget, T. & Torres-Salinas, D. (2013). *Informe APEI sobre publicación en revistas científicas.* Spain: Asociación Profesional de Espe- cialistas en Información.

Barsky, O. (2014). La evaluación de la ciencia, la crisis del sistema internacional de revistas científicas y propuestas de políticas. *Debate Universitario*, 3 (5), 109-124.

Boville L. De T., B.; Argüello S., N. and Reyes C., N. G. (2006). La acreditación como proceso dinamizador de la sociedad. *Actualidades Investigativas en Educación*, 6 (1), 2-21.

Cáceres C., G. (2014). La importancia de publicar los resultados de investigación. *Revista Facultad de Ingeniería*, 23 (37), 7-8.

Campanario, J.M. (2006). El factor de impacto de las revistas académicas: preguntas y respuestas.

Cepeda Á., K. I.; Pazmiño I., L. and Medrano F., E. L. (2018). Evolución de la Investigación Científica en América Latina. *Revista Científica Mundo de la Investigación y el Conocimiento*, 2 (2), 464-476. DOI: 10.26820/recimundo/2.(2).2018.464-476

Cisneros E., M. & Olave A., G. (2012). *Redacción y publicación de artículos científicos. Un enfoque discursivo*. Colombia, ECOE Ediciones.

Cuello, M. (2017). Publicar en español, más que una necesidad, una obligación y oportunidad que beneficia a la comunidad. *Revista Chilena de Obstetricia y Ginecología*, 82 (1), 5-11.

Day, R. (2005). *Cómo escribir y publicar trabajos científicos*. 3ª ed. Organización Panamericana de la Salud: Washington D.C.

De La Hoz L., R. (2016). La investigación y su rol en la acreditación de alta calidad en las instituciones de educación superior. *Ingeniare*, 12 (21), 7-8.

De Pablos C., J.M.; Tuñez L., M. and Mateos M., C. (2015). El idioma, como vehículo de la comunicación científica: análisis de la visibilidad e impacto de la investigación a través de la bibliometría de Google. *Estudios sobre el Mensaje Periodístico*, 21 (1), 283-298.

Delgado-Ponce, Á. (2017). *Tasas de aceptación y rechazo*. Retrieved from: https://comunicarautores.com/2017/03/19/tasas-acceptance-and-rejection/

Devís-Devís, J.; Villamón, M. and Valenciano V., J. (2014). Revistas iberoamericanas de Educación Física/Ciencias del Deporte presentes en Web of Science: evaluación y desafíos. *Revista Brasilera de Ciencias Do Esporte*, 36(4), 723-732. DOI: http://dx.doi.org/10.1016/j.rbce.2014.11.004

Díaz, V. A.; Ramírez G., M. E. y Díaz E., A. S. (2019). El Open Access a debate: entre el pago por publicar y la apertura radical sostenible. *Investigación Bibliotecológica*. 33 (80), 195-216. DOI: http://dx.doi.org/10.22201/iibi.24488321xe.2019.80.58039

Dorta G., M. I. and Dorta G., P. (2014). Factor de impacto agregado según campos científicos. *Investigación bibliotecológica*, 28 (62), 15-28. DOI: https://doi.org/10.1016/S0187-358X(14)72563-8

Fernández-Sola, C.; Granero-Molina, J.; Hernández-Padilla, J.M. & Aguilera-Manrique, G. (2011). Factor de impacto de revistas:
¿Amenaza u oportunidad? *Aquichan*, 11 (3), 245-255. DOI: 10.5294/here.2011.11.3.1

Garcia, J.M. (2006). Las revistas indexadas. *Revista Mexicana de Oftalmología*, 80 (1), 44-45.

Ganga, F.; Castillo, J. and Pedraja-Rejas, L. (2016). Factores implicados en la publicación científica: una revisión crítica. *Ingeniare, Revista Chilena de Ingeniería*, 24 (4), 615-627.DOI:http://dx.doi.org/10.4067/S0718-33052016000400007

González H., V. A. & Mendoza O., L. E. (2012). Cómo mejorar el factor de impacto. *Revista Fitotecnia Mexicana*, 35 (3), 1.

Herceg, J. S. (2012). Tiranía del paper. Imposición institucional de un tipo discursivo. *Revista Chilena de Literatura*, 82, 197-217.

Ibañez, T. (2016). La razón científica como dispositivo de dominación. *Revista Libre Pensamiento*, 85, 8-9.

Jiménez Á., J.M. (2011). Tipos de publicaciones científicas. *Columna*, 1 (4), 91-96.

King, D. W. & Tenopir, C. (2001). Publicación de revistas electrónicas: economía de su producción, distribución y uso. *ACIMED*, 9 (4), 78-85.

Lam D., R.M. (2016). La redacción de un artículo científico. *Revista Cubana de Hematología, Inmunología y Hemoterapia*, 32 (1), 57-69.

Lameda, C.; Suarez G., L.; Uzcátegui V., R. & Zambrano G., C. (2015). Importancia de publicar artículos científicos desde las perspectivas individual, de las organizaciones y la sociedad. *REDIP*, 5 (4), 914-927.

López-Cózar, E. D.; Ruíz-Pérez, R. & Jiménez-Con- treras, E. (2006). Criterios Medline para la selección de revistas científicas. metodología e indicadores. Aplicación a las revistas médicas españolas con especial atención a las de salud pública. *Revista Española de Salud Pública*, 80 (5), 521-551.

López L., S. (2013). El proceso de escritura y publicación de un artículo científico. *Revista Electrónica Educare,* 17 (1), 5-27.

Lubbers, M. (n.d.). ¿Cómo publicar en revistas indexadas? Universitat Autónoma de Barcelona. Retrieved from: http:// www.uab.cat/servlet/BlobServer?blob-table=Documentyblobcol=urldocumen-tyblobheader=application/pdfyblob-key=idyblobwhere=1305019403378y-blobnocache=true

Manterola, C.; Pineda N., V. & Vial, M. (2007). ¿Cómo presentar los resultados de una investigación científica? *Revista Chilena de Cirugía*, 59 (2), 156-160. [Accessed: 22-8-2019]. DOI: http://dx.doi.org/10.4067/S0718-40262007000200014

Mantilla-Villarreal, A.; Fontalvo, J.M.; Velas- co-Bayuelo, C.; Algarín G., J.; Rodelo-Salcedo, E.; Barranco, D. de La R. and Cabal- lero-Uribe, C. (2010). Guía práctica para publicar un artículo en revistas latino- americanas. *Salud Uninorte*, 26 (2), 311-324.

Marcellán, F. (2016). Un análisis crítico del conocimiento científico. *Revista Libre Pensamiento*, 85, 24-29.

Marin, P. (2016). Mitos de la ciencia capitalista. *Revista Libre Pensamiento*, 85, 10-23.

Márquez-Benavides, L. & Baltierra-Trejo, E. (2017). El proceso analítico jerárquico como metodología para seleccionar revistas científicas en el área biotecnológica. *e-Ciencias de la Información*, 7 (2), 1-19. DOI: http://dx.doi.org/10.15517/ eci.v7i2.26817

Martel, A. (2001). When does knowledge have a national language? Language policy-mak- ing for science and technology. Ulrich Ammon (Ed.). *The dominance of English as a language of science: Effects on other languages and language commu- nities*,Great Britain, De Gruyter Mouton, 27-58.

Martinovich, V. (2019). Revistas científicas argentinas de acceso abierto y circulación internacional: un análisis desde la teoría de los campos de Pierre Bourdieu. *Información, cultura y sociedad*, 40, 93-116. DOI: https://doi.org/10.34096/ ics.i40.5540

Merton, R. (1977). *La sociología de la ciencia. Investigaciones teóricas y empíricas*. Translation by Néstor Míguez. Madrid: Alianza Editorial.

Murillo F., J.; Martínez-Garrido, C. & Belavi, G. (2017). Sugerencias para escribir un buen artículo científico en educación. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación,* 15 (3), 5-34. DOI: https://doi.org/10.15366/ reice2017.15.3.001

Niles, M. T.; Schimanski, L.A.; Mckiernan, E. C. & Alperín, J. P. (2019). *Why we publish where we do: Faculty publishing values and their relationship to review, promotion and tenure expectations", BioRxiv, 706622.*

Niño-Puello, M. (2013). El inglés y su importancia en la investigación científica: Algunas reflexiones. *Revista Colombiana de Ciencia Animal*, 5 (1), 243-254.

Páez V., J. G. (2010). La investigación universitaria y la formación del profesorado latinoamericano. *Aposta, Revista de Ciencias. Sociales*, 47, 1-38

Perceval, J. M. & Fornieles A., J. (2008). Confucio contra Sócrates: la perversa relación entre la investigación y la acreditación. *Anàlisi*, 36, 213-224.

Pire, R. (2015). La importancia de las revistas científicas universitarias y la necesidad de su financiamiento. *Compendium*, 18 (35), 1-2.

Poch P., A. & Villanelo L., F. (2016). Ciencia sin alma: la impronta neoliberal en la investigación científica chilena. Retrieved from: https://ciperchile.cl/2016/12/19/science-without-soul-the-imprint-neoliber-al-in-the-scientific-chilean research/

Rivas R., F. (2017). Cómo publicar un artículo original en revistas con factor de impacto. *Revista Pediatría Atención Primaria*, 19 (26), 101-109.

Rocha D. S., P. (2015). Las altas tasa de rechazo de artículos por parte de una revista no garantiza un buen posicionamiento de impacto. Retrieved from: https://cuellar-gragera.wordpress.com/2016/02/08/las-altas-tasa-de-rection-de-articu- los-por-parte-de-una-revista-no-garanti- za-un-buen-posicionamiento-de-impac- to-universo-abierto/

Rodríguez-Gásquez, M. (2011). La revisión por pares en el mantenimiento de los estándares de calidad de las revistas científicas. *Investigación y Educación en Enfermería*, 29 (2), 171-173.

Rojas, L. R. (2008). ¿Por qué publicar artículos científicos? *Orbis*, 10 (4), 120-137.

Ruíz-Pérez, R.; López-Cózar, E. D. & Jiménez-Con- treras, E. (2006). Criterios del Institute for Scientific Information para la selección de revistas científicas. Su aplicación a las revistas españolas: metodología e indicadores. *International Journal of Clinical and Health Psychology*, 6 (2), 401-424.

Schonhaut B., L.; Millán K., T. & Podestá L., L. (2017). Revisión por pares: evidencias y desafíos. *Revista Chilena de Pediatría*,88 (5), 577-581. DOI: http://dx.doi.org/10.4067/S0370-41062017000500001

Soto, E. & Vega, R. (2011). Cienciometría y nuevos medios de publicación. *Elements*, 81, 31-39.

UNESCO (2015). *Informe de la UNESCO sobre la ciencia. Hacia 2030*. Luxembourg, UNESCO Editions. Retrieved from: https://unesdoc.unesco.org / ark:/48223/pf0000235407_spa

Universidad Nacional Autónoma De México (2011). *Procedimiento de registro del artículo como requisito de titulación del Doctorado de Psicología UNAM*. Comisión de Revistas Subcomité del Doctorado en Psicología UNAM. México: Del autor. Retrieved from: http://psicologia. posgrado .unam.mx /wp-content/ uploads/2019/05/CRITERIOS-revis-tas-doctorado-03311911.pdf

Vessuri, H. (2007). La formación de investigadores en América Latina y el Caribe. Conferencia presentada en el Seminario regional "Políticas de investigación y enseñanza superior para transformar a las sociedades: Perspectivas desde América Latina y el Caribe", Puerto España, Trinidad, 19-20 de julio, 2007. UNESCO Forum on Higher Education, Research and Knowledge, en: https:// unesdoc. unesco. org/ark:/48223/ pf0000154242