

EDITORIAL

Prior to a publication in a journal, the peer-review process consists of subjecting a scientific, academic or professional work to evaluation by experts within the same field, in order to determine if the work meets the journal standards. Due to the large amount of articles received, the time frame, and the speciality of the subject, the editors of the journals do not have the capacity to review all the manuscripts. Therefore, experts within a subject domain are required in the evaluation of manuscripts before the final decision for accepting or rejecting an article. Under these circumstances, reviewers independently and critically evaluate texts written by other scientists or experts working on the same topic or area [1, 2].

Nevertheless, although peer reviewing is a universally used method and considered as an indicator of publication quality, it is surrounded by controversy and difficulties. For years, a large number of journals have obligatorily performed peer review processes on any article to be published as a basic condition in the construction of scientific information; however, this process has been transformed into a more complex, time-consuming and arduous practice. On the one hand, there are not too many truly qualified specialists to assess the scientific contributions in the different subspecialties with objectivity and rigor. On the other hand, these potential reviewers are often exhausted with their own work, and review tasks are almost always ad-honorem contributions. These two aspects have challenged journals when finding competent peer reviewers each time a new manuscript is received [3, 4].

In addition to the above difficulties, there is also the questioning about the effectiveness of the historically established peer reviewing, arguing the lack of a measurement for effectively validating the reliability and quality of what is published. As is known, some failures have been reported in the quality control mechanisms, filtering out some scientific fraud. Furthermore, the heterogeneity of the reviewers' observations has been pointed out, which has allowed some irregularities; for instance, some work being rejected in a journal and then accepted in another in a similar level. Besides, reviewers are expected to respond promptly to the request to review a manuscript and to submit constructive, honest and correct comments within the agreed time [5], but this process is time-consuming and slows down the response to the authors, causing a natural demotivation and less potential reliability towards the journal.

Correspondingly, acting as a reviewer means spending a

significant amount of energy and time voluntarily. Being invited to act in the review process of a scientific work is an act of implicit recognition of competence and reputation within the field knowledge. The person being invited is being delegated the responsibility of whether a certain work must be published [6].

On the other hand, the role of conflicts of interest, sometimes involuntarily undeclared, cannot be ignored. Despite all these considerations, assigning to others the task of deciding whether or not publishing a scientific work is prevalent, because it still gives prestige and credibility to journals and reciprocal confidentiality, encouraging authors to achieve a better level of research and scientific writing, and helping control plagiarism and publication of manipulated or irrelevant results in subjects not relevant to the editorial board. Despite the discussions, peer review has allowed the advancement of science, but it lacks an experimental basis that justifies its wide acceptance and regular implementation. Peer review has no clearly established foundation and is not an unailing method; Although its value has been poorly studied and widely discussed, peer review helps editors decide which manuscripts are suitable for their journals, also facilitating the article quality. [6]. In any case, the editor of a journal is the final arbiter of the review process, being able to make decisions for issues not related to the quality of a manuscript, such as the suitability for publication [2].

Thus, an expert peer review process can positively influence authors and works, offering free advice in the process of transforming a manuscript into a scientific article. Through the peer review process, papers should improve in the following aspects [7]:

Robustness: Reviewers can point out gaps in a work that require more explanation or additional experimentation.

Readability: If parts of the article are difficult to understand, reviewers can suggest modifications. After all, if an expert cannot understand what has been expressed, a reader in a different field is unlikely to understand.

Relevance: Reviewers also consider the significance of the work within the field and can make suggestions to improve it.

There are different technical and editorial reasons for rejecting a manuscript. Technical reasons often require more work, such as additional experiments or analysis

before the work can be published.; some of them include [7]: i) Incomplete data, such as a small sample size, or non-existent or poor controls. ii) Poor analysis such as using inadequate statistical tests or the lack of complete statistics. iii) Inappropriate methodology to validate the hypothesis or an old methodology, which has been replaced by newer and more powerful methods that provide more solid results. iv) Weak research objective where the hypothesis is not clear or is not scientifically valid, or the data does not answer the question proposed. v) inaccurate conclusions about assumptions that are not supported by the data.

These reasons for rejection can be avoided by spending enough time reading the subject broadly, carefully deciding on the topic on which the hypothesis is based, and planning a comprehensive experimentation process.

The editorial reasons for the rejection include [7]: i) Out of the scope for the journal. ii) Not enough progress or impact for the journal. iii) Research ethics ignored, such as patient consent or approval of an ethics committee for animal research. iv) Lack of an adequate structure or not following formatting requirements of the journal. v) Lack of the necessary details for readers to completely understand and repeat the authors' analysis and experiments. vi) Lack of updated references or references containing a high amount of self-citations. vii) Poor linguistic quality, unreadability. viii) Difficulty following logic or poorly presented data. ix) Violation of publication ethics.

These reasons for rejection can be avoided by following the journal specific guidelines, writing a consistent article using appropriate English and honestly evaluating the work when deciding on a target journal.

Once the manuscript is returned by the reviewers, the authors are given the opportunity to review it according to the reviewers' comments and the editor's comments. Journals have different review deadlines ranging from just a few weeks to months depending on the reviews that need to be done. If authors do not think they will be able to return a revised manuscript in the allotted time, they must tell the editor immediately. They should be able to offer an extension but it is best to discuss this with them as early as possible.

When reviewing the work and responding to peer review comments, the authors are recommended to: Thank the reviewers and editors for their time and comments; address all points raised by the editor and reviewers; describe the main revisions of the work in the response letter followed by point-by-point responses to the comments made; develop any additional experiments or various analyzes that the reviewers recommend (unless

they are not thought to improve the work, if so please provide sufficient explanation in the response letter); provide an educated and scientific refutation to any point of disagreement. Remember that if the paper is submitted for a second round of peer review, the reviewers will also see that letter; differentiate between reviewer comments and letter responses clearly separating the main text revisions, either with a different text color, highlighting changes, or with Microsoft Word's Track Changes tool. This is in addition to describing the changes in your point by point cover letter.; finally return the revised manuscript and response letter within the time period allotted by the editor [7].

Appeals of a rejection decision are only successful in a few cases and usually only when strong evidence or new data can be provided that might respond and mitigate the concerns of editors and reviewers. They must be rational and not emotional arguments; therefore, it is recommended to have enough evidence before trying to change the editors' decision.

Additionally, even considering an appeal letter, these recommendations must be followed: A clear explanation on the disagreement, providing new information the editors have to consider. This should not be a repetition included in the original submission or cover letter. If the editors or reviewers have highlighted shortcomings in the article that can be corrected, authors must indicate how to address them, for example by providing more data. A point-by-point response to reviewers' comments must be included.

Any evidence to support possible technical errors or biased interpretation in the evaluation must be provided.

The Editorial Board of *Revista Facultad de Ingeniería-redin-* expresses its appreciation to the reviewers, who generously contributed their time and expertise to the review of articles, improving the scientific quality of the journal.

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