



Publishing a Research Paper

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The purpose of this white paper is to explore the topic of academic publishing. Publishing research papers is critical for both graduate students seeking a degree, early career professionals seeking for higher positions and academicians or company R&D staff, among many other stakeholders. Yet, many submitted papers are rejected on the first try.

It is the 16th paper in a series of thoughts collected, organized, and promoted by the Quality in Education Think Tank (QiETT) of the International Academy for Quality (IAQ).

The first paper addressed a broader scope of topics and put into perspective the overall field of “Quality in Education”, which set a common ground for further reflection and guidance of QiETT activities. The forthcoming papers, such as this one, focus on more specific topics and delve deeper into particular topics based upon the collection of international inputs from quality and education experts.

To date, this collection of white papers comprises the following titles:

- 1-“Quality in Education: Perspectives from the QiETT of IAQ”
- 2-“Large Scale Training of Quality Professionals”
- 3-“Inclusive Quality of Education”
- 4-“Continuing Education in Quality Improvement for Healthcare Professionals and its effects on organizational improvement”
- 5-“Current Societal Challenges to Quality and Quality Management in Higher Education”
- 6-“Applying Quality Theory to Educational Systems”
- 7-“Training and Teaching Statistical Methods for Quality”
- 8-“Simple Hints to Help Trainers Improve Training Quality”
- 9- “Student Quality Circles: A Step Towards a Total Quality Society”
- 10- “Solving Problems in Education Using Quality Tools”
- 11- “Making Online Education Effective”
- 12- “Integration: The Key to Effective and Efficient Quality Education”
- 13- “Examining the Nexus of Workforce Development and Quality”
- 14- “Flashes of Insight – The Many Pathways to Creativity and Innovation”
- 15- “Writing a Research Paper”
- 16- “Publishing a Research Paper”

1. Introduction

There are different types of research that may be performed, depending on the main intents of the research activities conducted. Hypothesis testing research is performed to test a hypothesis pertaining to a potential causal relationship between research variables. Descriptive research is performed to characterize phenomena. Exploratory or formulate research is conducted to gain new insights and diagnostic research is conducted to identify how often something occurs or is associated with something else (Kothari 2004).

Academics are expected to publish research and will be judged on their number of publications and their impacts. In many areas, University Professors are expected to publish at least two or three major papers per year during the first years of their academic career (Jalongo and Saracho 2013). The need to consciously publish is known as “publish or perish” in the academic world (Fanelli and Larivière 2016).

Publishing research helps academics with finding employment, gaining access to promotions and may also be a requirement for graduation or reaching the top position of Full Professor (Hsiang-Yee Lo et al. 2014). Publication is also useful for being recognized for work performed, increasing the status of the author’s institution, and gaining a profile (Murray 2005). However, publication is also rather competitive these days, with journals lacking sufficient space to publish all papers that are submitted, and this increases the challenges for early career researchers (Rowley 2022) and faculty members.

This paper reviews the topic of publishing academic papers. The main objective here is to identify and compile generic aspects, which inexperienced researchers can consult when attempting to get their research results published.

2. Metrics

Although academics are expected to publish and are evaluated based on the number of publications they have authored (Fanelli and Larivière 2016), there are other metrics that also matter. The number of citations is used for judging academics in the form of impact factors and the h-index (Fanelli and Larivière 2016). The number of citations a paper has also shows the paper’s impact in the field (Teplitkiy et al. 2022). An academic’s research performance can be assessed using the h-index, which is based on the point where the number of citations is equivalent to the number of publications (Hirsch 2005). However, there may be a bias towards well-established researchers and against researchers in fields that are more obscure (Murray 2005), and all bibliometric indicators have their own limitations.

The number of publications alone is not sufficient for judging the performance of an academic researcher. Often, the rankings of journals are taken into consideration (Frandsen et al. 2022). Although the IF (Impact Factor) has shortcomings, an IF is often used to assess the standing of a journal with better journals having a higher IF ranking (Ketcham 2007). Nations such as Pakistan, China and South Korea offer cash payments to researchers who publish in high impact journals (Al-Awqati 2007). Agencies that provide funding may require publication in a high IF journal. Universities also consider the IF of journal publications when evaluating job candidates (Dong et al. 2005)

An IF is calculated based on the mean of citations of papers published in a journal over the previous two years (Ketcham 2007) and provides an objective quantification of a journal’s quality

(Al-Awqati 2007). For example, in the field of pathology, there are over 70 journals with IFs ranging from 0.064 up to 6.446 (Hall 2011).

Authors should aim for the highest rated journals possible, while considering how well the material fits the journal. If a paper is rejected, it should then be submitted to the next lower-ranked journal (Hall 2011). Journals may be intended for an academic audience or a practitioner audience. Academic journals will have an emphasis on theory and research, but may have a smaller audience. Practitioner journals have an emphasis on practice and experience and often reach a larger, but less academic, audience. Practitioner journals are less prestigious than academic journals for scientific purposes and might not even conduct a proper peer review (Murray 2005). An alternative to publication in a journal is presenting at a conference and publishing in conference proceedings. Although less prestigious than journal publications, publishing in conference proceedings has the advantage of sometimes being easier (Zain et al. 2011), although there are also areas of knowledge with top conferences that are more prestigious and demanding than many journals, such as is the case of computer science.

Academic institutions often require and only recognize publications that belong to recognized index databases. There are many indexing databases, such as Thomson Reuters Journal Citation reports, SCOPUS, PubMed, EBSCO Publishing's Electronic Databases (Balhara 2012), or Web of Science (Mulcahy et al. 2021). Papers should be submitted to the highest ranked journal that they both fit and have a chance of being accepted into. Table 1 lists sources for finding journal rankings.

Table 1. Sources for journal rankings

Source	Link
Scimago Institutions Rankings	https://www.scimagojr.com/journalrank.php
Scopus	https://www.scopus.com/sources or https://www.elsevier.com/?a=91122
Clarivate	https://clarivate.com/webofsciencegroup/solutions/journal-citation-reports/

Fields often have top journals and publication in a top-ranked journal is far more valuable than low-ranked publications in the field. There are also predatory journals, which lack sufficient peer review to avoid publishing low-quality papers (Pollock 2020).

3. Research Journal Requirements

Journals may provide an opportunity to submit a cover letter explaining what research question was addressed and how this research question was addressed. The cover letter can also be used to provide context regarding how the research pertains to the relevant literature (Richardson et al. 2021). A journal may also require details such as author name, affiliation, email address (Rhoads 2006) and a corresponding author, who is the journal's main contact for all correspondence (Santini et al. 2019). A conflict of interest statement may also be needed to either declare conflicts of interest or to clearly state that there are no conflicts of interest (Rowley 2022). Journals often provide a confirmation and a reference number once a paper has been received for publication (Thompson 2005). Papers submitted to a journal should conform to the

journal's publication guidelines (Simon et al. 2020), which are usually available at the journal's website.

4. Peer Review

Scientific publications have peer review to ensure the papers published are scientifically sound and provide added value (Pollock 2020). Peer review may be conducted blind or open. Blind peer review may be single-blinded, with the reviewers aware of the authors' identity, but the authors are unaware of the reviewers' identity. A blind peer review may also be double-blinded, with both authors and reviewers unaware of each other's names. If open review is used, authors and reviewers know each other's identities (Drosou et al. 2020).

Peer reviewers, sometimes called referees, read the paper and provide feedback to the author or authors and multiple revisions may be necessary before a paper is considered acceptable for publication (Scarfe 2010). Required revisions of a paper range from a major re-write of the paper to a requirement to perform additional experiments or only minor revisions. If revisions are required, changes should be identifiable and a cover letter should be provided to address all comments made by the reviewers (Fried and Wechsler 2001) and how they were addressed. Any comments that cannot be incorporated into the paper should be explained in the cover letter and provided with references supporting the explanation (Gilmore et al. 2006).

Alternatively, the peer reviewer may recommend rejecting a paper for publication (Hall 2011). Papers may be rejected after peer review due to flaws in the methodology, insufficient evidence to support findings, a sample size that is too small, inadequate description of the methodology, being poorly written, conclusions or implications that are not supported by the findings, failing to offer anything new, key terms being undefined, unclear focus of the paper, or using unexplained acronyms (Hobson 2014), as well as a mismatch of the manuscript contents and the editorial line of the journal.

Not all papers will be sent into peer review. Editors may reject a paper prior to peer review (Munk-Jørgensen et al. 2010), under what is called a desk rejection (Rowley 2022). To be published, a research paper should fit the aims and scope of the journal, be well-written, offer new insights, and must be relevant enough to warrant publication (Mack 2018).

Editors seek papers that are well-written and with high-quality research supporting the paper (Santini et al. 2019). Papers may be rejected prior to peer review for not fitting the aim or scope of the journal, insufficient references, lacking substance, insufficient methodological rigor, lack of transparency in the methodology, failing to fully discuss the findings, not following the journal's instructions for authors, not clearly explaining the objective of the paper, or not making a new contribution to knowledge (Hobson 2014).

The chance of a paper being rejected can be reduced by ensuring the main contribution of the paper is clearly stated, linking the paper to previous research, providing a good explanation of the research methodology used, conforming to the journal's guidelines, and proofreading the paper prior to submission. Using only old references can increase the chance of a paper being rejected since this may suggest that the paper was previously written and not updated with current literature (Rowley 2022).

The time between submission to a journal and acceptance can range from a couple of weeks to six months or even longer. Many articles require being submitted between three and six times before they are accepted for publication, and therefore all together this can result in a paper taking

up to two years or so before being accepted for publication (Azar 2004). Rejected papers should be re-submitted to either a journal with a focus that is closer to the paper, or a journal with a lower ranking (Rowley 2022).

5. Predatory Journals

Researchers should avoid predatory journals, which are journals that may resemble legitimate journals, but bypass or have low-quality peer review in order to make a profit off of APCs (Article Processing Charges) that authors pay to publish in the journals (Bisaccio 2018). Some predatory journals look legitimate and even have respectable researchers listed as members of the editorial review board; however, some researchers may even be unaware that the journal has them listed. Once an article has been accepted by a predatory journal, it may not be possible to get the article back, because predatory journals may refuse to return the paper upon request (Storebø et al. 2017).

There are many predatory journals. Nishikawa-Pacher found that out of the 100 largest journal publishers, 30 were publishers of predatory journals (2022). Approved journal lists are sometimes used to avoid predatory journals (Muthappan et al. 2018). For example, a university in Ghana provides a list of publishers that are considered safe to publish in (Frandsen et al. 2022). There is also Cabells' Whitelist, with around 11,000 safe journals and a blacklist of over 8,300 low-quality journals (Bisaccio 2018). Unfortunately, a journal's presence in a major index is not proof that the journal is not predatory. A researcher submitted the same paper with obvious mistakes to 304 open access journals and the paper was accepted by 157 journals and some of the accepting journals were indexed (Bohannon 2013).

Care should be taken to avoid predatory journals that charge to publish and have little or no quality control in the form of appropriate peer review. If a list of approved journals is unavailable, a search of Cabells (www2.cabells.com) can be performed before submitting to an unknown open access journal that charges for publication.

Not all journals with APCs are predatory, and in certain areas of knowledge APCs are rather common. Overtime, there has been a shift from readers paying, through subscriptions or paywalls, for access to articles, to authors paying publications to make the articles available as a part of open access publishing with legitimate publishers offering open access publication (Houck et al. 2019).

6. Concluding Remarks on Publishing Research papers

Aspiring researchers face a gauntlet of challenges when seeking to publish research. Submitted papers may receive a desk rejection from an editor, a rejection after peer review, or may even inadvertently be accepted by a predatory journal.

If a paper is returned from peer review with a request for changes, changes should be made and identified in the paper and any changes that were not implemented should be explained in detail in a cover letter. Changes should also be considered when papers are rejected after peer review.

Papers should only be submitted to journals when they fit the aims and scope of the journal. The papers should also be written and formatted in the style required by the journal. Journals listed in scientific databases should generally be chosen over journals that are not listed. A plan for submission should be created, with higher ranking journals listed first and then lower ranking journals the paper can be submitted to in case of rejection by a higher-ranking journal.

Before submitting to an unknown journal, due diligence should be performed to ensure that the journal is a legitimate journal and not a predatory journal. For example, a check could be made to ensure the journal is either on a white list or not on a black list.

Having a paper accepted into a journal can help with career advancement, provide recognition for completed research, help a researcher to develop a profile, and advance knowledge (Murray 2005). But first, the paper must be well-written and submitted to a suitable journal.

To get papers rejected is part of the established quality assurance system in place, and sometimes, like in all systems, wrong and unfair decisions can also take place in the editorial process, depending namely on the referees chosen, their own limitations, or biases. Therefore, a rejection is part of the academic profession, and should always be seen as a learning opportunity, more than anything else. But the authors believe that following some of the guidelines and recommendations provided in this paper will increase the chances of having papers accepted when there are enough scientific merits and contributions to support that as being the right and fair editorial decision.

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