

## Publication in Civil Engineering discipline: A glance

*Publication is considered the yardstick to measure research performance in higher education. However, ethics in publication is highly questioned. This article discusses acceptable norms in research publication.*

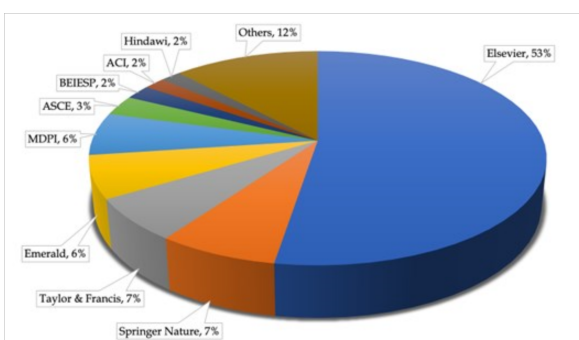
Publications may also be seen as an asset that helps authors to gain recognition and reputation in the academic community as experts in a certain field. Publication in indexed peer-reviewed journals also gives international recognition to corresponding scholars as well as universities. The young academics aware that failure to achieve the quality and quantity requirements for journal publications might seriously hinder his or her career. Nowadays, fresh graduates are required publication from reputed journals on their wing to get the scholarship for their graduate studies. That is why, in the recent years the trend of publication from undergraduate research has increased, which is not the norm a few decades before.

### Points to consider for publication

It is crucial to select the best peer-reviewed publication for the research work. Usually, an author will submit to their target journal first, and if they are unsuccessful there, move on to their second choice. A list of 1-2 target journals for each manuscript author plans to publish is a good idea.

There are so many journals out there right now from various publishers of scientific journals in every category of scientific research. More than 50% of the journal in the Civil Engineering field are published by Elsevier and followed by springers,

**Figure 01: Popular publishers for civil**



Taylor & Francis and Emerald.

### So, how do you choose where to submit your work?

Type of research: Among journals, they focus on different types of research. There are basic science journals, there are applied science journals, there are review article journals. As you evaluate target journals, consider what kinds of techniques you use in your research. Some journals tend to publish mostly articles with certain kinds of techniques. Think about what kind of experiments you use in your research, and look at recent volumes of that potential target journal to see what kinds of techniques are being published there.

How much time is required for publication: Different journals publish at different speeds. Publication time depends on several factors; initial screening time, evaluation by the editor, reviewing period, and production stage. Although the acceptance of the reviewer and the time taken by the reviewer to review the paper are not in the control of journals, still influence the reviewers' pool and set the time for the reviewer to complete the review. Most of the journals set the period for reviewers between three weeks to two months. Even some journals set this as one week, but they are mostly open-access paid journals. Also, when the paper has been accepted, how much time it takes to be published? Some journals have instant access, where as soon as it is accepted it

shows up online as author proof version or final version. Generally, it takes one to two weeks. But some others will have to wait for the next available issue for an accepted paper to be published. It takes several months to even a couple of

years. Always the former one is preferable. To see the journals; publication speed, you can go into your potential target journal to look at the dates on recent publications. You can look at the time between submission and acceptance and publication to get a feel for the speed of different journals.

Prestige of the journal: Journal impact factor or alternative measure of the scientific influence of scholarly journals which is a kind of proxy for prestige. Think about whether you want to go for a top journal, a mid-range journal, or are you happy with the lower-range journals. Publishing in a top journal is always good. But at the same time, they expect a high standard or novelty in the research and it is hard to publish in these journals. In an early career, too much rejection affects confidence in academics. Sometimes it is perfectly appropriate to publish in a mid-range journal or lower-end journal, depending on your particular situation and your needs at the time. Experience in publication and an improved publication profile will give more chance of acceptance in top journals in the future. But you have to make sure not to be trapped in the predatory journals for quicker publication.

Careful about predatory journal: You also want to make sure that the journal you are selecting is not bogus or predatory. You want to avoid those because although they might be fast and they might be inexpensive, they are not going to help your career very much. It might hurt your career if you are publishing in predatory journals. Open access or subscription: It depends on do you have a grant or fund for publication. Most journals have both open access and subscription-based. Open access publication has the advantage of

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the high visibility of your research but it is very expensive for Sri Lankan standards, ranging from \$800 to even more than \$5000. Keep in mind that even some university or institutional journals are open-access but do not charge the authors to publish.

### Measure of the scientific influence of scholarly journals

The indexation of a journal is considered a reflection of its quality. Indexed journals are considered to be of higher scientific quality as compared to non-indexed journals. Even though there are several indexations used for journals, when it comes to Engineering journals, the following are generally used by Sri Lankan academics.

Journal Impact Factor (Web of science index): Journal Impact Factor (JIF) is the most common indicator at the journal level. The JIF of a journal indicates the average number of citations during one year to articles published the two years before, divided by the number of documents indexed in Web of Science published in those same two years [1].

Cite score (Scopus): It is the number of citations received by a journal in one year to documents published in the three previous years, divided by the number of documents indexed in Scopus published in those same three years [2].

SCImago Journal Rank – SJR (Scopus): Scientific Journal Rankings (SJR) is calculated from articles and citations in the database Scopus. The SJR is calculated over three years, self-citations are prohibited, and the SJR value for the publication containing the citations is also taken into consideration [3].

Quartile index: Quartile index is determined by the impact factor (IF), citations, and indexing of that particular journal. It

has to be divided into the following four quadrants: Q1, Q2, Q3, and Q4. The top 25% of the list's journals occupy Q1, followed by journals in the 25–50% range in Q2, journals in the 50–75% range in Q3, and journals in the 75–100% range in Q4. The journals that rank in the top quartile for a certain field are the most prestigious [4].

Until recent years, Journal Impact Factor is widely used as a measurement of the quality of the journal. The impact factor can be influenced and biased by many factors. Especially, it depends on discipline and comparison of the impact factor to the cross-discipline journal is inappropriate. Also, citations of papers in journals are not in correlation with the quality of the journal and even less so with the scientific quality of the paper. So, recently, the SCImago Journal Rank (SJR) has become more popular. Also, from the year 2019, for the selection of Presidential awards and NRC awards, SJR score the journal has been used.

[1] [www.clarivate.com](http://www.clarivate.com)

[2] [www.elsevier.com](http://www.elsevier.com)

[3] [www.scimagojr.com](http://www.scimagojr.com)

[4] [www.mondragon.edu](http://www.mondragon.edu)

### How to find the suitable journal?

The best option is to read the article published by the fellow academics and colleagues in your field. It takes some time but it gives additional knowledge on what is the new research going on in your field.

An immediate source of potentially suitable journals is your paper's reference list. Another way to identify candidate journals is by performing keyword searches in databases such as Web of Science, Scopus and Google scholar. Journals that

appear repeatedly are potentially suitable.

Nowadays, Web of Science data and websites of major publishers provide the suggestion for a suitable journal based on your article title and abstract. Generally, Journal Finder uses a machine learning algorithm to create a list of recommended journals for you to publish your research. The major limitation in using journal finder is it provides only a limited number of suggestions and most of them are top-ranked journals. A few suitable journal finders are given below.

- **Web of Science:** <https://mjl.clarivate.com/home>
- **Elsevier:** <https://journalfinder.elsevier.com/>
- **Springer:** <https://journalsuggester.springer.com/>

### Where do Sri Lankan Civil Engineering academics target?

The figure below summarizes the journals and number of articles published in the particular journal by civil engineering academics from Sri Lankan state Universities in the last five years. A large number of articles have been published in the Journal of Building Engineering and Construction & Building Materials. Journal of Building Engineering is a fast growing journal, which first published the article in 2015 and indexed in Science Citation Index Expanded list in 2018, but within four years from indexation, it reached an impact factor of 7.114. Construction and Building Materials is one the prestige journals in Civil Engineering and ranked 14th out of 326 in the Civil and Structural Engineering category by Scopus. A larger number of articles published in these journals by Sri Lankan Civil Engineering academics show that even with limited facili-

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ties and resources, they can publish in top-ranked journals. These journals may be the starting point for young academics and students to target for their publications.

Also, there are two local journals: Journal of the National Science Foundation of Sri Lanka (JNSF) and Journal of the Institution of Engineers (Sri Lanka – IESL), that can be targeted by civil Engineering academics. JNSF is indexed in both Web of Science: Science Citation Index Expanded and Scopus. Journal of the Institution of Engineers is only indexed in Web of Science: Emerging Sources Citation Index. When your research is narrowed to local issues and lacks importance for interna-

tional readers, then these journals are more suitable for publication.

### What is the recommendation for graduate students and early-stage academics?

Publishing in the non-reputable journals can damage the reputation of your research, restrict your career, and result in minimal or no uptake and dissemination. The journals that your supervisor and colleagues use for research are an excellent place to start when choosing one for your publications.

The next step is to study the papers in the journal you are considering to publish. One of the most important ways to identify high-quality journals is their transparency regarding their goals and scope, editorial board, indexing status, peer review procedure, reputation, and author policies.

top-ranked journals better to move quickly to for mid-range journal or lower-end journal. But make sure whatever journal you targeted; is better to be indexed on one of the indexations mentioned above.

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**Figure 02: No of publication in Scopus indexed journal in the field of Civil Engineering with Sri Lankan state uni-**



These standards can be used to find reputable journals that are suitable for publishing.

It is always good to be published in top-ranked journals in your early career. It provides you with confidence and a reputation in the academic field. But at the same time, waiting for only publishing in top-ranked journals may have a negative effect as your research can be outdated. So, it is recommended to try to few top-ranked journals and if the particular article is rejected by several