OVERVIEW OF INDEXING AGENCIES, INDEXING PARAMETERS, REVIEWING METHODS AND OPEN ACCESS JOURNALS

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ABSTRACT

During this time of globalization, researcher have a substantial duty to work on topics which are beneficial across the globe. There are myriad journals which are available for the dissemination of this created knowledge. But a new researcher finds it difficult to search for these journals and understand how the system works. Indexing Agencies bring these journals to one place and help researchers differentiate between good journals and predatory journals. This article is an overview of Indexing Agencies. This article will also look at some reviewing methods journals use to sort good articles to publish in order to maintain standards. Additionally, it will give an overview of open access journals.

Keywords: *Academic Journals, Indexing Agencies, Indexing Parameters, Open Access Journals, Review Methods*

INTRODUCTION TO INDEXING AGENCIES

To index something is to give reference. It has a great place in Academic Research because, as Eugene Garfield mentions, it links the current research with the works done in the past. Indexes are of different types, namely, conceptual index, author index, subject index, place index, and so on. It helps in a systematic search for relevant works. Robert K. Merton, Manfred Kochan and other researchers describe citation as "formal acknowledgment of intellectual debt" to the cited author [1].

Indexing has a history of gradual and systematic development. In the pre-printing era, it was difficult to keep a record of all works. But they tried indexing whatever they could through concordances. When modern printing was developed, indexing developed as well, as they could print book indexes. One of the classic examples of book indexing is Samuel Johnson's Dictionary of the English Language (1755). It is considered the first index to English language. William Frederick Poole is considered a precursor of modern indexing. He, while still a student, published his own index to periodical literature. Father Robert Busa is called the father of Computational Linguistics. He along with IBM created a vast index, which took them around 30 years to complete. There are search engines today which not only give indexes of the primarily searched article, but also mention the citations cited by the writer for that particular work. Helping the researcher to get a broader search area, time wise and concept wise to researchers [2].

Eugene Garfield calls indexing a large topological field connecting various nodes of works. There are various benefits of Indexing. As Eugene Garfield illustrates by saying there have been classic studies which "demonstrated a remarkable amount of unintentional duplication sometimes even within large institutions." Indexing helps to reduce such plagiarism and promotes authentic work. Indexes help researchers to find out what all work has been already done. This helps in avoiding repetitive works. This also gives researches a solid ground work to base their research on [1].

INDEXING PARAMETERS

Indexing agencies have come up with some parameters to keep a check on the quality of the journals indexed. There are many indexing parameters; some are exclusively developed by companies for their own use. Impact Factor, Cite Score, h-index, g-index, and IC Value are some of indexing parameters. To understand the parameters better, this article will look at some of the advantages and disadvantages of three such parameters.

Impact Factor:

Clarivate Analytics invented the Impact Factor in the 1960s. This indexing parameter is exclusive only to journals published in Web of Science [3]. For calculations, data of 2 years is considered. The formula to calculate the Impact Factor is as follows:

If, D= Number of Articles published in year 1 and 2

And, N= Number of citations of D in year 3

Then, Impact Factor= N/D (calculated in year 4)

This Impact Factor can be a decimal and need not be a round off number. This parameter is calculated and published by the Journal Citation Report (JCR).

The Advantages of Impact Factor are as follows:

- It evaluates the quality of the journals.
- As it is calculated by an in-house committee, it curbs the outside influence.
- As it is conducted regularly, the quality of the indexing agency is maintained.
- The value of the journal can be judged based on this parameter.

The Disadvantages of Impact Factor are as follows:

- As it is calculated by and for only Web of Science, it becomes limited.
- It cannot be accessed for free by all.
- It provides only a vague estimation of the quality of the journal.
- Since it is a patent of Clarivate Analytics, no other agency can use it.
- Web of Science is dominated by the sciences, so journals of Humanities do not have an Impact Factor.

Cite Score:

Elsevier launched a new indexing parameter in 2016. It is exclusive to journals in SCOPUS [4]. It provides a 3 years report as they found it to be an ideal period. It is calculated in the same way as the Impact Factor, the difference is the number of years considered. It includes not just the articles published but also other kind of documents like letters, conference papers, etc.

The Advantages of CiteScore are as follows:

- It is free
- The CiteScore tracker keeps a monthly score of the journals.
- The mechanism of the calculations is transparent and available to viewers.

The Disadvantages of the CiteScore are as follows:

- Though the scope of journals is wider in SCOPUS, the parameter is still limited to the journals within SCOPUS.
- The fact that it considered all kinds of documents, it might impact the journals which focus more on articles and research work more than other documents.

h-index:

Jorge Hirsch developed the concept of h-index in 2005. The 'h' stands for Hirsch. It calculates the value of an individual researchers, or a community of researchers. It is a straightforward calculation. The h-index of a researcher is equal to the number of articles cited those many number of times [5]. For example, if person A has published 10 articles and 8 of his/her articles are published at least 8 times, his/her h-index would be 8.

The Advantages of h-index are as follows:

- It helps calculate the value of the work of a researcher.
- It gives a more objective view towards the researcher.
- Shows not just the quality but also the quantity, as the higher the h-index means the researcher has produced at least those numbers of works.

The Disadvantages of h-index are as follows:

- The ideal h-index for different fields is different, so cannot generalize it.
- It does not give a deeper understanding of the researcher's work.
- It neglects the quality of one work over the other.

REVIEW METHODS

In order to create and maintain these parameters, journals review all the articles before publishing them. There are different stages to reviewing an article. All the journals have a set submission guideline for the authors, updated on their official website. The guideline states the scope of the journal, as in, what research areas does the journal cater to. Formatting guideline mentions the font type, size, spacing, number of words or pages, and so on, expected by the journal. These are to be strictly followed or the article would be rejected at the initial screening. The articles are reviewed pre-publication and also post-publication.

The articles, accepted after the first stage, go to the editorial board for the Desk Review. Here, the editors check if the topic, language and research methods used are up to the standard of the journal. If not, the article is rejected and the author is sent a rejection letter stating the reason. If the article is approved at the Desk Review, it is sent for further peer-review by the experts in the field. These reviewers check if the articles are of quality and have contributed to the field with some novel idea. There are two broad categories of Review Methods: Closed Method and the Open Method. Closed Method is further divided into three types: Single Blind Review, Double Blind Review and Triple Blind Review.

In the Single-Blind Review, the author of the article does not know who the reviewer is, but the reviewer knows the identity of the author. This type of peer-review method has its own advantages and disadvantages. One of the advantages is that, the reviewer is not allowed to reject the article without justifiable reasons. And one of the major disadvantages is that there is a lot of scope for bias. The Double-Blind Review was an answer to the disadvantage of single-blind review type. In this, both, the author and the reviewer do not know each other's identities. But for such a review, the author has to be very careful as not to disclose his/her identity in any manner. For this they have to submit the title page separately and provide an anonymized manuscript. Only the editor knows which article was written by whom and sent to whom for the review. In the Triple-Blind Review, the handling editor, the reviewer and the author do not know the other's identity. It is only the journal manager who keeps a track of everything. This method is very tedious and is rarely used.

Open Review method is fairly new compared to the closed method. It is a counter to the later method as none of the identities are hidden. The author and the reviewer are informed about the other. This method is challenging in the sense that both the author and the reviewer might face the fear of the review. The author might fear the comments they receive openly and the reviewer might fear to critique openly.

If the article is selected, the author will receive an acceptance letter. Some journals charge for the review process during the submission, some charge the authors only after their articles are accepted. And if the article is not

up to the mark, the author receives a letter enlisting the changes to be done and the reasons for the same. The author if agrees to the changes, must send a letter along with the revised article mentioning the changes suggested and done. If the editor and reviewers continue to be dissatisfied, the article is rejected. The entire process might take minimum of 30 days to over a year. After the article is published, the reviews continue in the form of Post-publication reviews. These come as comments, blogs, microblogs, letter to the editor, and so on. There are also formal post-publication review sites available [6].

OPEN ACCESS PUBLICATION

When journals were only in the print format, it was difficult for them to be open to all for free. There were subscription charges, printing charges and so on. Even in the era of internet, some online journals remain closed journals. They have subscription charges, and systems like pay-per-view. For some journals, the authors have to buy their own article as well. But some journals used internet to make things easier and more accessible. These are called Open Access Publications. Some university libraries also act like internet repositories. Scholarly Publishing and Academic Resources Coalition (SPARC) has journals from around 800 institutions from North America, Europe, Japan, China and Australia, clubbed by librarians [7]. They disseminate peer-reviewed articles openly and for free but with certain restrictions. To curb the copy-right issues, the Creative Commons came about in 2001. They help researchers to legally share their work with open access. They developed cc licenses wherein, the main condition is attribution. One can use cc licensed material as long as they give attribution to the author.

Open access (OA) journals, now a days, are categorized using a colour system to depict different level of access. JISC-funded RoMEO project in 2003 established the original colour code [8]. They came up with a standardized approach to the different rights, permissions, and restrictions that are imposed by different publishers. However, a number of colours have been added since. Some of the colours and their connotations are as follows (taken from wikipedia) [9]:

Gold OA:

The publisher makes all articles and related content available for free immediately on the journal's website. In such publications, articles are licensed for sharing and reuse via creative commons licenses or similar.

Green OA:

Self-archiving by authors is permitted under green OA. After peer review by a journal, the author posts the same content the journal will be publishing to a website controlled by the author, the research institution that funded or hosted the work, or which has been set up as a central open access repository.

Hybrid OA:

These, contain a mixture of open access articles and closed access articles. A publisher following this model is partially funded by subscriptions, and only provide open access for those individual articles for which the authors (or research sponsor) pay a publication fee. Delayed open-access journals publish articles initially as subscription-only, then release them as free to read (but not to reuse, adapt and share, so not open access), typically after an embargo period (varying from months to years). In this way subscribers get early access to content.

Diamond/Platinum OA:

The journals which publish open access without charging authors article processing charges are sometimes referred to as platinum or diamond OA. Since they do not charge either readers or authors, such publishers often require funding from external sources such as academic institutions, learned societies, philanthropists or government grants.

Black OA:

The growth of digital piracy by large-scale copyright infringement has allowed enabled free access to paywalled literature. In some ways this is a large-scale technical implementation of pre-existing practice, whereby those with access to paywalled literature would share copies with their contacts. However, the increased ease and scale from 2010 onwards have changed how many people treat subscription publications.

Bronze OA:

Delayed open-access journals publish articles initially as subscription-only, then release them as free to read (but not to reuse, adapt and share, so not open access), typically after an embargo period (varying from months to years. In this way subscribers get early access to content.

CONCLUSION

It is important for researchers to publish research articles no matter which academic stage they belong to. This is because, the effect of the research would be seen only if the world has access to it. The indexing agencies are a boon. In the sense that, researchers get an exposure to good quality journals across the world. But most of these indexing agencies are costly and thus are available only at the university level. Independent researchers may not have access to them. There are many who argue against paid or overly costly indexing agencies as students and researchers and sometimes even universities are unable to pay these high prices. Some have also taken a step against it by developing Open Access Journals, fighting for free an open access of knowledge.

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