A study on the indexing concepts and its benefits in research publication

Paramita Choudhury
paramita.choudhury@res.christuniversity.in
CHRIST (Deemed to be University), Bengaluru, Karnataka

ABSTRACT

An index is essentially a roadmap. Indexing is a way to optimize the performance of a database by minimizing the number of disk accesses required when a query is processed. Indexing is essential to the reputation, accessibility and consequently it impacts the journal articles. Many scholars prioritize referencing and submitting to journals that are included in leading indexes, because indexing is a marker of journal quality. This a study focussing on the indexing concepts and its benefits in research publication.

Keywords— *Indexing, Journal, Research, Publication*

1. INTRODUCTION

The society of indexes was formed in the year1957. A form of index was first found in the 12th century in Hebrew religious literature. Indexing is that part of information retrieval concerned with specifying the content of documents. Indexing is as crucial an aspect in research as the content and its methodical approach guides scholars to find desired content efficiently. Having indexes allows research scholars to more quickly find records for specific individuals; without them, they might have to look through hundreds or thousands of records to locate an individual record. Indexing helps to arrange and record data for future reference. Indexing 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. A useful index is considered as a list of words and phrases used in publication and is also an organized map of contents, including cross references, grouping of like concepts and other intellectual analysis. The prestige of any journal is considered by how many abstracting and indexing services cover that journal. It has been observed that authors have started searching for indexed journals to publish their articles. Probably because, it has become a mandatory requirement in educational institutions. Some of the most common index criteria include that all journals should have:

(a) International Standard Serial Number (ISSN)
(b) Digital Object Identifiers for all articles (DOIs)
(c) Editorial board page with names and titles
(d) Peer review policy
(e) Publishing schedule
(f) Copyright policy
(g) Basic article-level metadata

2. ADVANTAGES OF INDEXING

(a) Indexing will help the journal achieve its main purpose of being accessible to a wide audience.
(b) Indexing can be used for sorting.
(c) Being accessible in turn will improve the journals reputation as a reliable source of high- quality information in your field.
(d) It makes it possible to retrieve data.
(e) Indexing of a journal provides better visibility of the journal with a wider user.
(f) Database research is the first activity researchers undertake as a part of their study, and they naturally look to established, well-known databases. Hence, being indexed in a known database will help increase the journal's readership.

3. GENERAL TYPES OF INDEXING

Researchers start their research by looking into the search engines to know whether their articles if published in a journal will appear in general searches in order to make sure that it is easily accessible to the public. Search engine indexing is free.

(a) **Scholar search engines:** Google scholar is a web search engine run by google that indexes scholarly literature like peer reviewed journals, academic books, conference papers etc. It improves the chances of articles being read, shared and cited.

(b) **General scholarly indexes:** General indexes cover a broad variety of topics and may index popular magazines, newspapers and some scholarly journals. General indexes cover multiple disciplines.

(c) **Discipline- specific:** Discipline specific is a set of understanding that is more than the broad knowledge of the field. This would be more beneficial for readers who prefer to reach only discipline oriented journals than looking into the general journals. It is benefited for the potential readers.

4. INDEXING AGENCIES

There are various setups who have taken the great job of indexing. Here we will discuss five of them.

(a) Google Scholar: This broadly aims to aid the search scholarly articles and literature. This is a single platform which assists to search across various disciplines. This helps researchers' source down articles, theses, books, abstracts and court opinions, from academic publishers, professional societies, online repositories, universities and other web sites which are broadly search for scholarly literature. One can also create a public author profile which helps the authors track the citations for their publications. However, they often cite articles based on its publicity. This might divert the researcher from the present status. Instead only prominent and trending studies may only be highlighted.

(b) Ulrich's periodicals directory: This is a database which provides detailed, comprehensive and authoritative information on serials published throughout the world. This indexes information across all the journals. This includes publications that are circulated free or by paid subscription. This has a weekly update making it convenient for researcher access latest authentic data.

(c) Scopus: Probably the most important one is Scopus indexing. This is the largest abstract and citation data base with abundance of peer reviewed literature, scientific journals and various data which enhances a researcher's research. This aims to deliver a comprehensive view of the research which goes around the world across fields. This aids the users to search based on domains, authors and so on covering maximum amount of information in a research.

(d) DOAJ (Directory of Open Access Journals): DOAJ is a community-curated online directory that indexes and provides access to high quality, open access, peer-reviewed journals. DOAJ is independent. All funding is via donations, 22% of which comes from sponsors and 78% from members and publishers. All DOAJ services are free of charge including being indexed in DOAJ. All data is freely available. DOAJ operates an education and outreach program across the globe, focussing on improving the quality of applications submitted.

(e) Index Copernicus: Index Copernicus is an online database of user-contributed information, including scientist profiles, as well as of scientific institutions, publications and projects established in 1999 in Poland, and operated by Index Copernicus International.

5. INDEXING PARAMETERS

Classification of indexing parameters:

(a) Open parameters: This can be done manually. It is generalised by humans and are easily understandable. Numbers can be computed and verified by the researchers.

(b) Closed parameters: This cannot be done manually. Algorithms are required for these parameters.

Other classifications

(a) Impact factor: It is a journal Metrix associated with academic journals. It is a copywrite registered keyword. Impact factor is declared annually using Journal Citation Report. JCR is a registered key mark. The lock in period is 4 years. The impact factor is for articles. It is associated with Web of Science. It is a certificate given only to the journals.

(b) Cite score: Cite score of an academic journal is a measure reflecting the yearly average number of citations to recent articles published in that journal. It has 3 years impact factor and Cite Score is by Scopus.

(c) h-index: These measures both productivity and citation impact of the publications of a scholar. Maximum h such that h articles are cited at least h times each. H- index is primarily for authors, and it also can be for institutions, countries, group of authors, geographical locations and departments. Minimum h-index is zero. Maximum h-index is the number of articles published by a person. H- index is a freely usable measure.

(d) g-index: This is an index for quantifying productivity in science, based on publication record. g-index was proposed by Leo Egghe in the year 2006.

(e) i10- index: This shows number of articles of an author with more than 10 citations each.

(f) SNIP: Source Normalised Impact per Paper (SNIP) measures contextual citation impact by weighting citations based on the total number of citations in a subject field. It is an assessment for journal impact factor.

(g) SJR: SC Imago Journal Rank is a measure of the prestige of scholarly journals. SJR scores are computed using network analysis of citations received by journals. It gives importance to the number of citations and also from where the citations have come.

(h) Eigen factor score: It measures the number of times articles from the journal published in the past five years have been cited in the Journal Citation Reports year. The Eigen factor score scales the total impact of a journal. The journals which are generating higher impact have higher Eigen factor.

6. REVIEW METHODS

Reviewers have an important role in any field. In research Peer review of academic research is at the heart of publishing. This validates academic work, which helps to improve the quality of published research. The two prominent ways to distinguish peer review are:

(a) Closed review
(b) Open review

Closed review is categorized under three categories. They are single blind, double blind and triple blind.

(a) Single blind review: In such review methods, the authors do not know who the reviewers are but reviewers know the authors. This helps to get impartial review to a publication. However, this process may often be delayed. At times, due to the anonymity, reviewer may at times be too critical while reviewing a publication.

(b) Double-blind review: The next one is double blind method. Here, neither the author, nor the reviewers are known to each other. This process limits reviewer bias making a healthy and transparent reviewing process.

(c) Triple-blind review: In triple blind review the reviewers are anonymous and the author's identity is unknown to both the reviewers and the editor. Articles are anonymized at the submission stage and are handled in such a way to minimize any potential bias towards the author(s). This helps good and new researchers gain appropriate recognition and platform to show their ability.

(d) Open review: This aims to have transparency in the process of reviewing. Both reviewer and the author are known to each other. This makes the review process more open for discussion.

7. OPEN JOURNALS

Open access or open journals refers to the practice of making peer-reviewed scholarly research and literature freely available online to anyone interested in reading it. They are unrestricted and are free. There are two ways of make a publication openly accessible. The first one involves publishing articles or books through Open Access route on a publisher's platform. The second one is having a manuscript under OA repository. There are a number of variants of open access publishing and different publishers may use one or more of these variants. Colour naming system: The most commonly recognised names are 'green', 'gold' and ''hybrid'' open access.

(a) Gold Open Access: In the gold OA model, the publisher makes all articles and related content available for free immediately on the journal's website, usually by requiring the author rather than the reader to bear the costs of publication. In such publications, articles are licensed.

(b) Green Open Access: Here, the author can post the work to a website controlled by the author, the research institution that funded or hosted the work, or to an independent central open repository, where people can download the work without paying.

(c) Hybrid Open Access: It is a mix of both of open access articles and closed access articles. Publisher which follows this model is partially funded by subscriptions and only provide open access for those individual articles for which the authors or research sponsors have paid a publication fee.

8. BENEFITS OF INDEXING IN RESEARCH PUBLICATION

(a) Spreads the word about researchers ground breaking research outcome: Reputed journal promote the spontaneous expansion of ground-breaking research work and outcomes by permitting researchers to declare their work on a global scale, guaranteeing certain accreditation and encouraging career elevation.

(b) Helps to gain a reputation in Global Scientific Community: Reputed journals draws collective outstanding outcomes, superior investigation and advanced research work into a single platform.

(c) Paves the way for collaborative opportunities: Reputed journals fosters collaboration by exhibiting the expertise of important partners and obvious experts purely on the quality of their research work and experimental studies. This helps top experts who need people to collaborate with can connect with those that shows immense potential in their respective fields of research and study.

(d) Helps in acquiring necessary funding: Publication in a renowned indexed journal, enhances the chances for the respective author/researcher of gaining critical financing and funding.

(e) Access to most recent literature: Researchers can gain access to the most recent literature, even if it has not yet been indexed by other sources.

9. PURPOSE OF STUDY

Research is a systematic investigation and study of materials and sources in order to establish facts and reach new conclusions. The purpose of this study is to satisfy the subject approach to information and identify pertinent materials on indexing and its benefits. A researcher must have adequate knowledge on basic information associated with research publication. But it has been observed that research scholars lack in the proper knowledge regarding quality publications. Hence, in this study efforts have been taken to provide concepts of different approaches to indexing to a considerable group of researchers.

10. STATEMENT OF RESEARCH PROBLEM

Research scholars of various universities in India lack awareness on term and concepts related to indexing in journal publishing

11. METHODOLOGY

Research methodology is the specific procedures or techniques used to identify, select, process, and analyse information about a topic. For this study secondary data has been used. Secondary data refers to the data that is collected by someone other than the user. Common sources of secondary data include censuses, information collected by government departments, organizational records, books and journals, websites and data that was originally collected for other research purposes. Secondary information allows us to merge data from various sources in order to provide larger and more usable data sets.

12. CONCLUSIONS

To conclude indexing helps in quick identification of files and document at a shorter period of time. It helps in the arrangement of files in a systematic order. It helps the researchers to find through various articles at a limited period of time. Thus, indexing helps the scholars in faster learning, finding subject related journals and acknowledging the work of other scholars. This article lists down the concept, history, indexing agencies, indexing parameters and various review methods. The task of indexing may be tedious and long. This article can guide future researchers to understand the concept and design new processes for indexing.

13. REFERENCES

[1] Gadd, Elizabeth, Troll Covey, Denise (2019-03-01). Journal of librarianship and Information Science. 51(1): 106-122. Doi:10.1177/0961000616657406. ISSN 0961-0006

[2] Laakso, Mikael, Bjork, Bo-Christer (2016). Journal of Informetrics. 10(4):919-932. Doi: 10.1016/j.joi.2016.08.002

[3] Suber, Peter. ''Open Access Overview'' Archived from the original on 2017-05-19. Retrieved 29 November 2014

[4] A brief history of indexing. (n.d.). Retrieved from https://www.anzsi.org/resources/about-indexers-andindexing/a-brief-history-of-indexing/

[5] Ulrich's Periodicals Directory. (2017, September 13). Retrieved August 19, 2019, from https://www.library.ucsb.edu/research/db/338

[6] Cleveland, D. B, and Cleveland, A. D (2001) Introduction to Indexing and Abstracting   Colorado: Libraries Unlimited.

[7] International Journal for Research in Engineering Application & Management (IJREAM) ISSN: 2454-9150   Vol-05, Issue-06, Sep 2019.

[8] Measuring your research impact: http://guides.library.cornell.edu/c.php?g=32272&p=203393

[9] Garfield, E. (1994). The impact factor. Current contents, 25(20), 3-7.