

CITATION AND CITATION ANALYSIS

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Abstract:

A citation is a quotation from or reference to a book, paper, or author, especially in a scholarly work. It is a relation between previous research and current research in specific domain of any subject or topic of any subject. Citation analysis is a statistical study of citations received in documents in specific field of research. Citation analysis is the examination of the frequency, patterns, and graphs of citations in documents. It uses the pattern of citations, links from one document to another document, to reveal properties of the documents. This paper discusses various aspects of citation and citation analysis.

Keywords:

Web of Science, Scopus, Google Scholar

INTRODUCTION

Citation Analysis is an indirect method to assess the information or source used by various categories of users. It is a worthwhile area of research and refers to references in one text to another text, with information on where that text can be found (Singh & Babi, 2013)

CITATION

The dictionary meaning of citation is “a quotation from or reference to a book, paper, or author, especially in a scholarly work.”

An essential part of research papers is the list of references pointing to prior publications. a reference is the acknowledgement that one document gives to another and a citation is the acknowledgement that one document receives from another. A citation implies a relationship a relationship between a part or the whole of the cited document and a part or the whole of the citing document. Citation Analysis is that area of bibliometrics which deals with the study of these relationships (Smith, 1981).

PURPOSE OF CITATION

Purpose of Citation can be described as follows (Ramesh & Nagaraju, 2000):

- 1) Paying homage to pioneers.
- 2) Giving credit to related works.
- 3) Identifying methodology, equipments etc.
- 4) Providing background reading
- 5) Correcting the works of others
- 6) Correcting one's own work
- 7) Criticising previous work
- 8) Substantiating claims
- 9) Altering to forthcoming works
- 10) Providing leads to poorly dissimilated, poorly indexed or un-cited works

CITATION ANALYSIS

Citation Analysis is new technique used to measure quantitatively the value of document through arranging the citations in some kind of rank or order. It is also used to study the growth and structure of literature of any subject (Kumar & Reddy, 2013).

Citation analysis is the examination of the frequency, patterns, and graphs of citations in documents. It uses the pattern of citations, links from one document to another document, to reveal properties of the documents. A typical aim would be to identify the most important documents in a collection. A classic example is that of the citations between academic articles and books. Documents can be associated with many other features in addition to citations, such as authors, publishers, journals as well as their actual texts. The general analysis of collections of documents is known as bibliometrics and citation analysis is a key part of that field. (Ref. https://en.wikipedia.org/wiki/Citation_analysis)

The first recorded Citation Analysis was Gross and Gross, who looked at citation pattern to determine the journals to be subscribed to and back volumes to be acquired for the library (Chikate & Patil, 2008).

WHAT IS CITATION ANALYSIS?

1. It is the examination of the frequency, patterns, and graphs of citations in documents. It uses the pattern of citations, links from one document to another document, to reveal properties of the documents.
2. A bibliometric technique in which works cited in publications are examined to determine patterns of scholarly communication, for example, the comparative importance of books versus journals, The citations in student research papers, theses, and dissertations are also examined by librarians for purposes of collection evaluation and development
3. The study of the relationship between and among the authors of texts, mainly for the purpose of identifying relevance and influence. (Ref. <https://www.igi-global.com/dictionary/a-cito-analytical-study-of-doctoral-theses-in-legal-research/43063>)

HISTORY

In a 1965 paper, Derek J. de Solla Price described the inherent linking characteristic of the SCI as "Networks of Scientific Papers". The links between citing and cited papers became dynamic when the SCI began to be published online. The Social Sciences Citation Index became one of the first databases to be mounted on the Dialog system in 1972. With the advent of the CD-ROM edition, linking became even easier and enabled the use of bibliographic coupling for finding related records. In 1973, Henry Small published his classic work on Co-Citation analysis which became a self-organizing classification system that led to document clustering experiments and eventually an "Atlas of Science" later called "Research Reviews".

SOURCES FOR CITATION ANALYSIS

- **Web of Science:**

Web of Science provides citation counts for articles indexed within it. It indexes over 10,000 journals in the arts, humanities, sciences, and social sciences.

- **Scopus**

Scopus provide citation counts for articles indexed within it (limited to article written in 1996 and after). It indexes over 15,000 journals from over 4,000 international publishers across the disciplines.

- **Google Scholar**

Google Scholar provides citation counts for articles found within Google Scholar. Depending on the discipline and cited article, it may find more cited references than Web of Science or Scopus because overall, Google Scholar is indexing more journals and more publication types than other databases. Google Scholar is not specific about what is included in its tool but information is available

on how Google obtains its content. Limiting searches to only publications by a specific author name is complicated in Google Scholar. Using Google Scholar Citations and creating your own profile will make it easy for you to create a list of publications included in Google Scholar. Using your Google Scholar Citations account, you can see the citation counts for your publications and have GS calculate your h-index.

USEFULNESS OF CITATION ANALYSIS

Citation Analysis is used to study the citation links between scientific papers, technical notes and reviews. It provides relevant measures of utility and relationships of journals whose primary function is to communicate research results. It helps in identification of key documents and creation of core list of journals.

LIMITATIONS OF CITATION ANALYSIS

Review papers, on an average, are cited more than the research papers. Scientists writing a sizable number of review articles are likely to be cited more than those not writing, or writing a smaller number of review articles. Hence, this fact needs to be borne in mind while evaluating a scientist, or comparing the performance of one scientist with others of his field.

A paper giving rise to any controversy is likely to be cited more, and there may tend to give false indications in case the number is large. It requires a few years, say five, for a paper to receive its reasonable quota of citations. Hence the importance of a paper cannot be correctly judged if the paper is less than five years of age. Similar is the case with new journals

Sometimes the rate of self-citation is found very high; so what is the reason behind this abnormally high rate of self-citation? Is it characteristic of parochialism, eccentricity, mediocrity? Does it indicate that a particular field of study has as yet no basis for interaction with other fields? (Ref.

http://shodhganga.inflibnet.ac.in/bitstream/10603/63873/12/13_chapter%204.pdf)

SUMMARY

A citation is an acknowledgement given to the previous document for receiving help for the present document in the specific area. Citation Analysis is the statistical study of citations. It helps the library to select the core journals, to keep the records of the specific subject in a systematic manner and to know the changing trends in that subject area.

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