

Volume 1:1 March 2001

CITATION INDEX: ITS IMPORTANCE TO INDIAN LINGUISTICS

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1. INTRODUCTION

A research article makes an impact if it is read and used by others in their research output. If it is not used, it is of no consequence in the discipline. This factor was quantitatively measured and studied by Eugene Garfield (1978). The process is called the "Citation Index"(CI).

Citations are the references appended to a document or mentioned in its footnotes. Each such citation presents the bibliographic description of the source. The index of these is called citation index (CI). In other words, citation index is an organized list of cited articles, each of which is accompanied by a list of citing articles identified by a source citation. Ultimately any source citation may become a reference citation if it is cited.

2. FACILITATORS

Eugene Garfield proposed the compilation of comprehensive CI primarily as an effective means of disseminating scientific literature. Information retrieval is achieved with the help of facilitators. The facilitators help in the process of identifying the frequency with which the papers are cited in the literature over any chosen period. The identification of the frequency of citation provides a useful objective criterion. In CI, it is not only the author who gets the recognition, but also the journal that contains that article.

When a journal's articles are more frequently cited, the scientific community finds the journal to be a better and more valued carrier of useful information.

3. USES OF CI

Citation index is used to:

- § Identify and map research fronts.
- § Define disciplines and emerging specialties through journal relationships.
- § Determine the interdisciplinary or multidisciplinary character and impact of research programs and projects.
- § Literature based mapping can provide valuable insights for policy makers.
- § It can reveal a nation's strength in publishing research articles in journals.

§ It can bring to light core authors, journals, institutions, etc., in a discipline.

CI in linguistics reflects the state of linguistic research in general globally as well as it substantiates the information on the linguistic research community in India. Besides telling about the languages on which research is done more or less frequently, it reveals the lacuna in the coverage of the fields of research. From the much cited papers, one can locate the institutional affiliation of the author and source of funding for the research. From this, information about the centers of active current research, sources of funding, etc., are known, and this would help in taking policy decisions.

4. FEATURES OF CITATION INDEXING DATABASES

Most of the CI studies are based on the readymade databases available in the world information market such as the following from the Institute for Scientific Information, started by Eugene Garfield.

- § Science Citation Index (SCI)
- § Social Science Citation Index (SSCI)
- § Arts and Humanities Citation Index (A&HCI)

Science Citation Index monitors citations from pure science and technology. Linguistics is covered in the Social Science Citation Index and Arts and Humanities Citation Index. From one master database several other databases are created and listed. Each of the cited journals is given the impact factor, self-citation, half-life, immediacy index, etc. Mentioned below are the brief descriptions on these concepts with examples from the SSCI database 1980.

Impact factor of a journal is indicative of its rank and to a certain extent its quality in the world. It is a measure of frequency with which an average article in a journal has been cited in a particular year. Higher the impact factor, higher is the prestige of the journal and the paper. Getting a paper published in such a journal is prestigious. Example: Journal of Verbal Learning and Verbal Behavior has the highest impact factor 2.260 among the 29 journals in the rank list.

The **self-citation** of a journal occurs when an article in a journal cites another article previously published in the same journal. A journal's self-citation rate indicates several things about its field. High self-citation rate is likely to mean that the field is small or isolated.

- § Self-citation rate = cited journal/total citations of citing journal. Example:
Anthropological Linguistics has 465 citations; Self-citation is 4 in the year 1980.
The self-citation rate = $4/465 = 0.0086$.

The **half-life** tells us something about the rate of obsolescence of information in subject fields. The half-life value is calculated by determining the year in which the cumulated percentage of citations to a cited journal is equal to or more than 50%. Then a count is

made of the number of years. From this, obsolescence of literature is calculated. When a journal is less used and its use ceases, then the journal is obsolete. Combining this fact with other information, a librarian might consider retiring the un-cited segments of the collection to sub-ordinate shelf space. In the above sample no journal remained in inactive file.

Immediacy index is self-explanatory. It is the factor got by contemporary reference made by the source item. In the above sample, the journal that got maximum count in this category is the *Journal of Linguistic Inquiry*, 3.93%.

The SSCI Journal Citation Report is made of five data packages.

1. Journal ranking package
2. Source data listing
3. Half-life package
4. Citing journal package
5. Cited journal package

Sample entry:

Journals in alphabetical order						
Journal Title	Citation in 1980	Source Items in 1980	Impact Factor	Citations in 1980 to 1980 Items	Source Items in 1980	Immediacy Index
Acta Linguistica	67		0.500	2	29	0.069

In the above table, item 4 Impact factor is the average citation rate per published item. It gives some idea of the frequency with which the average paper in a particular journal is cited.

1. Journal ranking package

In this package the journals are ranked by the number of times they are cited by SSCI, SCI, A&HCI covered journals. This is one perspective from which the Social Science literature can be assessed. The number of times a journal is cited is indicative of its usage. For example, the above sample has a rank list of top 1275 journals cited collectively by Social science journals. In this, Linguistics journals are placed in the 31st position. Out of the 23 journals listed in the journal-ranking package, 15 journals have been selected depending upon Times cited limiting to 100.

2. Source data listing

It is the list of the source journals in alphabetical order by title. The total number of articles in the particular year and references contained in these articles and the average of reference per article are listed.

3. Citing journal package

This package shows which journal or journals have been cited in a particular journal and a distribution by the year of publication of the cited material.

4. Cited journal package

This package shows citation frequency relationships between pairs of journals. They are listed in descending order by citation frequency.

Half- life has been explained above under section 4.

5. THE STATUS OF LINGUISTICS IN INDIA

Manually doing the analysis based on citation indexes is more cumbersome. There are several software packages such as "Bibliograph" that can be used for doing the analysis.

In order to introduce this database to linguists in India, an attempt was made to get it either in print form or in machine-readable form. The 1980 database was available for Social Science Citation Index (SSCI) in print form. This database listed the linguistics journals. Though *Linguistics and Language Behavior Abstracts* (LLBA) monitored more than 630 journals in 1980, at the international level, only thirty journals are listed in the Journal Ranking package of the SSCI. As Balasubramaniam (1995) puts it, 'Even in pure science and technology SCI journal ranking package lists 3300 of the 70000 journals published all over the world as citation worthy. These 3300 are the main stream, ... the club journals. The rest are the ghosts - unread, un-honored and unsung. Among these 3300, Indian contribution is only about 1.6% and ranks 13th at the international scene'.

The NISST New Delhi sponsored the National Mapping of Science Project. Sample data was collected from different indexes in the relevant topics from the various science disciplines and the number of papers contributed from India as indexed in the database of 1990 and 1994. This project covered most of the topics in the science discipline. However, the coverage of Indian contributions in the databases in the study is only partial and does not reflect the total Indian productivity. Hence, the scenario of Indian output drawn on the basis of the data may not reflect the real Indian situation (ITT 2000). For example, a concluding remark on the topic on life sciences states that 'a very large proportion of Indian life science papers are published either in low-impact journals (F1.01) or in the journals not indexed in SCI. It is also seen that scientists from better known institutions publish a large number of papers in the journals not indexed in SCI (Arunachalam 2000)

If that is the status of science discipline in India globally, it is not surprising that not even a single Indian author or journal is cited in SSCI 1980.

The 1980 version has no authors or journals of linguistics of Indian origin. This initiated the need to bring the existence of such a powerful database and its importance in the world of knowledge to the notice of Indian linguists. Through available global computer networks, it is not really difficult to analyze the data directly from the ISI databases and bring to light India's place in linguistics at the International level. It is also possible to identify other important factors that contribute to the present status of research in Indian linguistics to help formulating policy decisions with regard to the discipline. However, the earlier studies of citation analyses in linguistics have indicated that it is the books published in the discipline that meet the major percentage of the information needs of Indian linguists. Contemporary Indian linguists seem to seldom cite other Indian scholars. The citations are highly slanted towards the publications and research done in USA. The majority of the referred articles is in English (Sharada 1985). The journal *Indian Linguistics* is consistently giving only a limited number of citations as compared to the journal *Language*. Articles on Sociolinguistics give more citations than those on grammar, revealing the limited paradigm in grammar and a broader outlook in Sociolinguistics. This also indicates that grammatical research is not theoretical, it only describes the specific language structures without reference to the theoretical issues. These are certainly welcome studies, but the focus is on describing hitherto un-described parts of grammar or the study of a language not yet studied and described. Hence, usually there is no reference to other works. The citation-coupling rate is maximum in grammar compared to sociolinguistics (Sharada and Sharma 1993).

As per Shelly Walia's (1995) finding, "the arts and humanities citation index puts Noam Chomsky above Hegel and Ciero as most cited writer of all times: those who rank above him are Marx, Lenin, Shakespeare, the Bible, Plato, Aristotle, and Freud. His popularity depends on the awesome range of his critical mind from global issues to the basic question of intelligence of creativity". Attempts are being made to get the SSCI and Arts and Humanities citation index databases to provide a detailed report on the Indian contribution in linguistics at the global level.

6. INFERENCE

If the representation of linguistics is met globally by less than 30 journals listed in the SSCI, India's place or the contribution from the Indian linguistic community is near to nothing. This is indicative of the fact that only selected journals/articles get into SSCI, which are considered to be top journals referred to by many linguists.

The LLBA journal abstracts almost all the articles that it monitors and has got wide international readership. Through these abstracts linguists develop a sort of awareness as to the current resources available to them at the international level.

To enter the ISI (the Institute for Scientific Information) "club," the local journals should follow a few guidelines such as:

- § The journal should appear at regular intervals and on time.
- § The board of editors should be well known in the field and much cited.
- § The journal should provide abstracts of its articles in English
- § Subscription rates have to be paid, etc.

The citation index databases are used in the other disciplines in formulating policy decisions at the highest levels of governance. If linguists from India contribute well at the international level and get cited, they will be in a position to get a lot of support for their research. Their voices will be heard with respect. In turn they will be able to do a lot more for the economic development of the country.

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