CHAPTER 1
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Introduction

1.1 Preamble

The objective of the present chapter is to highlight the need and importance of the study, objectives, hypotheses, scope and methodology of the study.

Universities act as the premier centres of research activities and university libraries are the tools of research. Research can be successfully carried out only when the necessary information has been provided to the scholars as and when they required it. It is very difficult to satisfy the information needs of research scholars in science as well as in social science disciplines due to many factors like exponential growth of literature, its complexity, scattering of literature, language barriers, multi-disciplinary nature etc. During the second quarter of the 20th century tremendous growth of research activities in universities was observed. Moreover increasing demand to support and encourage the research scholars on one side and constant financial constraints on the other side have created problems in acquisition programme of every academic library. Therefore it has become necessary for the Librarians or Information Scientists to understand various dimensions of the interaction between research scholars and recorded knowledge. In this regard Harsha Parekh (1990) observes “An increasing array of studies deal with the structure and development of recorded knowledge, the analysis of information needs, literature use pattern, reading habits, library use, information seeking behaviour etc.” These types of studies predict the demand for various products, services to be provided to the users so that library services can be used effectively and efficiently.

The rapid development of libraries generated several evaluationary studies about the effectiveness and efficient information
services. These studies led to the identification and application of appropriate quantitative measuring techniques known as 'Bibliometrics.' Bibliometric study based on citation analysis has become quite popular in the recent years. Such study may be useful for acquisition of materials, provision of better services to patrons and knowing the location of materials. What part of literature remains useful to readers and languages of most cited publications, knowledge of all these provides guidance to collection development policies, individual item selection and retention and binding decisions.

1.2 Relevance of The Study

Dr. Babasaheb Ambedkar Marathwada University plays a significant role in the economic, educational, social and cultural development of the people of Marathwada. It caters to the need of higher education and strives to encourage students to undertake research for the socio-economic development of the region. Dr. Babasaheb Ambedkar Marathwada University Library is the biggest library catering to the information needs of the academic community of Marathwada region and is playing an important role in promoting research in the field of pure and social sciences. So before embarking on research for doctorate the researchers conduct comprehensive literature search. P. Geeta (2004) in her article ‘Information needs and use pattern of scientist’ calls attention to the fact that, "In developing countries most of the researchers are not aware of the role of information in research activities, due to the lack of competitive situations and research environments, researchers in developing countries do not properly use information. In India even the existing resources of the library remain underutilized.” Moreover number of the Librarians of the Universities in India have pointed out that the
condition of most of the Indian university libraries is far from satisfactory. Especially opinions of Srivastava (1980), Ojha (1980), Hingewa (1982), Deshpande (1984), Tejomurty (1987), Krishnan Kumar (1987) are the Indian university libraries especially which are located in backward areas suffer from inadequate stock of reading material, unscientific organization, poor services and insufficient facilities. Against such background a large number of bibliometric studies in the form of citation analysis has been conducted in India.

In Dr. Babasaheb Ambedkar Marathwada University also such studies have been attempted in different subjects in natural sciences but paucity of such work exists in social sciences. Therefore it was felt that a comprehensive and detailed study is required to understand and explain the literature use pattern of social science researchers of Dr. Babasaheb Ambedkar Marathwada University.

1.2.1 Statement of the Problem

The present study is entitled: Literature use pattern of social science researchers in Dr. Babasaheb Ambedkar Marathwada University: A Bibliometric Study

1.3 Explanation of Concepts

The operational definitions of some of the frequently used terms in the present study are as under.

1.3.1 Literature

Webster Noah (1978) defines literature as, “All the writings dealing with a particular subject”
1.3.2 Use Pattern

Use pattern may be defined as the preference indicated by the information users to documents in respect of their bibliographic form, language and country of origin, age and information services either through citations in their own works or through requests or demands made to various information systems and services.

Use pattern means the style of using. The style may be different for different persons. The use pattern includes concepts like style at searching for information, sources of searching information, preference of materials, interaction with the information system etc.

1.3.3 Social Sciences

The Encyclopaedia of Social Sciences (1937) defines social sciences as “Mental and cultural activities of the individual as member of a group” Webster (1978) defines social science as “The branches of science that deal with the institutions and functioning of human society and with the interpersonal relationships of individuals as members of society” and also “a science such as economics or political science dealing with particular phase or aspect of human society” and webster adds ”compare behavioural science” for which it gives “a science such as psychology, sociology or anthropology, dealing with human action and aiming at the establishment of generalizations of man’s behaviour in society.”

Social sciences may be defined as all the disciplines which deal with men in their social contacts. They are concerned with orderly investigation of the behaviour of man in society with the aim of formulating a body of relevant theory. The focus of their study is behavioural analysis of human groups, collectivities, communities etc.
It may be said that social sciences are a combination of multiple disciplines having social implications. Generally speaking the social sciences include, economics, political science and sociology, social and cultural anthropology, social psychology, social and economic geography social context of learning and the relation of the school to the social order.

In the context of the present study the term social science includes the subjects comprised under section 27(3) of the Marathwada University Act 1974 as History, Ancient Indian Culture, Archaeology, Political science, Public administration, Economics, Sociology, Logic, Philosophy, Psychology, Geography, Journalism, Home Science, Library science, Dramatics, Music etc.

1.3.4 Social Science Researchers

Dictionary meaning of research is studious inquiry in a field or into a specific subject while researcher means - A person who researches; someone studying or investigating a subject.

In the context of the present study the term ‘Social Science Researcher’ who is working towards an advance degree of Ph.D. in Social Sciences of Dr. Babasaheb Ambedkar Marathwada University.

1.3.5 Thesis

“A thesis is a statement of investigations of research presenting the author’s findings and any conclusions reached, submitted by the author in support of his candidature for a Ph.D. degree in social sciences”.

In the present study term ‘Thesis’ is confined for which Dr. Babasaheb Ambedkar Marathwada University awarded Ph.D. in social sciences.
1.3.6 Bibliometrics, Citation Analysis

Bibliometrics is defined by different authors. No universally accepted definition still exists for this. As Hulme (1923) first of all discussed the purpose of statistical bibliography according to him, “Bibliometrics is to shed light on the process of written communication and of the nature and course of development of a discipline, by means of counting and analysis its various facets of written communication”.

Raising (1962) “Statistical bibliography is the assembling and interpretation of statistics relating to books and periodicals... to demonstrate historical movements, to determine the national and universal research, use of books and journals & to ascertain in many local situations the general use of books and journals”.

According to Prichard (1969), “Bibliometrics is the application of mathematical and statistical methods to books and other media of communication”.

Fairthorne (1969) defined Bibliometrics as, “Quantitative treatment of properties of recorded discourse and behaviour appertaining to it. Bibliometrics is also named as quantitative analysis of bibliographic features of a body of literature”.

The British Standard Glossary (1976) of documentation of terms explained bibliometrics as.”The study of the use of documents and patterns of publication in which mathematical and statistical methods have been applied.”

Nicholas and Ritche (1978) accepted the definition as “Bibliometrics is the statistical or quantitative description of a literature”.

According to Potter (1981), " Bibliometrics is the study and measurement of publication pattern of all forms of written
communication and their authors."

Egghe (1988) explained bibliometrics as, "The development and application of mathematical models and techniques to all aspects of communication".

Sengupta I. N. (1990) defines bibliometrics as the,"Organisation, classification and quantitative evaluation of publication pattern of all macro and micro communications along with their authorships by mathematical and statistical calculas."

'Scientometrics' which is sometimes also used for bibliometric like phenomena is defined by Beck (1972) as. "Quantitative evaluation and intercomparison of scientific activity, productivity and progress.'

Brusilovsky (1978) explained 'Scientometrics' in a more general way as "The study of the measure of scientific and technological progress."

The term 'Scientometrics' which is primarily used in USSR, deals with quantitative analysis of science viewed as an information process. The 'Scientometrics' is further considered as bibliometric measurement for evaluation of scientific progress, level of scientific development, social relevance and impact of application of science and technology etc.

'Informetrics' is another recently used term formalises and consolidates measurement studies which focus on information productivity. It integrates information technology and complex intersections of information theory, cybermetrics, decision theory etc.

However, 'Scientometrics' and 'Informetrics' are included under the domain of 'Bibliometrics' and comprises several very closely related and highly overlapping research areas. In general "Bibliometrics" therefore may be defined as the quantitative analysis of the characteristics, behaviours & productivity of all aspects of written
communication, library staff & information users.

Bibliometric analysis may be classified under two broad groups. One describing the characteristics of a literature (descriptive studies), and the other examining the relationships formed between components of a literature behavioural studies.

The other type which is commonly referred to us “citation studies” relates to what authors cite. Citation analysis reflects two major themes that is use of citations as tools for librarians to evaluate the library collection and services and use of citations as tools to analyse research activity.

Citation Analysis

Citation analysis is one of the important and quite old branch of bibliometric study. The citation analysis studies are based on citations appended to a publication such as a research paper, a review paper, technical communication, theses etc.

R. Paul Mohan Roy (1983) defined citation analysis as, “Citation analysis is one branch of bibliometrics where the unit of analysis is a document, that is being cited as a bibliographic reference or as a footnote in a citing document”.

Martyn (1976) has rightly defined citation analysis as “The analysis of citations or references or both which form part of the scholarly apparatus of primary communications. The technique is used for putting items of references in some kind of rank or order, whether they are journals or authors cited.”

Christiansen et. al. (1983) stated that “The method of citation analysis consists of counting the number of times documents are cited in footnotes, references, bibliographies or indexing and abstracting tools and comparing these figures. It is assumed that items that are
relatively heavily cited are likely to be used more than that are cited less or not at all."

In present study citation analysis is concerned with the following phenomena. viz. which authors are most cited, which journals are most cited, what linkages exist between the citing and cited works, language of documents selected for use as citation, type of documents used for citation, subject distributions and how quickly the literature on some subject become out of date.

1.4 Objectives

The main objective of the present study is to examine the literature use pattern of information sources by social science researchers. This is sought to be done by analysis and understanding of the nature of citation pattern of literature in order to:
1. determine the number of citations per thesis in particular subject;
2. find out the forms of document used, their language and countries of origin;
3. observe authorship pattern;
4. compile a ranked list of authors, books and journals;
5. observe chronological distribution of books and journals;
6. half life and obsolescence of literature in social sciences.

1.5 Hypotheses

The hypotheses which have been formulated in accordance with the objectives of the study are as follows.
1. Books are the major documents used by the researchers in Social Sciences.
2. Researchers in Social Science use the documents published in Marathi Language.
3. Research scholars in Social Science prefer Indian publication.

1.6 Scope and Limitations of The Study

Present study is based on the basic assumption that citation of a document indicates its use in the preparation of thesis. In other words researchers cite documents not only for the citing but after really making use of them in some manner to prepare their study.

This study covers the period of ten years from 1991-2000. Though the university was established in 1958, after 1975 the number of social science departments were established. This period is selected with the intention of a comprehensive study covering the entire subjects in social sciences.

It has been estimated that upto 2000 the total number of theses submitted to Dr. Babasaheb Ambedkar Marathwada University is near about 2489. Total number of thesis in social sciences upto 2000 is near about 376 and number of citations given in these theses is so enormous that it would not be physically possible to collect data from all the citations listed in all the theses and to organise and analyse such a huge quantum of data.

Besides, the objective of the present study is not to survey the citations by social science researchers, but to analyse the citations patterns from a particular viewpoint. Therefore it is not required to have the entire quantum of data but a properly selected sample representing all the subjects in social sciences would suffice for the purpose of this study.
In view of this it has been assumed here that 176 theses submitted from 1991-2000 in which 49381 citations are noticed is an adequate sample representation for the present citation analysis study.

The subject library and information science is not included in the scope of this study. It is because upto the year 2000, there was not a single thesis submitted in this particular subject.

Bibliometric laws are not taken into consideration while conducting the present study.

One of the limitations of the study is that in many cases bibliographical details are not mentioned. Therefore the number of unidentified documents may have direct relevance to the hypotheses being tested.

1.7 Methodology

The study is primarily concerned with the literature use pattern of social science researchers in relation to their preference for reading material. It is based on analysing and understanding the citation pattern of social science researchers. Citations in the study is taken as bibliometric unit. Therefore citation analysis is more suitable and valid method having less subjectivity. Moreover, this method can be applied independently according to convenience of the investigator.

1.7.1 Source of The Study

The source data in this study is citations or bibliography listed in social science theses submitted to Dr. Babasahebd Ambedkar Marathwada University and for which degrees have been awarded during the year 1991-2000.

The total population of this study is 49381 citations which appeared in a sample of 176 theses, these citations pertained to journals, books,
1.7.2 Data Collection

The bibliographic details for the source and the cited documents were recorded on a catalogue cards made for the purpose.

The data collected includes:

1. The name of the thesis for which data was collected.
2. Name of the subject in which thesis was submitted.
3. Number of the citations appended to thesis
4. Bibliographic form as books, periodicals, dissertation, theses, reports etc.
5. Author, title, country of origin, publisher & year of publication etc. of the document.

Collection of data become a difficult and time consuming effort due to many problems encountered in the process. No standard format was evident for rendering citations. Most of the theses had their own set of rules of citation formats. Some theses gave only an abbreviated form of cited books & journals. On many occasions, reference sources such as directories of periodicals needed to be referred to find out proper title, country of origin. Ulrich’s International periodicals directory was consulted to ascertain the national origin of cited journals.

1.7.3 Data Analysis

In order to facilitate the two stages of analysis required for testing the hypotheses, these 49381 citations were kept as a single unit and also grouped into 9 subject categories of social sciences.

The data, thus collected and organised, have been analysed using all appropriate statistical techniques in order to arrive at logical and concrete conclusions regarding the literature use pattern of social science researchers.
as per the corresponding objectives.

In the present study data analysis process is carried out manually, the organized data have been presented in the form of tables and figures to facilitate easy understanding of the analysis and findings.

1.8 Summary of Major Conclusions

Mostly Books and Journals are preferred channels of information communication. In case of book sources (86.93%) citation belongs to the subject History while minimum (2.2%) belongs to the subject Home Science, rest of the subjects lies in between these two.

In case of journal articles the researchers in Psychology and Home Science used more Journal articles than the books.

The general trend in using Social Science literature, shows that literature published in English language seems to be quite prominent, Second priority goes to Marathi language and literature published in other languages have been used very less.

It is observed that most of the sources cited by the researchers belong to single authorship pattern which is followed by multiple and corporate authors respectively.

Countrywise distribution of citation depicts that most cited sources (books & journals) belong to three countries of the world namely India, U.S.A. and U.K. Indian coverage is (60.93%) where as foreign coverage is (39.61%). This shows that Social Science researchers used Indian Publications more than any other publication published from other countries of the world.

The general trend of Chronological distribution indicates that their is steady increase in cited documents in every decade and every subject with few
exceptions. It is observed that maximum cited documents pertain to the 1981-1990. Further the decade maximum cited sources belong to the past three decades prior to the commencement of the present study. That the age of cited literature is above 30 years old.

1.9 Chapter Scheme

The thesis is organised under eight chapters.

Chapter 1 Introduction

The preamble, Relevance of the study, Statement of the problem, Explanation of key concepts, Bibliometrics, Citation analysis, Objectives, Hypotheses, Scope and Limitations, Methodology, Brief summary of the major conclusions and Chapter Scheme etc. of the study are mainly discussed in this chapter.

Chapter 2 Review of Related Literature

This chapter highlights a brief review of related literature and similar studies conducted in the field.

Chapter 3 History : A Bibliometric Study

This chapter deals with citation analysis of the subject History.

Chapter 4 Political Science : A Bibliometric Study

This chapter deals with citation analysis of the subject Political Science

Chapter 5 Economics : A Bibliometric Study

This chapter deals with citation analysis of the subject Economics.

Chapter 6 Sociology : A Bibliometric Study

This chapter deals with citation analysis of the subject Sociology.
Chapter 7  Bibliometric study: Public Administration, Psychology, Geography, Journalism, Home Science

This chapter deals with citation analysis of the subjects Public Administration, Psychology, Geography, Journalism, Home Science.

Chapter 8  Findings and Conclusions

This chapter presents a short account of major findings in relation to the objectives, testing of hypotheses, general conclusions and suggestions.

The thesis ends with bibliographical references.