CHAPTER 1

INTRODUCTION

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1.0 Introduction

Giving the vision of future, Alvin Toffler discusses in Power Shift about force, wealth and knowledge the three sources of power at the age of the last century. The use of force as a source of power will continue. The state is not going to give up the gun. Control of immense wealth will also continue to confer enormous power. But what we are witnessing now is the most important change in the history of humanity. Knowledge is gaining importance over other sources of power with every fleeting nano second. The military might now depend not on the mindless fist, but on information systems and knowledge embedded in weapons and surveillance technologies. Wealth is also increasingly depended on knowledge. The advanced economy can not run without information systems and the knowledge of the new complexities of production and integration of diverse and constantly changing technologies.

Knowledge therefore is not only the dominant of the three sources of power, but is also the most important constituent of the other two sources – force and wealth. Knowledge has gone from being an adjunct to money power and muscle power to being their very essence. The most important of all therefore is not the shift from one person, party or one institution to another. It is the hidden shift of the relationship between force, wealth and knowledge. It has become an accepted fact that knowledge will rule the present century. This explains why the battle for control of knowledge and the means of communication is beating up all over the world.

Universities play a crucial role in the generation and application of new knowledge. Their contributions may belong to the four major areas into which the responsibilities of the universities are traditionally assigned; teaching, research, conservation and
extension. Teaching is a systematic transfer of the sum total of knowledge a society holds to its growing generation through various well-structured courses of studies and training programmes. Research is pursuit of new frontiers of knowledge and wisdom in whatever directions and to whatever extent possible. Conservation is the preservation and maintenance of the knowledge generated and the cultural traditions and values of the people and Extension is the reaching out in service of the society at large for making the knowledge generated useful. The success or failure of a university is measured by the contributions it has made in the above areas (James, J., Sreekumar, G. & Nair, R. R., 2008).

Doctoral dissertations or research is a scientific undertaking, which by means of logical and systematized methods, aims to discover new fact and relevant to the community or region in which it is produced or verify old facts, analyze their sequences, interrelationships, casual explanations and the natural laws, which govern them. Research has always been a source of excitement and incalculable benefit to the society. So research is incomplete until its results have been communicated. Findings of research are invariably accompanied by social change and economic and political development. In the pre-industrial society, research was mostly a private affair. But after the industrial revolution the pace of research had to quickened to meet the growing demands of the society. Mounting population pressure, growing consumerism, fast depletion of limited natural resources; perceived need to have political or military edge by one nation over the others, urge to save time and space, need to find cures for diseases to prolonged health and long life have given rise to planned, organized and coordinated research. Output of research of a country is the key factor of its development. In addition to the excellence and perseverance, the
quality of research, again depends upon the availability of fund and instruments, quality supervision and a quality library & information service.

For rendering an efficient library service to the research scholars, it is needed to know the literature use pattern, which varies from subject to subject. An essential part of any dissertation is the list of references which are the signposts left behind after the information has been utilized. A detailed picture of literature use of a scholar is expected from the list of references.

Bibliometrics is the study and measurement of the publication patterns of all written communication and their authors to understand the pattern of information flow and evaluation of the works. Citation analysis is that area of bibliometrics which deals with the study of relationship between the cited documents and the citing document. Different analysis of citations appended to the doctoral dissertations are very much helpful to create an useful library collection for the research scholar.

A considerable number of research papers submitted by scholars of different departments to the University of Kalyani are very much important from the point of view of effective factor of development of our country. The University was established in 1960 with a campus of over 400 acres at Kalyani town. It is situated in a lush green locality and it cares mostly to the students of rural and backward areas. Yet its distance from Kolkata is only 50 km; this location advantage of the University makes it particularly suitable for the ‘Cafeteria Approach’ to higher education. It is well connected with Kolkata and almost all big towns in the state by well-maintained roads and regular rail links.
The University ensures, on one hand, all round excellence, on the other, the imparting of higher education through dissemination of knowledge to rural areas in an open and flexible system. The University has also considered the possibility of upgrading of some of its affiliated colleges with academic autonomy and postgraduate teaching. The University has completed five decades of commendable service to the development of higher education keeping in view the importance of the upcoming rural economy and the needs and aspirations of the youth in the region. The University is presently offering thirty postgraduate programmes under four faculties, namely, Science, Arts & Commerce, Education and Engineering, Technology & Management. Two more faculties, those of Law and Music & Fine Arts, also have been approved recently under the University Act and are in the process of Crystallization.

Table 1.1
Faculties and departments of the University of Kalyani

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The University provides academic guidance and leadership for 41 affiliated Govt. aided and Govt. degree colleges, located in the districts of Nadia, Murshidabad and parts of North 24 Parganas. There are also two Govt-aided and eighteen self-financing private colleges offering B. Ed. / B. P. Ed. Degrees, four Law Colleges and eight other Institutions offering degrees and diploma both at the undergraduate and post graduate levels, and certificate courses.

Over the years the university has grown into a comprehensive institution with firm bases of administration, infrastructure and qualified faculties towards realizing its
mission of advancement of teaching and research. The University has adopted clear policies to achieve its aim keeping in view the National and International scenario and identifying research priorities with a focus on the problems and needs of the people and the region.

The Central Library building of this University is located between the Faculty of Arts and Commerce and the eastern side of the Administrative Building. Different library facilities and services are given to the teachers, research associates, professional staff, officers, research scholars, students, non-teaching staff and part-time teachers regularly. With more than one lakh volumes of books, about 124 current journals and periodicals and back volumes of numerous important journals and about 2000 theses the library is reasonably good and equipped (University of Kalyani, 2011).

All the Departments of Social Science group of the aforesaid faculties are conducting Doctoral Programmes. But due to lack of sufficient number of Doctoral Dissertations accepted by the Central Library of the University, only theses of six departments (Commerce, Economics, Education, Environmental Science, Folklore and Sociology) are taken for the study.

1.1 Statement of Research Problem

The statement of the research problem is the specification of the objective of the investigation and particular aims to be realized. For this study the problems are:

- How many theses are submitted in different years and different subjects?
- What are the different sources of information cited in the theses?
How the citations are being distributed according to the subject, country and language?

What is the trend of authorship pattern of the cited journal articles and cited books?

Which are the frequently cited journals/books by the researchers?

What are the commonly cited journals in different subjects?

How do the University Library satisfy the researchers’ needs regarding these frequently cited journals?

What are core journals/discipline-wise?

1.2 Objectives of the study

The present study is an investigation to analyse the specified sample of 80 doctoral dissertations to obtain the required information with respect to the objectives given below.

- to know the rate of submission of thesis and their subject-wise distribution
- to identify the use of different sources of information cited
- to analyse the distribution of citations on the basis of subject, country and language
- to observe the authorship pattern of contributions cited
- to compile a ranked list of journals and to check whether Bradford’s Law of Scattering applied to the journal use pattern in different subject fields
- to compile a ranked list of books
- to identify the use of important journals and their availability at the Central Library of the University of Kalyani
- to identify chronological distribution and frequency of cited journals
• to find out the subject distribution of each subject on which maximum number of research has been made

**1.3 Significance of the study**

In our contemporary civilization, being the fifth factor of production, information has now become an essential raw material. Information in the form of data, both raw and processed, is heavily relied upon by the social science information users. It presupposes the need for local, regional, national and international data both published as well as unpublished. Obviously these data materials form the main source of information for such users.

It can be seen that unlike scientists, the social scientists use a variety of information resources such as legislative proceedings, enactments, newspapers, newsletters and bulletins, committee/commission reports, addresses and proceedings of political parties, etc. An observation is also made that the social scientists generally use retrospective information as well as current information with the same degree of importance. It is in this context, the analysis of trend of citation pattern by social science researchers of the University of Kalyani is carried out.

The primary function of citation analysis is to provide a connection between two documents one which cites and the other which is cited. Citation analysis is one of the popular methods employed in recent days for the identification of core documents in various subject fields or for a particular scientific community in a geographical proximity. In fact, citation study is one of the effective and indirect methods to understand the information requirements of the users.

The present study is very much significant from the following point of views –
• To lead the reader to further studies in the respective fields
• To prepare bibliographies
• To study the use pattern of different types of documents
• To find out the relative use of different languages
• To study the use of literature from different countries
• To prepare ranked list of books and periodicals
• To study the rate of collaborative research

Citation analysis is such an important type of study which may be useful for acquisition of materials, provision of better services to patrons and knowing the location of materials. What part of specific micro subject is cited most and how long those materials remain useful to the readers, language of most cited journals – all these knowledge provides guidance to collection development policies, individual item selection and retention and binding decision, etc. It is a fact that compilation of bibliographies in new fields is really difficult. In such circumstances, analysis of citations of articles and other sources of information may be the only way to gather information. The very fact that the citations have been verified, evaluated and recommended by authors who are experts in their respective fields.

The result of this investigation will carry wider implications to overall design and improvement in quality and economy of library and information services. It is hoped that the study based on the analysis of bibliographic references appended to the theses, will provide an apparent view of information needs and use pattern of social scientist. It will also provide guidelines in the decision making process with regard to the acquisition and organization of documents in the social science libraries.
purpose of the present study is to investigate various trends in citation pattern in the doctoral dissertations on social science during 1998-2007, at the University of Kalyani.

1.4 Scope of the study
Out of one hundred fifty nine doctoral dissertations submitted to the University of Kalyani from 1998 to 2007 in commerce, economics, education, environmental science, folklore and sociology eighty are taken as the source material and the references used in these theses are taken as the main subject of study. Analysis is done on the total number of citations (6932) found in the accepted theses. Twenty five different bibliographic forms, namely, books, handbooks, series books, dictionaries, encyclopaedias, journals, bulletins and newsletters, theses and dissertations, conference papers, reports, working papers, abstracts, web resources, yearbooks, gazettes, acts, laws, cartographic materials, standards, recommendations, guidelines, strategies, draft papers, addresses and personal contacts found in the references of the theses are considered for the study. The analysis excludes newspaper and incomplete citations. Books, handbooks, series books, dictionaries, encyclopaedias are grouped under the category ‘books’ and yearbooks, gazettes, acts, laws, cartographic materials, standards, recommendations, guidelines, strategies, draft papers, addresses and personal contacts are grouped under ‘others’. 90.27 percent of total citations are found from books and journals and hence the analysis is confined on the different bibliometric parameters on the citations from books and journals.
1.5 Hypotheses of the study

The present study is based on the following hypotheses

- Various citation studies among social sciences indicate equal importance to books and journals
- The value or importance of older literature in the field of social science is very much present.
- Among the different sources of information cited in the references of social science theses, the share of non-print document is very less.
- Frequently cited journals are being subscribed by the University Library.
- Number of web resources cited in the theses has an increasing trend.

1.6 Conspectus

The thesis is divided into nine Chapters. The running chapter gives introductory words of this study. Chapter 2 deals with review of earlier studies on citation analysis and bibliometric study. Chapter 3 encompasses the methodology of the present study. The conventional theory and discussion on citation analysis is given in the Chapter 4. Analysis and interpretation of the doctoral dissertations on the basis of which this work is done is analysed in the Chapter 5 and it is named as ‘Content Analysis’. In Chapter 6 the main work, i.e., the analysis of citation pattern of doctoral dissertations is completed. Chapter 7 shows the comparative study of citation pattern. Findings and recommendations are given in the Chapter 8 and finally conclusion is in the last chapter, i.e., in Chapter 9.