

Chapter 5

Role of Bibliographical Databases in Measuring Information: A Conceptual View

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ABSTRACT

The quantum of information being produced has made the information scientists to devise various ways and means to effectively organize and disseminate them when needed. Bibliographical, citation and abstracting databases are the some of the tools. This chapter intends to describe the conceptual base of bibliographical databases, their genesis and impact in library science perspective and their importance in measuring information. The chapter also presents the science of measuring information using various quantitative and qualitative approaches like bibliometrics and scientometrics.

INTRODUCTION

Information can simply be defined as data that have been collected, collated and communicated in a meaningful form. The advancements in science and technology Post-World War created several by-products and one such is the production of information in huge quantity. Along with this the advent of modern fifth generation computers and communication technology gave birth to phrases and terms such as ‘information explosion,’ ‘information overload,’ ‘bandwidth,’ ‘channel capacity,’ ‘information redundancy,’ ‘noise,’ etc.

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Information explosion, which is also known as exponential growth of information leads to formulate a mechanism to retrieve the information easily and effectively without waste of time. Presently information explosion has become a common phenomenon due to the fact new information are generated more frequently and disseminated through ICT based communication technology. Price (1963) states that “once in ten years the number of articles in a field (particularly in science) doubles”. The development of science with a rapid increase in the number of scientific researches, scientists and researchers, and the advent of novel scientific disciplines have led to an exponential rise in the number of journals, books, conference proceedings, dissertations, patents, technical reports and other publications bringing research results and updating science literature. These publications are referred to as primary publications or primary sources of information, pointing to the original character of the information presented. Convenient search of such a huge number of publications issued in different countries, in different languages and stored in different media would be impossible to access without special aids, i.e. secondary publications or secondary information sources, which process, analyze and summarize primary publications and help in their target search. As such, a great amount of publications and their authors require proper evaluation, these secondary sources of information are also used for scientific validation, based on the high criteria they employ in the selection of primary publications to be systematically followed and processed.

Bibliographies served this purpose to some extent before the invention of computers. The modern day bibliographical databases play the role of secondary sources of information leads the readers to access primary sources of information. The concept of bibliography is more relevant and important to the publishers and library professionals for the management of collections in the library in earlier days while researchers too are concerned about it though for different reasons. The word ‘bibliography’ is a systematic description of books, their authorship, printing, publication, editions and so on. It is synonymously used with terms like, list of reference, book list, lists of books, catalogue, and record.

BIBLIOGRAPHY

The term bibliography was first used by Louis Jacob de Saint Charles in his bibliographic *parsiana* (1645 – 50) which gained popularity in the eighteenth century. The *termis* coined from the two Greek words, viz., ‘Biblion’ and ‘graphein’. The meaning of the word *biblion* is Books and *graphein* is to write. Thus, etymologically bibliography means ‘writing of books’. Bibliography as defined by Shores (1954), is a “...list of written, printed or otherwise produced record of Civilization, which may include books, serials, pictures, films, maps, records, manuscripts and any other media of communication.” According to Ranganathan (1963), ‘bibliography’ “...is a list of documents listed together for some purpose. The purpose is to bring to the attention of the reader an exhaustive or selective list of documents relevant to his pursuit of study or enquiry.”

Bibliography is a complex structure of lists which extends from the local library to the region, nation and the world. A bibliography records not only what is available, but also what had been available in the past and what will be available in the immediate future.

Bibliography or bibliographic databases as a secondary source of information arise from the need to make the follow up, search and access to most relevant literature ever more convenient of the users. Current bibliographic databases were preceded by printed publications, their best known and oldest

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