Chapter 2

Literature Review

2.1 Introduction

Literature search is essential while defining a research problem particularly from two aspects. a) In order to be aware of the research findings, b) To define the research problem based on the findings explored by the previous researchers. Literature search is an inevitable portion of any research. Literature review helps the researcher to gain knowledge of the study area and understanding the present status of the area. It also gives an idea regarding the previous works done in the study area. Different forms of literature both macro and micro viz- books, periodicals, journals, reports, reference books, e-journal, blogs, e-books, seminar papers etc. is needed to consult the width of the research problem. Amidst all the vast literature important and relevant literature on “Use of Library Software Packages in the Libraries of Institutes of Higher Learning in Assam with reference to Serial Control Module: An Evaluative Study” have been considered for the study. Due to information explosion the internet is overflow with bunch of irrelevant information, therefore only few literatures both printed and online resources are cited.

The researcher has also visited some of the libraries like Lakshminath Bezbaroa Central Library (IITG), Krishna Kanta Handiqui Library (Gauhati University), Dr. Surya Kumar Bhuyan Library (CU) and Central Library (Tezpur University). The UGC-Infonet Digital Library consortia, NLIST (National Library and Information Services Infrastructure for Scholarly Content) resources at Department of Library and Information Science and JSTOR have also consulted by the researcher along with e-books.

This chapter discusses the literature relevant to this study. It depicts published and unpublished covering the different aspects of the information technology, library software packages and automated serial control which is elaborated in local, national and international perspectives. An effort is made by the researcher to give
an impression of the literature analysis by the researcher. The arrangement is done chronologically in ascending order.

2.2 Books

Brown and Smith (1980) in their book “Serials: past, present and future” stated that a serial is a publication that is numbered, and has every expectation to continuing either regularly or irregularly to the latest.

Riaz (1992) in “Library Automation” describes the main six modules of library software management software: circulation, cataloguing, reference service, acquisition, serials control, and information retrieval. The book also talks about present developments in fields of information technology; it’s implication on online information services of modern libraries with reference to use of computer networks in western countries. Various telecommunication methods for computer networking in use today, including satellite communications in remote places for exploring potentials of a library information system is also described in the book. This book is of immense help for all library professionals while implementing library automation.

Nair (1992) in “Computer Application to Library and Information Services” describes various computer concepts with reference to library. The impact of computers and telecommunication technologies on traditional library functionalities like information collection, storage, retrieval and dissemination is immense. The library and information professionals have to be competent in these fields to successfully extract the capabilities of the computer technologies and add value to the modern library. The book gives a general understanding of the computer system and its hardware cum software components for benefit of library professionals. It describes computer language PASCAL, dBase III+ database management software and CDS/ISIS software package which were developed by UNESCO for generalised Information Storage and Retrieval systems.

Nair (1995) in “Academic Library Automation” describes about developments and experiences in application of information technology in academic libraries like Universities, Colleges and research institutes. Accessibility of relevant up-to-date information in timely manner is of utmost importance to ensure high quality of learning as well as teaching in the institutes of higher education. Information accessibility is also important in research institutes because in absence of the same, unnecessary duplication of research work and huge waste of resources may occur. Library automation is the natural solution to such problems of academic libraries. Latest technologies have enabled libraries to introduce storage media like CD/DVD ROM, Video Disks and also online databases, which are accessible from anywhere over the intranet within the campus network or even outside the campus though Internet, if enabled. CD/DVD ROM, flash drive technologies allow storage of large chunks of information on very compact and portable medium. To effectively serve the information requirements of the academic community, modern academic libraries must adapt to latest library automation technologies.

Szilvassy (1996) in “Basic Serials Management Handbook” discusses about serials management. Serials play the most important role of communication medium among the researchers, teachers and students on its field of speciality. However serial management is one of the most challenging tasks faced by staff at any library. Frequent change in publishing patterns, rising cost of subscriptions and absence of national bibliographic agency in developing countries like India further makes this task even more difficult to handle. This book presents some best practices of serial management in libraries in a language which can be easily understood by novice users too. Although the book concentrates on serial management aspects like acquisition, bibliographic control, conservation and
preservation, access, standards etc. in a predominantly non-automated library environment, it also consists of a valuable chapter entirely devoted to future automation aspects of serial management.

Nisonger (1998) in “Management of Serials in Libraries” discusses about serial management issues using illustrative as well as descriptive approach. It emphasises rightfully on the importance of serials as a medium of scholarly communication and its management complexity due to inherent nature of its irregularity. The book primary discusses about collection management issue, serials evaluation/ selection criteria, cancellation, weeding, document delivery, budgeting, decision method, journal ranking, and the application of citation analysis. Impact and importance of Internet communication on serial management, serials history, serials automation, and electronic journals, technical services processing and copyright issues are also discussed by the author.

Woodward (1999) in “Management of printed and electronic serials” stated that automation has materially advanced the merger’s control of the serials collection through superior public access of information, improved claiming for missing issues, enhanced binding control. He further emphasized that library users generally find that Online Public Access Catalogue (OPACs) is a considerable improvement over manually produced serials lists, which become out of date so quickly.

Vasant and Mudhol (2000) in their book “Software packages for library Automation” discussed software packages for Library Automation. It has been divided into six chapters such as Introduction, Computer configuration, Development of software packages, Specific software packages. Each chapter is defining about library management software packages and related terms.

Reddy (2001) in “Automated management of library collection” discusses about the Automation and Library Serial Automation Standards, bibliographic access,
automation process serial control procedures, Acquisition method, online cataloguing in Libraries.

Balakrishnam & Paliwal (2001) in their book “Library Automated Acquisitions” discusses that automation is the best way to reduce human work by application of machinery to accomplish those work in a perfect manner. Serials automation includes quite a few different concepts, including automating serials control procedures in libraries, the electronic journal, automating bibliographic access to serials, and automated vendor services. Around of these topics have been share out in this book. Most important matters discussed comprehensively in this book are: serials automation; Development of serials automation; Serials processing in libraries; Collection management of serials; direct service to the user.

Bilal (2002) in “Automating media centers and small libraries” has taken a practical and systematic procedure while describing step by step activities of library automation process. This book can be a guiding handbook for any library professional irrespective of his/her experience in the field. The book clears various technical concepts of library automation which enables a library professional to make a learned decision whether to implement automation for the first time, or to upgrade existing system, or to migrate from the present system to a different one.

Subba Rao (2005) in “Library and Information Technology” discusses about the increasing use of computer systems in the field of information retrieval and its subsequent effect on our mind which has rapidly altered human perception about information. Near instantaneous nature of large amount of information retrieval at a click of a button has changed the way library information services operate now-a-days. The book discusses about information technological impact on traditional library operations of acquisition, cataloguing, serial control, circulation generation and publication of bibliographic indexes and different other documents.

Nanda (2006) in “Library Automation” discusses the about the Automated Reference Service, Acquisition system, Automated Circulation Control System,
Automated Serials Control, Functions Automated Acquisitions, Automated cataloguing, periodical indexing.


Pandey (2011) in “Recent advances in library automation” discusses use of computer and a variety of electronic gadgets to automate various library activities. The book also includes a number of papers written by prominent library professionals. Problems faced by libraries in India while implementing library automation as well as different prospects of library automation in Indian context are discussed in these papers.

Tiwari (2011) in “Library automation” talks about computerization, automation, and implementation as well as use of library management software in Indian libraries from a historical perspective. He also covers concepts like resource sharing among libraries through inter-networking of institutional libraries, Online cataloguing of library resources, ICTs, Digital Technologies as well as use of artificial intelligence in modern day automated libraries.

Balasubramanian (2011) in “Library Automation and Networking” discusses about computer networking and communication aspects of library automation. He discusses about open source library management software Koha, database management software DBMS 4 and importance of computer networking for reliable sharing of library information services thorough computer network at locations outside library premises. He also discusses in general about status of computer networks in India.
Kochar & Sudarshan (2012) in their book “Library Automation (Issues and Systems)” gives some indication of the extent to which automated library systems are actually being used by libraries in their everyday operations. He also discusses about Periodical listing and accessioning.

2.3 Articles

Schmidt (1984) in “Choosing an Automated Serials Control System” scrutinized some of the chief prevailing automated serials control systems considering the purpose of serial automation and also suggested a few standards with the help of which comparison of different systems can be done.


Paul and Rao (1989) in “An Automated Serial Control System - A Module” discussed about the goals, different roles, and the prerequisite steps of an automated serial control system. The authors also discussed about restrictions and possible suggestions for implementation of the modules with reference to few works carried out at national as well as international levels.

Saxena and Srivastava (1998) in their paper “Evaluation of Library Software Packages Available in India” have performed evaluative study of some library management software packages. They found in their study that suitable hardware according to the operating system requirements of the LMS package is of utmost importance while implementing library automation.

Francis (1998) in “Software Problems in Library Automation in India” discussed about objections and challenges affecting computerization of libraries in India. The author also suggested some parameter for library software packages best suited for Indian libraries.
Tyler and Neal (2005) in their paper “Serial Control: Past, Present and Future Imperfect” discussed various issues to control serials. They also discussed about the constant changes in and around serials controlling. They have also covered the topics like significance of periodicals to libraries, serial records maintenance, administration and staff requirement of serials section.

Kushwah, Gautam and Singh (2008) in their paper “Library automation and open source solutions major shifts and practices: A comparative case study of library automation systems in India” highlighted various features of library automation software (LMS). Widely used LMS packages i.e. Libsys and SOUL were compared with open source system KOHA. The paper describes about authors’ observations and comparison of non-commercial LMS package. The impact of open source LMS packages on Indian library automation is also described by the authors.

Harinarayana and Raghavan (2008) in “Retrieval capabilities of CDS/ISIS and Libsys : A comparison” discusses the results of study on the comparative retrieval effectiveness of CDS/ISIS with Libsys LMS. The authors have used eight numbers of well-defined parameters to compare between the two packages. The results state that none of the two software packages perform on all the eight parameters ideally. However on performance of retrieval among the packages there is performance gap of approximately 10%.

Ansari and Hussain (2007) in “Library Automation Software Packages in India: A Study of the Cataloguing Modules of Alice for Windows, Libsys and Virtua” discussed the effectiveness of library services including efficient organization and retrieval of information activities. Now a day’s one of the greatest challenges before the library managers has been the selection of good library automation software, which can cater to the needs of a particular library. Their study also discussed the salient features of cataloguing module of three such packages, namely, Alice for Windows, Libsys, and Virtua.
Ansari and Faruqi (2008) in “Benchmark of Library Automation Software” discusses the availability of various features in a library automation software package and also discusses about the important features that should be inherent in all the modules of the software package for carrying out all the housekeeping operations of the library.

Mulla, ChandraShekara and Talawar (2010) in their paper “Usage and Performance of Various Library Software Modules in Engineering Colleges of Karnataka” discusses about the library software packages use in different libraries, viewpoints of librarians regarding the software packages they have used along with the modules in the library software packages are also discussed in this paper.

Ghosh and Panda (2011) in their paper “Automated Serial Control at the Indian Institutes of Technology: an overview” studied the functional attributes of various library management software packages in central libraries of seven Indian Institute of Technology (IITs). The authors found that the most popular LMS in IITs is LibSys being used in five out of seven IITs; whereas IIT Madras and IIT Roorkee libraries use Virtua and Troodon LMS respectively for library automation. Features of serial control module of LibSys, Virtua and Troodon are studied by the authors by logging in to each LMS system. They found that Virtua incorporates almost all the functional attributes as per International Standards. Whereas LibSys has only included core functionalities of serial control module with limited compliance to international standards and Troodon has even less standard functionality for serial control. Finally the paper discusses about recommended standards of LMS serial control and emphasises on improvement and upgradation of IIT libraries by resolving the drawbacks identified in the study.

Waghmode (2012) in “Automation of Acquisition Section of Sonubhau Baswant College Library with the help of SOUL 2.0: A Study” discussed about Automatic Acquisition section of SOUL LMS which itself is a Sub-System of Acquisition Module. He discussed about implementation of acquisition module of SOUL LMS in S.B. college library with special emphasis on Automatic Acquisition sub-system.
Joy (2014) in “KOHA and LIBSYS: A Comparative Study” described about comparative study of LMS packages. Libsys is a commercial LMS package whereas Koha is an open source LMS package. The paper aims to create a checklist of various evaluation criteria to be used by library professionals while comparing between different LMS packages. He also discussed about desirable features of LMS packages. The study collected data from thirty four libraries in Kerala using any one of the two LMS packages and the same were analysed in the paper.

Aute and Ghumare (2014) in their paper “Library Management Software: Libsys7 & Koha” discussed about the two main library management software packages being used by libraries in India, Libsys and Koha. The study reveals that both the packages are very useful and quite capable for library automation purposes. However, Libsys being commercial software provides a higher level of certainty with periodic updates and supports from the company being delivered on-time. Whereas Koha, being an open source software package commands higher level of satisfaction to its users.

Waghmode (2015) discussed in “Automated Serial Control System of Sonubhau Baswant College Library: A Case Study” about automation of serial control system of Sonubhau Baswant College Library. The paper deals with the process of serial control system automation such as: request or suggestions from users, subscriptions, orders, cancel orders, payment process, refund payment process, frequency wise check-in, etc.

Borkakoti and Singh (2016) in their paper “Issues and Challenges of Automation in the College Libraries of Guwahati” discussed about Issues and challenges of library automation in provincialized college libraries of Guwahati which are using LMS. The study covered sixteen numbers of college libraries in Guwahati out of which as many as fifteen colleges were using SOUL 2.0 as their library management software. Only one college was using KOHA LMS. The study showed that use of serial control module is very limited whereas cataloguing module is used by all the libraries, followed by OPAC module and circulation module. The paper also discussed about challenges faced by the college libraries...
and suggested possible steps to achieve higher levels of library automation by using all the functionalities of LMS.

Sarma (2016) in “OPAC Module in Open Source Library Management Software: A Comparative Study” discusses about OPAC modules of the open source software packages, which are freely available in the web for download and gets regular software updates. OPAC module features and characteristics of the LMS packages like Evergreen, Koha, NewGenLib, OpenBillio and PhpMybibli are discussed with special emphasis on searching and online services provided through web interface to users. The study shows that Koha is the most features LMS followed by NewGenLib and Evergreen among the LMS packages under study.

2.4 Thesis and Dissertation

Baman (2006) in “Feasibility of library software packages for library automation in higher educational institutions of Assam a critical study” discusses about the library automation in University Libraries and applications of IT in College Libraries of Assam and use of various library software packages in University Libraries and College Libraries.

Boro (2012) in “Problems and Solution of Serial Control in Central Library, IIT Guwahati” discusses about the problems of serial control in central library, IIT Guwahati and also suggested some suggestion in this regard.

Malla (2013) in “Usage and effectiveness of different software packages in the libraries of Kashmir University, IIT Delhi, IIT Kanpur: a comparative study” discussed about details about most popularly used Library Software Packages in India.

Aute (2013) in “Comparative study of library management software packages” discusses about system software, open source software and application software. The researcher has discussed comparison of major national level LMS packages like SOUL 2.0, Librarian, Libman, Maitrayee, Granthalaya, Sanjay and Koha in the
thesis. The thesis also tries to point out views of library professionals and users about these LMS packages.

Brahma (2014) in “Problems and prospects of library automation in bodoland territorial council area Assam” has discussed about library automation challenges and future prospects in the libraries located within the geographic boundary of BTAD area in Assam. Shortage of professional staff, lack of infrastructural facilities in some cases, low percentage of proper library user manual, unavailability of Internet connectivity are few major problems identified by the researcher.

Sarma (2016) in “Prospects of using open source library management software in college and university libraries of Assam” has discussed about the open source software and its future prospects in college and University libraries of Assam. The researcher has found that there is significant difference between college and University libraries in terms of manpower strength, availability of fund and infrastructural facilities. Moreover, the study concludes that Koha is the most suitable LMS package for college and University libraries of Assam for library automation.

Ghosh (n.d.) in “Automated Serials Control at IIT Libraries in India: An Evaluative Study” has discussed about the serial control module and its features available in the library software packages use by the seven (7) IIT libraries. The researcher has used survey methodology to collect user feedback and concluded that serials are widely used by faculties and research scholars whereas post graduate and under graduate students use serials occasionally.

Apart from the above discussed documents the researcher has also gone through different websites for literature purpose. Serial control itself is a very complicated task, so literature on this topic is not abundant. Though some of the researcher understood the importance of this tried to contribute and tries to find some solution on serial control which is very helpful for the researcher to carry out the research work. The researcher tried to cover maximum number literature available in all form of literature like books, articles, thesis and dissertation.

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