USE PATTERN OF ELECTRONIC INFORMATION RESOURCES IN THE COLLEGE LIBRARIES IN KERALA: AN ANALYTICAL STUDY

Thesis submitted to the University of Calicut for the award of the Degree of

DOCTER OF PHILOSOPHY IN LIBRARY AND INFORMATION SCIENCE (As part of M.Phil/Ph.D integrated Programme)

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DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE UNIVERSITY OF CALICUT 2008
CHAPTER II

REVIEW OF RELATED LITERATURE
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This chapter presents review of related studies conducted in India and abroad. Literature review can help the researcher to formulate research design and appropriate tools for the successful completion of the study. The review includes paper presented in seminars, conferences, articles published in seminars, conferences, article published in scholarly journals, research abstracts, books and library websites which deals with the current developments in usage of EIR. These studies under review have offered insights on issues related to the use pattern of electronic information resources in the college libraries in Kerala. It also helps to avoid duplication of research and helps to go deep into the problems at one hand and to study the different side of the problem on the other. The literature reviews are arranged chronologically.

The review of literature is not mere reading for reading sake, it is also not a casual reading of the story or novel. It focuses and directed towards specific purposes. It is also selective. A researcher has to select the kinds of literature to be reviewed and determined the purpose for which he has to study them. The literature review starts with the selection through the various stages for the research process and ends with report writing.

Braid (1994) stated that electronic document delivery has assumed much greater importance recently. At the same time there is a great deal of confusion over what the phrase means. The author described this paper gives one definition and examines some of the reasons for the sudden upsurge of interest. There was a brief history of electronic document delivery development at the British library document supply centre and details of current activities and future plans. There are details of the development of a
standard for electronic document delivery and practical application of that standard. This paper includes with some the barriers to progress.

Prabhakaran (1996)\textsuperscript{2} studied the need of electronic publishing. The numbers of publishers providing online access to many of their journals are increased. The study was based on the electronic access and their problem in Tata Institute of Fundamental Research. Here the steps involved in the process of building up their structure for online journals are described. Tata Institute of Fundamental Research library is presently having online access to several journals in electronic format. While making this electronic journal available to its users, library has numerous experiences so that other libraries may benefit by them.

Anuradha (1999)\textsuperscript{3} in a paper presented the growing user needs and the change of user character for access to information. The paper described the concept of digital libraries and their nature, functions and environment. It explained the digital library products and systems. The paper also overviewed the electronic information sources and explained the importance of CD-ROM in digital libraries. It highlighted the impact of digital libraries on information transfer and also identifies its limitations.

Deverajan (1999)\textsuperscript{4} discussed the role of digital libraries in the present day information environment and new challenges and promises for library services especially in the Third World Countries like India. The paper pointed out a number of problems as hurdles for the development of digital libraries in developing countries. Lack of indigenous efficient and effective library software packages, lack of information policy and information culture, inadequate fiscal allocations in libraries, problems relating to the conversion of the existing manual databases in to computer readable databases were some of the problems faced in materializing the concept of digital libraries.
Rekha (2000)⁵ provided information about e-journals in terms of their development, advantages and disadvantages. Some of the advantages the author observed were multimedia capabilities, accessibility, speed of production and distribution. Disadvantages posed by e-journals include technological barriers and economic barriers. The paper reviewed the current trends concerning e-journal, which libraries need to be aware of some practical implication that are unique to academic libraries were also discussed.

Meshram (2000)⁶ explained the characteristics, perspectives, and issues problems of the electronic journals. On the basis of distribution methods, identified four types of e-journals and estimates of a number of currently published electronic journals identified in the paper were format and intellectual quality, high subscription rates, legitimacy, archival and cataloguing etc. The article concluded that the evolving information technologies are imposing unpredicted challenges in the fields of library management but these technologies are taking closer to the sacred mission of libraries, which is by providing right information to right person at right time.

Saji et al., (2001)⁷ made an attempt to discuss the state-of -the art in the field of electronic books. With some possible definitions, genesis and comparison with printed books, the various hardware and software available for reading e-books were illustrated. After describing the possible offline and online delivery modes, it discussed at length the online web delivery of electronic books with a few illustrative examples. The major impacts of e-books in libraries like accessibility, services, ownership etc were elaborated.

Singh (2001)⁸ an attempt has been made to describe the problems in subscription of periodicals in NCERT library. The study highlighted importance of periodicals and the problem related to the subscription of foreign periodicals through agents. It also offered some evaluate comments on different measures adopted to avoid difficulties, concluded with practical
difficulties experienced in NCERT library in acquisition of periodicals through agents.

Frankline et al., (2001) defined e-publishing as the publication process where the manuscripts are submitted in electronic format, edited, printed and even distributed to readers by employing computers and telecommunication system. The full capabilities of the electronic media include motion sound and interactive features are exploited in the creation of completely new publication forms. The study revealed that the number of journals available on-line are increasing day by day. The journals of knowledge synthesis in nursing have no point equitant.

Huta (2001) studied about the journal selection. He observed that it is very crucial point in the net environment and limited budget in any library and information centre. The study emphasized on the limited budget and tries to find solution of the problem in journal selection by using the theory of marginal utility. Also discussed how Bradford’s law is effective for cost analysis and journal selection. This alternative approach tries to find out the solution for best selection and optimum utility of the budget.

Saroja (2001) assumed that in the present day society Internet and the World Wide Web (www) have become important source of information. She pointed out that many research studies sites and the resources available on the web. The study examined the source of cyber information and discussed the need of quantitative studies regarding the information available in the cyberspace. In particular, she examined the problem associated with citing e-resources and attempted to answer some of the question on account in citing e-resources. The study suggested for evolving studies in citing e-resources.

Siddiqui Rana (2001) discussed the emergence of new tools for library and information processing and retrieval of the information. They
examined the various information storage tools and their application. The paper described the online information retrieval techniques, through Internet. The study concluded that the modern libraries equipped with modern form of technology make the resources of information globally available and consequently the role of libraries is more dynamic and ever changing.

Demilew (2001)\textsuperscript{13} investigated the potential of electronic document delivery services for academic libraries in Ethiopia. The objective of the study was to investigate the existing manual-based document delivery system of academic libraries in Ethiopia with a view to proposing enhanced resource sharing among the academic libraries through the application of EDDS. To carry out the survey the investigator employed questionnaires, interviews, onsite observation techniques and reviews of existing documentation. The survey reveals that among the 17 libraries, majority of library staff have computer skill. The survey also reveals that most of the institutions have used the postal system to deliver locally published materials. The computers were heavily used for word processing, and some libraries used them for searching databases from CD-ROM. Very few libraries have started to use them for in-house databases development or information retrieval services. The major financial resources of libraries were their parent institutions. All academic institutions received aid donor-supported project assistance for the major part of their acquisition and some specific activities from overseas. The survey revealed the many challenges and opportunities end user face in obtaining research materials not available locally. From the discussion it was observed that all libraries have an interest in a strong information resource-sharing consortium using EDDS.

Devraj and Singh (2002)\textsuperscript{14} discussed digital libraries and its gaining importance with the aid of Internet for library operations by down loading information from remote databases. In India more that 180 universities and
over 6 thousand colleges use the library services for their academic and research activities and depend on resources available in their libraries. Currently the technical, scientific and management institute libraries are functioning in isolation and there is no mechanism for the dissemination of valuable information available in these institutes. The authors have discuss search engines and digital libraries on web site via internet and all these aspects from the Indian point of view and the digital library network now in operation in India. Internet based resources and services are very valuable particularly for the developing countries since the printed sources of information are not easily available in time from the developing countries.

Murthy (2002) the author described the tools required for information professionals in handling the Internet in order to satisfy the users. Gateways are the Internet search tools to help users to find resources on the Internet. Gateway information is electronic journals, data sets, e-books; educational institutions, institutional home pages. Gateways are needed to improve the effectiveness of Internet searching. The establishing of the gateways as a process of identification, filtering, description, classification and indexing before they added to a database which is freely available via the world wide web. The aim of the digital library gateway website is to serve as a library guide to the resources and services. Indian statistical institute library has applied few digital information techniques and is providing the information services to its users. The Internet is only the latest of the important technological advancements that libraries have enthusiastically adopted in their quest to deliver improved information service to library users.

Mohan (2002) discussed the collection, development and resource sharing of scientific libraries for the Oceanography and Fisheries Research. A study was conducted and subsequently substantial duplication was identified relating to subscription to the periodicals in some special libraries of the
Cochin city. The study highlighted the duplication of acquisition and the amount spent for the acquisition of these journals. To solve these problems a network environment is essential for collection development. The study reported with the facilities and database available for the development of such a networking system within the city.

Swarna et al., (2002) discussed the characteristics of e-journals. The main objective of the study is to describe the physical organization and layout of the electronic journal and comprehend the subject coverage. The study found that the electronic journal facilitates dissemination of research result in less time, low cost and offers universal acceptability, flexibility and interactivity, the list of journals on the internet which are accessible absolutely. Conclude that the library should select such journals, evaluate them and make them available to the user community through their local website.

Ali (2003) conducted a study about the use of the electronic information services by the users of IIT library Delhi. The questionnaire supplemented with interview method has been used to solicit the opening of the different level of users group. The study also examines the utilization and satisfaction level of users about Internet, CD-ROM databases and other services provided by the library. Finally it highlights the suggestions made by the users for further development of electronic information services at IIT library Delhi.

Natarajan (2003) described the definition of databases and the functions of Internet, which helps the library and information science professionals in many ways for providing better services to their users. The paper, described the different types of electronic resources available. The factors determined for quality of e-resources like, authority, content, currency and timeliness and special attributes were discussed in detail. The
considerations for evaluating the e-resources were discussed under the heading like content, access, technical support, cost, legal and support tools. The selection of different types of e-resources and the evaluation of the same were discussed. The article conclude that library and information science professionals should be well aware of the e-resources available and evaluate them before acquiring/accessing them for their users.

**Equbal and Soomaraza** (2003) stated that over the years there has been a rapid rise of a number of e-journals. In most of the cases these journals are available free to print subscribers. The management of e-journal raises a new set of issues regarding urgent attention. The issues surrounding can be resolved through collective efforts and co-operation of libraries, publishers and vendors of e-journals. It is also describes the types of journals, CD-ROM journal, selection and acquisition of journal and explains about managing the e-journals in the digital environment.

**Murthy** (2003) conducted a study on Digital Library using Green Stone. The Study remarked that the digitization had been becoming a major consideration for all library and information services. This study discusses the practical issues and key stages involved in digitizing ISIBC in-house documents, based on work undertaken as part of the digitization of in-house volume, aims to develop a working model of the hybride library with a teaching context. Greenstone digital library software is developed from Newsealand Digital library project. Developing Digital Library collections and often means creating new kinds of tools and services. To create a digital library, an application planner selects the modules from the screen. GSDL has a variety of Formats; other programs give application planners greater control over display and printing layout for search results.

**Caravan and Jeny** (2003) in their study discussed the research undertaken by the centre for research in Library and Information
Management, Department of Information and Communications, Manchester Metropolitan University, has sought to enhance understanding of information seeking behavior of blind and visually impaired people when using digital resources. The Non-Visual Access to the Digital Library Project (NOVA) aimed to develop further undertaking of user behaviors with world wide web based resources, with particular reference to the retrieval of information by blind and visually impaired people. Using a sample of 20 sighted and 20 visually impaired people, undertook a number of information seeking tasks using four different electronic resources. Each steps of the information seeking process was logged (at keystroke or equivalent level) and pre-task and post-task questions were asked in order to gather qualitative data. Results revealed that visually impaired users spend more time searching or browsing the web with times searching or browsing the web with times varying considerably depending on the design of site. Overly, visually impaired users have to spend more time navigating around each page; especially of for example, the page contains a lot of information or has many links. Observations revealed that people with more experience with the assistive technology they were using more successful with the task. Whereas designer may assume that everyone has access to the new versions of assistive technology, this is not always the case. Designers, therefore, will have to take such realities into account.

**Little** (2003) \(^{23}\) outlines the resource sharing arrangements between the Med Hist gateway and the Humbul hub, using the OAI protocol for Metadata Harvesting, and some of the issues it has raised. This Med Hist gateway was launched in August 2002, providing access to a searchable and browsable catalogue of high quality, evaluated history of medicine Internet resources. Med Hist was developed principally to fill the gaps left in the coverage of the history of medicine by existing resource discovery service within and outside the RDN.
Talaja and Maula (2003) made a study with an aim to contribute to the development of a domain analytical approach for explaining the use and non-use of e-journals and databases. The authors identify and define factors to account for disciplinary differences in e-journal use, outline hypotheses to be tested more rigorously in future research, and test them initially on a limited data set. The empirical data was gathered as a part of a wider qualitative study exploring scholars’ use of networked resources in four different disciplines; nursing science, literature/cultural studies, history and ecological environmental science. The findings suggest that e-journals and databases are likely to be used most heavily in these fields.

Smith (2003) in a study explored the role electronic journals currently play in faculty’s weekly scholarly reading habits. Questionnaire method was used to collect information about the scholarly reading habits of University of Georgia faculty members. A sample of 365 was selected randomly from the total of 800 Science faculty members and the whole of 161 from Social Science faculty. Questionnaire was sent through email.

The finding of the study indicated that 77% Science and 69% Social Science faculty members reported reading electronic sources. The most noticeable disciplinary difference was in personal electronic subscriptions 35% of science faculty reported reading at least one article from a personal electronic subscription per week, as opposed to only 15% of social science faculty. In addition, slightly more science faculty members reported weekly reading from both library print subscriptions and library electronic subscriptions than did their colleagues in the social sciences. The percentage of faculty who reported weekly reading from personal print subscriptions was the same for both group (91%). In terms of rank, more assistant professors reported weekly readings from electronic sources (88%) than did associated professors or professors (69% of both). The most noticeable difference in
usage was in library electronic subscriptions, with 84% of assistant professors reporting weekly usage, but only 64% of associate professors and 63% of professors reporting usage. In addition, 94% of assistant professors reported this activity. This indicates that 6% of assistant professors at University of Georgia do not read any articles from print sources in a typical week. Disciplinary differences were also evident within rank. More professors in the science (71%) indicated reading at least one electronic article a week than did professors in the social science (64%). The biggest difference in usage was once again in personal electronic subscriptions: only 8% of social science, while 50% of the science assistant professors reported usage.

Oduwole and Akapati (2003) in a paper presented the accessibility and retrieval of electronic information in the Nigerian University of Agriculture Library. A three-part questionnaire was given to 1,000 out of an estimated 5,030 users of electronic information in the university library using a simple random sampling technique from which 789 response were returned and found usable. This constituted a 78.9 percent response. The study revealed that non-final year undergraduates use mainly the automated library catalogue (OPAC), while final year and postgraduate students as well as academic staff regularly use bibliographic databases tools. A majority of users were satisfied with the information obtained and reported that they find these automated services to a greater or lesser extent easy to use. The major constraints to information accessibility and retrieval of automated library services were infrastructural: the limited number of terminals available for users and power supply outages.

Maharana et al., (2004) conducted a study on collection Development of electronic information resources in the R&D libraries of Kolkata. The study focused on the policies and practices of development and management of e-resources in R&D libraries. It
also examined various criteria for selection and evaluation of e-resources. It also made an attempt to reveal the present status of collection of e-resources, to find out collection development policies of e-resources, to explore the current practices of selection and evaluation of e-resources and to recommend practicable guidelines for improved collection development programme. Questionnaires were used to elicit information on the various aspects of subject understudy, which included the present status of e-collection, policies and practices followed, preservation strategies used etc. from the ten R&D libraries.

Jalaja and Deneshan (2004)²⁸ pointed out their study “The problem of digital divide among the academic community” that information is a fundamental resource indispensable for any academic activity. The role of information in study, teaching and research is well organized by the academic community. The revolution in the information and communication technology (ICTS) has made the transfer of information so easy that any body in any place can share information without geographical barrier. The new ICTS have enabled the academic community to overcome the barrier of time in assessing information as well.

Susheela (2004)²⁹ described the electronic publishing facilitated the research for quick and precise search for scientific information. The paper discusses the ways and means of exploring and accessing the relevant information through the most complex Internet or web, explaining the various electronic networks, its locations highlighting the Indian scenario. The paper gives stress on the various developments that have taken place to provide facilities to the researchers. The author says that the growth and developments of electronic journal is envisaged with electronic publishing, computer and web technology. Serial publications especially publishers of primary and
secondary journals have been transforming their trends to the tune of current needs and priorities of scientific community, utilizing the latest technologies.

**Gulati (2004)** conducted a study on the status of information and communication technologies usage in Indian libraries with special reference to special libraries and the efforts made by various institutions to propagate e-information products and services. This paper highlights the consortia efforts in India like JCCC consortium, CSIR E-Journal consortia and UG C infonet. The study concludes with challenges for library and information science professionals and an overview of initiatives taken by government of India.

**Ramesh et al., (2004)** made an evaluative study in terms of user requirements and satisfaction with regard to IT based services in the universities of Karnataka state. Objectives of the study were: to assess current levels of infrastructure facilities available to offer various IT services to different categories of user; to examine the state-of-the-art of library automation and networking with special reference to the possibility of participation of libraries for resource sharing with other national and international systems and networks; to diagnose particular problems in providing IT based services on the basis of user requirements and satisfaction; to assess the nature of all types of users, their changing needs of information sources and types of IT based services required to satisfy them, to evaluate and measure the users opinion on IT based services keeping in view user requirements and satisfaction in the networked environment; to highlight the significance of campus networking for enabling the optimum utilization of Internet and other electronic sources and services; to workout the strategy to increase the user awareness or orientation programme with respect to IT based services; to suggest the ways and means of using available facilities to get the adequate financial assistance from different funding agencies. Questionnaire method was used to survey all the 7 university libraries making personal visit
to all the libraries. Findings of the study indicates that out of 7 sanctioned posts of University Libraries only 3 have full time librarian and the absence of University Librarian has affected the overall management and administration of the Library; Both traditional and modern infrastructure is available at all university libraries to a large extent and IT and network facilities are satisfactory; most of the libraries have extensively computerized their operations and this has been developed progressively during last 5 years and 71.42% have rated the facilities as ‘good’; the infrastructure includes adequate number of computers with facilities for CD-ROMs, printers, scanner and other peripheral devices; almost all the university libraries are participating in one or other network system for resource sharing; 95% of the users have rated from Manglore University, are not satisfied with the overall IT based information services and notably no user has indicated that he/she is extremely satisfied and 14% are not at all satisfied with the IT based services. The suggestions put forwarded by the authors include filling up of necessary staff position; conduct of user awareness programmes in libraries; up gradation of IT infrastructure and in-house training programmes for library staff in IT applications.

Mercedes et al., (2005) 32 made study on online journal and their impact on document delivery. The purpose of the study was to examine some of the ways in which e-resources have made an impact on traditional practices and how some user practices have begun to change. The study uses both qualitative and quantitative data. The study finds the e full-text is as yet unable to fully meet the needs of the researches. Until full text can approximate what is available in print both in journals and in monographs the need for document delivery service will remain.

Rajeswari (2005)33 conducted an analytical study on the use of electronic resources and services by faculty, research scholars and students of
Sri Padmavati Mahila University (SPMU), Trupati. Questionnaire was distributed to stratified random samples. The samples group consisted three groups namely teaching staff, research scholars and postgraduate students. The response rate was 82 percent. The study revealed that majority of the teaching staffs used Internet, E-mail and OPAC facilities. Most (36.2%) of the research scholars had the opinion that INFLIBNET services met their information needs.

Madavan Nair (2005) argued that launching of Edusat reflected India’s commitment to use space technology for national development, especially for educating the population in remote and rural locations. According to him it was especially configured for audio-visual medium, employing digital interactive classroom and multimedia multi-centric system. At the end of the article he hoped that Edusat would herald a new era for a countrywide distance education.

Mai (2005) conducted a study on web-enhanced learning. The main objective of the study was to explain a web-based constructivist-learning environment, which was developed, based on course given to students in Faculty of Creative Multimedia (FCM) on student learning. The methodology used was an online survey. The result obtained was satisfactory. In this learning process, students were able to understand the problem, work collaboratively, construct their own solutions and determine their own learning outcomes.

Renn and Zelgmann (2005) conducted their study to know the outcomes of online learning. Data for the study were gathered through questionnaire. Data consisted of pre-midsemester and post-surveys of students’ attitude and skills in relating to technology and student affairs, transcript of asynchronous online discussion, and student assignment. Data analysis included descriptive statistics. Findings about experiences related to
outcomes were derived from the immersion and to the quality of learning environment. The online immersion seemed to have the intended effect of simulating for the student’s experience of being online distance learners.

Swaroop Rani et al., (2005)\(^{37}\) conducted a study on users attitude towards e-journals. From their study e-journal appeared during 1970s but became popularized in 1996. Electronic journals are periodicals literatures that are made available as individual titles via electronic medium typically the World Wide Web. Electronic journals for all practical purposes may be available on CD-ROM; a few may be available only online. Some may available both e and print media. Today most of the e-journals appear as parallel versions of their print counter part. E-journal could be accessed through gopher flp, telent, e-mail or discussion lists but are mainly through web. Because of the multidimensional features of the e-journal compared with print version journal have become the format of choice for academic library patrons in a relatively short time. A consortium based subscription to e-resources for the technical education systems for the benefit of IIT, IISc, NIT and other reputed institutions.

Xiaoyin Zhang (2005)\(^{38}\) made a study on movement towards a predominantly e-journal collection. From this he studied that since 1999 the composition of the libraries journal collection has been dramatically changed. The percent of print only subscription decreased from 59% in 1990 to 20% in 2004. While e-journal jumped from 35-75%. The percentage of library material acquisitions budget spent on e-resources raised by at least 10% each other. The proliferation budget spent on e- resources raised by at least 10% each other. The proliferation e-resources had a major impact on the acquisition/serial activities from handling physical objects to initiating and ensuring on going to e resources. It has resulted in a workflow that required ongoing review and change to accommodate the constant technological
development that has impacted the management of information delivered electronically.

**Webster and Williams (2005)** made an evaluative study on the NHS Direct online health information e-mail enquiry service. In this study, the main attempt was to judge the quality of the health information provided to Internet users of the NHS Direct online e-mail service. The study also examined the quality of health websites, information retrieved from the NHS and to measures readability statistics of the web pages. The check list developed from this process provided a method of judging a specific website’s quality level. Readability levels of websites were measured using with modern instrument of measuring scale. Two case studies were conducted to examine questionnaires were distributed. Results from the checklist indicated that the majority of health information sent on to users of the service was of adequate or excellent quality. The case studies revealed that the criteria used by the NHS in composing responses to enquiries was not always consistent and needed streamlining.

**Vilar and Zumer (2005)** made an attempt to present a comparison and evaluation of four user interfaces of web-based e-journals (Science Direct, Pro Quest Direct, EBSCO Host and Emerald). This study comprised the first part of a large evaluation of these interfaces through a user study focusing on user’s perceptions of user friendliness and functionality. This expert study was intended to examine the user interfaces of e-journals, in order to discover the characteristics and differences between the e-journals. The second aim of this study was to discover potential difficulties for users of these e-journals and to investigate as a preparation for the follow-up user study. The study disclosed some significant differences. The biggest difference was found in the characteristics and complexity of the levels of query formulation. The study
also revealed that in the case of some e-journals, the advanced level searching was used for command searching.

**Echeverria and Barredo (2005)** found out the impact of online journals on document delivery. They attempted to examine some of the ways in which the electronic resources had made an impact on traditional interlending practices. This study examined, how full-text articles were reducing the traditional level of requests made at a university library. This study was conducted using both quantitative and qualitative data. The qualitative data were gathered through a questionnaire about the impact of electronic resources and the use of Inter Library Loan. The survey showed that the usage of document delivery in the university libraries decreased since the introduction of a critical mass of online journals from 2000 onwards. This study also revealed electronic full-text was unable to fully meet the needs to researchers.

**Gunter (2005)** conducted a survey to assess the use of electronic books in UK. Data were collected from an online panel established by a leading commercial Internet research company. Respondents completed an online questionnaire posted on the company’s website. Questions explored awareness, traveling, purchase and borrowing of e-books, examining the frequency of such behavior and types of publications accessed and obtained. Among the respondents, around half made trial use of them, nearly four in ten bought at least one e-book, and one in seven borrowed an e-book from a library. The survey also found out widespread awareness of e-books among the Internet population.

**Berilacqua (2005)** investigated the organization of e-journals from the point of view of Humanities at the University of Parma. Research was carried out with the purpose to investigate the organization of e-journal titles from a user viewpoint. In order to find out what influence the approach
adopted by the library had on the use of e-journals and what characteristics the organization of e-journals should have to enable an easy access to resources. The study was conducted on the students, faculty members and library staff in classic and medieval studies. Research methodology comprised a mixed qualitative and quantitative approach, a focus group, observations, interviews and a questionnaire. The group of users appeared still reluctant to use e-journals. The main barriers to use were lack of awareness and limited number of relevant resources. Users were favorable to being provided with multiple points of access to e-journals. The organization of e-journals adopted at Parma had the potential to meet the user’s expectations, but its implementation seemed to require more effective promotion and user centered design.

Sreelatha (2005) 44 conducted a study on the perception and use of e-journals among the Doctoral students of Calicut University. The major objectives of the study were: To access the awareness of doctoral students about e-journals, to assess the degree of utilization of e-journals; to assess the level of satisfaction, to find out whether Doctoral students were making use of INFONET and to find out the factors hindered the use of e-journals. The questionnaire contained a set of questions logically selected to the problem understudy. The study revealed that advanced searching method was followed by the majority of the students. Encyclopedia Britannica was the most frequently accessed aggregator. The study brought to light that the respondents were quite aware of the importance of e-journals and INFONET in research.

Sajila (2005) 45 conducted a study on the use of electronic information resources in the library and information center at the Indian Institute of Management, Kozhikode. The major objectives of the study were to access the current use of electronic information resources, to examine the frequency of use, to find out the most favored electronic information resources and to
assess to what extent users were satisfied in electronic information resources. The study used questionnaire for eliciting responses from the users. For analyzing the collected data, percentage method was used. From the major findings of the study it was evident that most of the students used digital library resources for project work, and research assistants and teachers used them for research purpose. All the categories of the users were fully satisfied with the systems and services. The majority of the users were of the opinion that electronic resources are easy to access.

Panda and Arunima (2006) made a study on a critical evaluation of e-journal in LIS: a case study of three websites. In this study they provide an insight into the concept of e-journal and their growth. Vividly explains the taxonomy of e-journal along with the methodology employed in the study. Analyses and interprets data, pertaining to a total sample of 110 of available in 3 websites using only 3 popular search engines (Google, AltaVista, Yahoo) in regard to their subject coverage, country of publication, language of publication, year of publication, frequency of cost. The study reveals that, 48.18% of the total e-journal in library information covers information technology as their trust area; 63.37% of them are published from USA; 97.21% e-journal are published in English. 44.95% are published quarterly and 67.42% of them are free-based journals. Interestingly, the publication since witnessed an unexpected decline in the 3 websites from 11 in 1995 to only 1 in 2003, the study asserts.

Jankowska (2006) conducted a survey to determine user satisfaction and expectations concerning library service quality. The results of the 22 items constituted a rich source of information for the university of Idaho library’s strategic planning process. Focusing on graduate students, this study used three methodologies to analyse survey results. The first method, internal benchmarking, compared graduate students to faculty, staff and undergraduate
student’s results against their peers from other non-ARL libraries participating in the LibQUAL survey. Lastly, categorizing and carefully considering survey comments enriched the qualitative data by adding context to the numbers.

**Mc Clellend and Hawkins (2006)** conducted a study on perception on the use and developments of a broad range of e-books in higher education and their use in supporting virtual learning environments. The purpose of this study was to examine the problems, tensions, contrasts and complementary surrounding the use of e-books in developing learning environments for students in UK higher education. The methodologies selected by the authors were four case studies and a questionnaire to highlight developments. The study found that users wanted some features of paper books to be preserved in the electronic medium, while also preferring electronic text to be written in a scan able style.

**Holm et al., (2006)** conducted a study to provide an insight into the work carried out by a consortium of organizations that had an interest in space activities and to provide a focus on the knowledge architecture that was needed to viable short and long term plans for implementing a successful knowledge management programme. The data for the study were collected by analyzing documents, interviews, group discussions, reviewing technical specification and by participating in online group discussion via a dedicated knowledge management portal created for the group. The study revealed that generating and maintaining organizational knowledge and identifying lessons learned from space project management activities are important for planning future projects. One of the most important elements in transferring knowledge was creating knowledge management system that supported the organizational processes and based on sound technical foundation.

**Ramlogan and Tedd (2006)** conducted a study on the use and non-use of electronic information resources of the undergraduates at the University
of the West Indies. The purpose of the research was to gather some empirical baseline information on the use/non-use of selected, subscribed electronic information services among full time third year graduates. The other broad objectives of the study were to present the survey findings, evaluate the survey’s findings and proposed necessary recommendations. The research design involved a mixed quantitative and qualitative approach: a user survey using semi-structured questionnaires and face-to-face semi-structured interviews. The major finding of the study was that over half of the total respondents had not accessed any of the Electronic Information services. Lack of awareness of the service availability was revealed as the over riding factor for non-use. It was concluded that undergraduates made infrequent or no use at all of certain electronic information services largely from lack of awareness.

Lin et al., (2006)\textsuperscript{51} analyzed why the e-mail forwarded and other not. This study was an attempt to explain why e-mail trigger emotional response states in receivers and to explore the influence of e-mails. To meet the study’s aim, participants were asked to fill out the questionnaire based on any forwarded e-mail that they had recently received. The study revealed that people would have a stronger intention to forward e-mails that made feel positive emotions, displayed richer information, which were greater in length, or included audio and visual information.

Nagi and Ali (2006)\textsuperscript{52}conducted a study on IT based service in Indira Gandhi Memorial Library. This study pointed out to computerized all its in house operations and provides information technology based service over the network to the students and faculty. This paper attempts to evaluate the service provided by the library in the IT environment and also find out the user satisfaction based on the questionnaire survey. Averages of 250 questionnaires were distributed to students and research scholars in the university out of which 181 response were received. The findings of the study
indicate that students and research scholars are satisfied with the library services in the information technology environment. The study once again reiterates the benefits of IT in libraries to meet the user requirement and have satisfied clientele.

Shuling (2007)\textsuperscript{53} investigated and analyzed current use of electronic resources in the library of Shannxi University of Science and Technology. The major aim of the study is to find out the readers present conditions, difficulties faced while using e-resources. The investigation target involves teachers, scientific staff, graduate students, under graduate students and some training students from 15 institutes in the whole university. It centered on seven subjects. In order to collect data questionnaire were designed and sent to the target groups. The investigative results shown that, nearly half of the readers investigated are satisfied with e-resources of the University. At present, the main way that reader’s obtained literature is from traditional library storage. This illustrated that the printing literature obtained important functions. The e-book does not substitute the traditional printed book. The construction of library storage should advocate the printed one. Readers selecting the printed and e-book occupied the greatest majority.

Tublin (2007)\textsuperscript{54} conducted a study on when ICT meets schools: differentiation, complexity and adaptability. The objective of this study is to explore the interaction between Information Communication Technology (ICT) and the schools organizational structure and propose an analytical model based both on Luhman’s system theory and empirical findings. The approach of building a theory from a case study research along with an instrumental multicase study method were applied to analyze nine Israeli schools that successfully implemented ICT based innovation within school’s structure: segmentation, stratification and functional differentiation. The type of differentiation correlates with the schools communications and set of contingencies which includes ICT usage types, leadership style, time and space arrangement source of expertise, and the champions-those who bear the
burden. All the differentiation types were found to increase internal complexity and enhance school’s adaptability and in a recursive process after school’s communication and its sensitivity towards further ICT integration.

Khaiser and Pramodini (2007) surveyed the use of e-journals and databases by the academic community of University of Mysore. The paper described the use of e-journals and databases subscribed by UGC-Infonet Consortium in University of Mysore. The objectives of the study were to determine the extent of use of electronic resources, and to identify the alternative sources used and the extent of awareness of UGC-Infonet Consortium resources among the users. The study used structured questionnaire and interview schedule for data collection. The result of the survey revealed that the use was marginal and the scientists in the Mysore University campus need constant guidance and training to maximize the use of the electronic resources. The paper also examined the utilization and satisfaction levels of users with respect to the electronic resources. The paper also discussed about the role of Information Communication Division (ICD) of the university of Mysore in informing the users about the availability of the electronic resources.

Conclusion

The investigator revived various studies and article discussed in similar topics. The perspective of the present study can be understood from related literatures reviewed in this chapter. Most of the studies employed questionnaire method for data collection and statistical method for analysis. The findings of the study would be useful authorities for improving the IT facilities in to the college libraries. The careful observation of these related studies has helped to identify the gaps in the concerned areas to construct the questionnaire, analyze the fact in an objective manner and to derive positive conclusions.
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