Chapter II

Review of Literature

The publication of literature in e-resources has made it necessary to think about the present research work. The researcher to determine the topic of research and narrow it down to specific area to carry out the research has reviewed number of articles. Only a few important studies have been included here, which provide the background for this present research work.

Wills has explained that the electronic publishing needs a strong input of marketing thinking. Technological hype has created a sales fetish, which has a little evidence to support its claims. The substantive benefits when a broader perspective is taken consideration for the authors and readers are very significant, including considerably faster publication and much wider dissemination via Internet.21

Singh and Rowland have opined that the librarians and information workers obviously are interested in electronic journals as a means of providing information to their customers. At the same time, members of the profession are becoming increasingly interested in accessing electronic journals that relate to their own specialist concerns.22


Bains has proposed that they are in the early stages of an information revolution, which will have an effect similar to that of the industrial revolution of the last century. He looks at the development of electronic news production, the technology required and in particular about the services to shipping offered by IMC Ltd.\(^{23}\)

Woodward et.al. have advocated that great deal has been written about the potential for electronic publication over the past five years. However, technology rather than being led by demand, has driven much of the research about electronic publication. The particular focus at South Borough University has been on the potential for network distribution of scholarly research journals.\(^{24}\)

McKiernan has opined that the biomedical journal would transmit and maintain, in both permanent online and downloaded archives, reports in the many fields that constitute biomedical research, including clinical research, cell and molecular biology, medically-related behavioural research, bio-engineering, and other disciplines allied with biology and medicine.\(^ {25}\)


Sweeny has illustrated that the current situation affecting academic publishing today by looking at the economic, sociological and technological changes that have affected the academic journal over the last 20 years. Examines the strategies that academic libraries have devised to cope with the current cancellation crisis such as electronic document delivery, resource sharing and electronic journals and it looks at alternative models of scholarly communication. 26

Johnson has explained that EASI Access to Library Technology," a regular feature of Library Hi Tech News, examines new technology, information sources and services, and other news of interest to librarians concerned with providing quality services to their patrons with disabilities. 27

Ashcraft and Langdon have expressed the outlines that the issues concerning electronic journals in higher education libraries. Reports on a research project at Liverpool John Moores University to investigate the reasons for any resistance to the purchase of electronic journals, given that the library/information profession has embraced new technology research. 28


Vilas and Krstev discussed that the linguistic influences on an electronic publishing infrastructure in an environment with unstable linguistic standardization from the computational point of view. Essentially, in Serbia in the last half of the century (at least) publishing is based on the following facts: two alphabetic systems are regularly in use with the possibility to mix both alphabets in the same document; the various dialects are accepted.\(^{29}\)

Rao and Mutshewa have included that the issue of devoted partly to the theme in African and Russian libraries. Libraries are changing their modes of information delivery at a very fast rate. The electronic publishing in the chemistry research detailed a promising alternative means for disseminating scholarly research but also revealed a number of challenges that must have to be overcome before it offers a serious alternative to traditional print publishing. While many use electronic venues such as E-resources and Web sites to find scholarly research, few seek to publish their own work electronically.\(^{30}\)


Zhou has established that the demonstration Gateway Service Centre for Chinese Academic Journal Publications, to deliver digital copies of Chinese-language academic journal publications from six Chinese libraries, via the Internet, for scholars throughout the USA. This is an unprecedented and unheard global resource sharing and document delivery service between American libraries and Chinese libraries. This arrangement creates a global virtual library of Chinese journal collections with great depth and extent for scholars in all academic disciplines.  

Wilson has opined that changing nature of the electronic content of license or otherwise provides access was reminded of the halcyon days of yore when the systems we commanded were arcaic sophisticated and pricey to say the least. Because of the specialized skills needed to efficiently retrieve useful information from these systems and the cost being based on elapsed time, limited searching, for the most part, to trained professional searchers. Sometimes even limited the quantity of information retrieved (e.g. citation data, no abstract) in order to control further the overall cost of the searches in publishers; independent researchers; learned journals.publications


Reeves, Hagen and Jewell have talked about that all the accounts of ETD 2006, the 9th International symposium on electronic theses and dissertations had been resounding success. Delegates were treated to a well-integrated programme organized under the overarching theme of unlocking scholarly access to the ETD’s Institutional Repositories and creators. Theses and dissertations in print have often contained cutting edge, comprehensive research on very specialized subjects but have been traditionally difficult to locate and to access.  

Arora has conversed that the proposal for strategic co-operation for consortia based access to electronic resources, which is called Indian National Digital Library in Engineering Science and Technology. The INDEST would function as a consortium of engineering and technological libraries for building up a core digital collection in engineering and technology. The INDEST is proposed by three major ministries i.e. HRD, IT and Dept. of Biotechnology to function as a consortium of engineering and technological libraries for nurturing core digital collection of engineering and technology.  


Manjunath and Pujar have examined that scholarly electronic journal which, in addition to making great impact, has generated enormous debate among the researchers and the information professionals. In underdeveloped and developing countries its visibility, with the existing infrastructure and pricing has been viewed with great apprehension.  

Pakasan, Swarna, Kalyane and Vijayakumar have deliberated that the utility of an e-document has a great significance in the field of Information Communication and Technology. Links give structure to the dynamic activity of browsing and also to the information being browsed. This study has made an attempt to study the links in e-resources, which have been considered as e-documents and e-resources in this study.

Seetharama has reviewed that Information and revolution coupled with the third popularly termed as globalization have brought about the sea change in the lives by fueling the belief that they are living in world of one, ever freer, modern and universal culture with an increasingly and beneficially unified political system.


Mickiernan has conversed that the profiles innovative World Wide Web based electronic periodicals and full text indexing services that aim to provide considerably more facilities to users than that are provided by paper based services. The virtual e-resources in science and technology have accessed through the users.  

Ben Wagner has conferred that the free internet resources, which provided a significant amount of physical property information, are critically reviewed. These free web sites cannot totally replace classic print sources and online subscription databases. However, a number of these web sites provide extensive and reliable property information, especially for substances that are used in commerce or have seen significant research interest and its library subscription.

McKiernan has clarified in his e-profile that in April 2001, the American Chemical Society (ACS) commemorated its 125th anniversary. Founded in 1876, ACS is the world's largest scientific society and is "recognized as a world leader in fostering scientific education and research, and promoting the public's understanding of science" (American Chemical Society).

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Ashcroft and Mclvor have elucidated that the requisite of IT infrastructure is now becoming commonplace in academic institutions, electronic journals are becoming an established component of academic life, but the management of electronic journals can not yet be considered trouble-free. This latest research project at Liverpool John Moores University focuses on the evaluation and promotion of electronic journals in academic libraries in the UK and in North America.\footnote{Ashcroft, Linda & Mclvor, Stephanie(2001). Electronic journals: managing & educating for a changing culture in academic libraries. On-line Information Review, 25(6).}

Keller has enlightened that the results of an international and interdisciplinary Delphi survey on the future development of electronic journals. The expert panel comprised 45 scientists, publishers, librarians, journal agents and consultants. The survey covered five areas of interest regarding e-resources: future role of scholarly journal literature; scenarios for the journal of the future; serials crisis; archiving of e-resources; and new pricing and access models.\footnote{Keller, Alice (2001). Future Development of electronic journals: a Delphi Survey. The Electronic Library, 19(6).}
Seadle has justified that all the commercial publishers are not alike. Of the many epithets had thrown at the commercial publishers of academic works, “greedy? Ranks are as the most common. But for journals facing serious competition, like Library Hi Tech, the pricing strategies tend to conform to market realities."\(^{43}\)

Shouse, Crimi and Lewis have informed that one might think that libraries should know all the journal titles to which they subscribe and how to access them, but this is not usually the case. Many libraries have a difficult time maintaining a list of current print journal subscriptions. The advent of electronic journals available directly from publishers and through aggregators has further complicated the situation in Joyner Library of East California.\(^{44}\)

Gilmour has corresponded that the self-describing nature of data marked up using extensible markup language (XML) allows the XML document itself to act in a manner similar to a database, but without the large file sizes and proprietary software generally associated with database applications. XML data can be made directly available to users using a variety of methods.\(^{45}\)


Hughes and Buchanan have agreed that the preliminary information about patterns of access and use of a collection of 35,000 electronic scholarly monographs in the humanities and social sciences provided by a commercial online library collection of significant access.\textsuperscript{46}

Cole et. al. have described that an approach to the processing and presentation of online full-text journals that utilizes several evolving information technologies, including extensible markup language (XML) and extensible styles sheet language transformations (XSLT). They discussed major issues and trade-offs associated with these technologies, and also specific lessons learned from the use of these technologies in the Illinois Tested of full-text journal articles.\textsuperscript{47}

Rajasekhar has indicated that the recounts the salient features of J-gate, the library’s local gateway, JCCC, a resource sharing gateway for libraries. He also explained that the Indian universities and research labs spend an estimated cost of rupees two hundred crores a year on subscribing international scholarly and research journals. This investment brings the Indian Scientist access to about 6,000 scholarly research journals publication.\textsuperscript{48}

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Gandhi has preached that reviews the past, present and future trends of electronic journals in general and more specifically, chemistry and biochemistry journals. It has presented various issues involved in e-resources and their subscription models and provides some professional tools and figures.\textsuperscript{49}

Harischandra has validated that the building e-collections in S & T Libraries with Special reference to e-resources that brief the introduction about building e-collections in libraries. This paper gave brief introduction about building e-collections in libraries. In its literature review, the research team found that stakeholders frequently agreed about electronic publishing. Every segment expressed the importance of promoting the publication and dissemination of scholarly works, and there was a strong feeling of concern about the growing shift towards the electronic publication and the economic ramifications of the trend. The researchers cited in the literature review played a variety of roles, sometimes simultaneously they could be authors, peer reviewers and readers. It also discusses the e-resources, utility, features, advantage and issues for the development of e-collection.\textsuperscript{50}


\textsuperscript{50}Dr.Harischandra (2002). Building e-collections in S&T Libraries with Special reference to e-journals. e-resources workshop at Indian Inst. Of Technology, Chennai, 25(2).
Desai has defined that the full text of electronic journals in continuing educational needs of science and technology librarians, conducted every two years as part of the Association of College and Research Libraries are most interested in instructional techniques and technologies and in the teaching of information literacy in the sciences.\textsuperscript{51}

Town et.al have motivated that chemists communicate in structures. The nature of information available to chemists therefore has to take this into account. With the migration from print to electronic publication nearly complete, the internet offers the chemical information user many advantages.\textsuperscript{52}

Foster of Cornell University logically explained that he has been providing e-resources for faculty members and students 24-hour access to more than 1,200 scientific, medical, and technical journals through its subscription to Science Direct, an electronic database owned by Elsevier Science.\textsuperscript{53}


Atkinson the associate university librarian for collection development at Cornell said that he is frustrated that the university's agreement with Science Direct that makes it uneconomical to cancel individual journals that are rarely used. As a result, Cornell can't replace unpopular Elsevier titles with high-quality journals not published by Elsevier, he added.\textsuperscript{54}

Frazier the director of the Madison library said the cancellations are an unavoidable result of the total price of journals to which Madison subscribes having increased by between $300,000 and $500,000 a year, while the library's budget has been relatively flat. The library subscribes to 138 titles through Science Direct and 322 Elsevier print titles, but not as part of a bundled deal.\textsuperscript{55}

Perez and Alaman have opined that how groups of authors may create electronic books about the knowledge area of their interest by means of unsupervised collaborative work. For this task they propose a Web-based groupware system that allows building Web sites that can be considered as electronic books. In these Web sites one can find in a structured way the relevant knowledge about an area or topic.\textsuperscript{56}


\textsuperscript{55} Frazier, Kenneth L. Alfred B. Kreamer (2002). Head of Tech. Services. Medical College of Wisconsin Library, 56(3).

Lefebvre has explained that the Information Highways 2000 Conference and exhibition was held at the Metro Toronto Convention Centre 27-29 March. Formerly called the Canadian Online Information Summit, this annual conference is sponsored by Information Highways magazine. The theme "e-content/start here!" was aimed at professionals looking for ways to ensure that the Internet content they use or produce is at high quality.57

Fox and Bridge have orated that the information service staff who coordinate and manage the introduction of new electronic information resources, this document offers practical guidance to any library staff concerned with strategies for implementation, policy, procedure, education, and/or direct provision of electronic information resources and this project aims to develop tools for evaluating electronic information services as well as to increase awareness of resources and initiatives already in existence which could help library and information managers in the higher education sector to evaluate their services more efficiently and more effectively at UK higher education institutions survey.58

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Wild and Griggs have explained that the common thread among plethora of definitions of knowledge management is that its objective is to identify and leverage the collective knowledge in an organization to help organizations compete and survive. One potential lever is e-learning, the creation and distribution of organizational knowledge through the online delivery of information, communication, education, and training and to implement the knowledge.59

Peters has preached that the e-resource usage statistics contain a mine of information, but mining that information from the massive amounts of data can be time consuming, expensive, and dangerous. Focuses on the practical aspects of getting some use out of usage statistics of recent e-resource usage statistics in USA libraries.60

Rajasekhar has defined that the open access publishing to include both public domain and open access scholarly materials. Open access movement is driven by several enabling technologies including open source digital library software, metadata standards and protocols. 61


IRN Research Team have specialized that in their research and analysis of information markets, and regularly undertakes surveys of users of STM information in Europe. Brief extracts from some of these surveys that are included in this article, including: a survey of UK academic librarians and information specialists undertaken in late 2003; a User Panel of UK STM information specialists, which IRN has established in 2004; and a business continuity survey undertaken in February 2004, covering all main UK economic sectors. The share of journal budgets taken by 'Big Deal' agreements is still relatively low for most libraries, according to the results of the survey of more than 30 STM academic information managers and librarians in the UK, undertaken at the end of 2003.62

Hughes has discussed in conference that the experiences in creating and managing massive amounts of content. Tom Sanville, Executive Director of Ohio LINK, noted that this consortium has raised the threshold on the amount of use a title must receive before it is purchased because e-books have fundamentally changed the dynamic of browsing among titles in a catalogue. Louise Edwards, JISC Collections Manager, noted that librarians in the UK are beginning to make joint marketing agreements with publishers to promote e-books to users.63


Gelfand has explained in symposium on National Academy of Science that during the planning stages for many months, the symposium focused on new trends and took a broad look across the scientific, technical and medical (STM) journal enterprise as it currently is configured and how it can evolve with new technologies and reader expectations. This session resulted in unknown concept of a publication, which is still evolving and also continue to have serious concerns about costs etc. STM publishing will continue to challenge and haunt us but with a cast of characters that were in this symposium line-up one could not have had a better overview of the current landscape.64

Nagh, Fong and Abdullah have addressed that The Electronic Journal of the University of Malaya is a free Internet-based journal hosting system designed to facilitate the publication of scholarly electronic journals. Though intended for all types of libraries, not every statement will apply to a particular library or a type of library. Accordingly, this checklist contains suggestions and recommendations that may be adapted to local library environments. It aims to provide an environment where scholars can both create and consume scholarly information.65

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Amy Bush showed that age was not an influential factor in whether the respondents read articles on paper or in electronic format. However, these results did not coincide with those obtained by the same researchers among astronomical scientists. The relationship between the use of electronic journals and academic ranks are studied which show that as time goes by, researchers progress in their careers and obtain higher positions in the academic hierarchy.66

Kumar has opined that the electronic journals have mainly focus on the role of e-resources in libraries with reference to the users. Further it describes the pros and cons of e-resources and feasibility of accessing e-resources using different formats. Also issues and implication related to e-resources have been discussed in this paper.67

Muralidhar and Muthusamy have taught and emphasize the importance of e-resources and the need for licensing agreements. It indicated the role of publishers, aggregators, subscription agents and consortia. The access models of e-resources and access management aspects are brought out.68


Sankaran Pillai and Nirmala Devi have spoken that e-resources are predominant in the last few years in information environment. However the e-resources cannot simply and easily replace print resources. There are many issues which need to be addressed before resorting to e-resources.\footnote{Sankaran Pillai, S., & Nirmala Devi, T.M. (2004). E-publishing and e-resources: a review of their impact on libraries. SIS Conference 2004, IIT, Madras, 85(3).}

Vijayakumar, Dr. Murthy and Khan have attempted to give a short account of Indian Universities taken by the university sector for implementing electronic theses and dissertations in respective regions. It further discussed the use of web technologies in providing comprehensive and wider dissemination of theses to a remote place with the help of digital libraries.\footnote{Vijayakumar, J.K., Murthy, T.A.V., & Khan, M.T.M., (2004). Accessing Indian University research literature importance of ETD’s in the verge of UGC-Infonet. SIS conference, IIT, Madras, 29(7).}

Basu has opined that Psychiatry as a western medical science arrived in India with colonialism. By mid 19th century, lunatic asylums grew around the major metropolitan centres. By the early 20th century, this new mental science has percolated to the vernacular periodicals of popular science. It has been argued that the process of vernacularisation opened up new possibilities of an alien science.\footnote{Basu, Amit Ranjan (2004). Emergence of a marginal science in colonial city: reading Psychiatry in Bengali Periodicals. The Indian Economic and Social History Review, 41 (2).}
Gouder and Poornima have explained that the print journals continue to dominate from both users and point of view and publisher’s revenue. The advent of e-publishing has brought a revolution in journal publication, subscription and access and delivery mechanism. Print journals publishing costs include high article processing costs, high production and marketing costs.\textsuperscript{72}

Chudamani has instructed that the journals are most important sources of information. Now, with the advent of e-resources, many online journals are being published. Their number is increasing day by day. As it is well known, many criteria have evolved for evaluation of web pages relating to content, presentation, organization etc.\textsuperscript{73}

Prasad, Latheef and Subramanyam have notified that the space, financial constrains, increasing subscription rates and limited scope for publication have necessitated the emergency of electronic publication. Electronic publication refers to the publication of any document in electronic media.\textsuperscript{74}

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\textsuperscript{72}Goudar, I.R.N. (2004). Emerging pricing models for e-resources consortia and Indian initiatives. ICDL Conference, New Delhi, 89(7).


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Singh et.al. have updated that the responsibility for publicity to one or more members of the library staff. Publicity may be tailored to the specific communities of users most likely to use the resource and the newspaper never needs to be recycled. Every day the ink on the paper is updated electronically. The daily news comes fresh without the hawker boy, printing presses or a web browser. That’s the dream of electronic ink. It allows electronically controlled data to be printed on paper or plastic instead of a computer screen. E-ink involves fusion chemistry, physics and electronics to create new material. The e-ink would definitely help in ushering in e-paper a reality.\textsuperscript{75}

Mahendra and Jadhav have established a level of proficiency in the use of the resource or service, including access methods, basic and advanced searching, and an understanding of the content focus and examined the digital libraries resources various naming and addressing systems used to identify and locate resources in the digital environment. The Internet Engineering Task Force (IETF) have been developed various schemes for this purpose like URL, URN, URC schemes and PURL developed by OCLC and CNRI’s Handle system. The publishing industry also has developed the Digital Object Identifier (DOI), which is being used for rights management of intellectual property.\textsuperscript{76}

\textsuperscript{75} Singh (2004). The e-ink saga. SIS Conference, IIT, Madras, 76(7).

\textsuperscript{76} Mahendra, N. & Jadhav (2004). Digital library resources naming schemes. SIS Conference, IIT, Madras, 67(4).
Pushpa et.al. have reported that the electronic environment has revolution in the field of publishing. It has implied in concentrate terms that an individual need not approach traditional publishing agencies for publishing a work, hence bringing about convenience, time, saving and a lot more. This paper also has discussed the concepts of publishing and its impact on library and information professionals. It emphasizes upon the need and advantage of e-publishing.\textsuperscript{77}

Ganesh and Tamilzhelvan have brought out that the information is the key for developing economy for growth and is to be treated as a precious commodity. To make information as a resource means to achieve the desired results, which are derived out of the aggregation, analysis and transformation of data into information? Mass media with the help of new technology is slowly moving towards digital on-line publishing.\textsuperscript{78}

Paul Pandian and Karisidappa have enlightened that the standards and protocols play a very important role in the library resources sharing programmes. Libraries have been adapting various standards and protocols as they were available right from standards for card catalogues to standards for information resource discovery in a network environment.\textsuperscript{79}

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Gayatri and Sridhar Kumar have discussed that the growth of information technology has motivated the formation of different types of library consortia to share the resources. Library consortia refer to co-operation, co-ordination and collaboration amongst the national and international libraries for the purpose of library union catalogue, information resources and bibliographic information.\textsuperscript{80}

Chaurasia and Ganesh Kumar have argued that the concept of e-books giving various definitions. It also lists various features, advantages, issues, recent trends and developments pertaining to e-books. Today there are increasing number of websites, news groups, discussions forums and e-mail alerts dedicated solely to the promotion of e-books. Most important one would find web sites that provide information on very specific and narrow genes.\textsuperscript{81}

Ramesh Babu and Gopalakrishnan have examined that the e-book creation process also it highlighted the merits and features of e-book. This article has also concluded with promising note on the future of e-book. The rapid development in technology and WWW created a sea change in all walks of life tremendous impact in publishing industry too.\textsuperscript{82}

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Sumanjeet has conversed that the subsequent, regular evaluations to determine the effectiveness of the electronic resource in meeting information needs of the user community and to inform future decisions on selection or rejection of the resource. The emergence of e-commerce in India changes the life in different ways and the way to conduct business technology in the last decade has been phenomenal. E-commerce has the power to expand business beyond traditional boundaries and give it competitive advantage in the global market place. No wonder the companies are embracing this technology with great zeal as they realize the potential it offers.\(^{83}\)

Chandrappa and Veerbasavaiah have conferred that the remote access issues including: licensing, communications protocols, authentication, and remote access instructions/guides. The electronic resources have been available on management and its related topics. It has also presented a new approach for classifying electronic resources in management that would form a comprehensive database of electronic resources directory in management. The development of IT has helped libraries to provide accurate and timely information, apart from compact storage and systems of information retrieval as and when required\(^ {84}\)


Medical Library Association in their report has deliberated that the potential of open access publication to increase accessibility to peer-reviewed literature is cause for celebration. One should not lose the sight of the longstanding challenge of providing better access to the gray literature that provides an essential complement to peer-reviewed findings.  

Love has explained in the National Meeting on American chemical society and said that the reports on the 227th National Meeting of the American Chemical Society (ACS), which took place at the end of March 2004 in Anaheim, California.

Abouchedid and Eid have reviewed that the overwhelming traditional knowledge delivery system for higher education in the Arab world demonstrates the pronounced information technology (IT) gap between Arab countries and the developed world. This study demonstrates the problems and possibilities of implementing e-learning in Arab educational institutions through the process of analyzing the attitudes of university professors (n = 294) in Lebanon towards three a priori e-learning dimensions.


Albright has considered in the conference that electronic resources requiring license agreements or specific restrictions on use, determine which staff have oversight responsibility for observance of any limitations on use. The librarian is bringing together a diverse group of scholars, information and communication technology professionals, librarians, public policy makers, and others, its purpose is to provide a forum for the discussion of ethical issues involved in the use of electronic information. It has been intentionally restricted to a small size in order to facilitate the airing of global issues, allowing generous time for discussion, reflection, and debate. 88

Martey has evaluated that the training for a new resource or service to accommodate various learning styles and experience levels, such as hands-on practice, system tutorials, peer instruction, outside trainers, and/or study of appropriate manuals or other documentation. The major goal and objectives set by Ghanaian academic libraries for the formation of a multipurpose consortium different from the Ghana Interlibrary Lending and Document Delivery Project (GILDDNET). It also discusses the challenges that will be faced in achieving the stated goals and objectives and suggests what librarians can do to make a success out of the proposed consortium. 89


Fallon has checked out that the development of the BAE Systems Virtual University has enabled the organization to enhance the transfer of knowledge throughout the organization. The VU team has created a knowledge management (KM) consultant capability to support different parts of the business. 90

Ettinger and Holton have assessed that the sharing experiences of e-learning pioneers with regard to the cultural change necessary for e-learning to be successfully adopted in an organization. This study was based on 29 research case studies and a cultural change needs to take place in organizations for e-learners to engage in the process. 91

Willkinisky has recommended that the insider's review of the journal management and publishing software, Open Journal Systems (OJS), from the Public Knowledge Project, which the author directs at the University of British Columbia and it outlines the history, development, and features of OJS, including some of the experimental aspects, as well as early research results and work underway, on which it is based. 92


Bevilacqua has considered that the research was carried out at the University of Parma with the purpose to investigate the organization of e-resources titles from a user viewpoint, in order to find out what influence the approach adopted by the library may have on the use of e-resources and what characteristics the organization of e-resources should have to enable an easy discovery of e-resources.\(^9^3\)

Jayaraj has praised that the e-governance is occupied to the present day life, whatever words used earlier now have an “e” prefixed to it like e-mail, e-book, e-resources and e-governance etc. But what does this “e” has to do in the governance.\(^9^4\)

Chua has estimated that the American Library Association Annual Conference that the idea of the library as publisher has become so widely accepted that for many libraries the question is no longer why libraries should become publishers, but how to do so. This session provided two different perspectives on the practicalities of electronic publishing and for the publication of electronic journals and also other materials in the humanities and social sciences.\(^9^5\)

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93 Bevilacqua, Fabrizia (2005). Organizing e-resources from the print of view of humanities: a case study at the University of Parma. New Library World, 106(9-10).


Banks has calculated that the potential of open access publication to increase accessibility to peer-reviewed literature is cause for celebration. As we celebrate, we should not lose sight of the longstanding challenge of providing better access to the gray literature that provides an essential complement to peer-reviewed findings.96

Asemi and Riyahiniya have conducted that the survey to investigate the awareness and use of digital resources by the students in the libraries of Isfahan University of Medical Sciences, Iran.97

Ani and Ahiauzu78 have assessed that the emergence of electronic information resources has tremendously transformed information – handling and management in Nigerian academic environments, and University libraries in particular.98

Madhusudhan has quoted that the studies have also been carried out on the use of electronic resources by teachers, students and research scholars of universities and research organizations.99

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Okello-Obura and Magara have investigated electronic information access and utilization at the East African School of Library and Information Science, Makerere University, Uganda.\(^{100}\)

Parameshwar and Patils highlighted that the large portion of user population in the university has aware about the internet, but they do not know all its techniques and applications.\(^{101}\)

Umesh Kumar Agarwal and Rajesh Kumar Dave have studied the use of internet by the scientists and research fellows of Central Arid Zone Research Institute(CAZRI), Jodhpur (Rajasthan) was assessed on the basis of a questionnaire survey in CAZRI.\(^{102}\)

Sharma has reported that today availability of e-resources in a university library is very common. But their proper and maximum use of e-resources is a matter for the existence of various e-resource databases in Guru Gobind Singh Indraprastha University Library.\(^{103}\)

100. Okello-Obura, C and Magara, E.(2008). Electronic Information access and utilization by Makerere University in Uganda. available at http://creativecommons.org/licenses/by/2-0.


Padhi and Dash validated that the present technological advancements and provision of the library and information science professionals should be able to read or browse Electronics information without having to pay for it.\textsuperscript{104}

Govinda raju has found by his survey that the use of electronic resources is found to be significant among the users of the Andhra University. This is quite natural and expected in the present day implementation environment.\textsuperscript{105}

Kattimani and Kamble have made a study on awareness of Internet and online information resources. His study is confined only to the Honey well library, Bangalore.\textsuperscript{106}

Arikrishnan has defended that the Engineering and Technology libraries are facing challenges due to continuous increasing in the subscription to scholarly journals and databases which affects the research and academic activity.\textsuperscript{107}

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Soni, Verma and Majumdar have opined that the possibilities of web 2.0 is to incorporate tools technologies in library and information services and challenges for the library and librarians in digital environment.\textsuperscript{108}

Nibalkar and Hirdwade explained that the web 2.0 awareness among Engineering College Librarians in Nagpur City.\textsuperscript{109}

Kumar, Mishra and Kulshrestha have enlightened that the Blogs for Extending Library Services and this will of course, greatly complicate collection development processes, and the librarian will need exercise a great deal of expertise and fastidiousness when adding a blog to a collection development system.\textsuperscript{110}

Nattar has defined that the different point of time various technologies such as bar coding, Electromagnetic, Radio Frequency identification etc, have been used to improve the quality of services in the libraries.\textsuperscript{111}

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Perumalsamy and Balasundaram have argued that the electronic journals are used in so many colleges, Universities and Higher learning Institutes. Therefore, libraries need to adopt electronics media for its collection development in a better way to fulfill the requirements of users.\textsuperscript{112}

Pandey has informed that the management of preserving resources in the digital age for securing the future of preserving resources in digital library, likes librarians, archivists and information scientists should take a leading role in educating society regarding digital preservation.\textsuperscript{113}

Arya has described that the changing context of library and information systems, a new community of informational professionals will be necessary with a variety of new skill and knowledge.\textsuperscript{114}

Uma and Reddy have clarified that the IGM Library is helping the academic community of the university by providing journal literature online without much delay by regularly updating the ICT facilities.\textsuperscript{115}

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\textsuperscript{112} Perumalsamy, K. and Balasundaram, P,(2010). Role of electronic journals in the University libraries. University News, 48(23), 3-6.
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\textsuperscript{114} Arya, Chanda (2010). Academic libraries in the light of TQM. University News, 48(8), 13-17.
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\textsuperscript{115} Uma, V and Reddy, Y.Nagi,(2010). The role of a library in achieving the academic distinctions, University News, 48(28), 138-141.
\end{flushright}
Jiang and Zhang have opined that the From many aspects such as the resource construction, the talent group, and the mechanism and system, main factors to restrain the development of college library are analyzed, and corresponding countermeasures are proposed.\textsuperscript{116}

Bhalekar discussed that the automation process of an academic library by taking Babasaheb Naik College of Engineering, Pusad (M.S.) and elaborates the importance of automation of an academic library.\textsuperscript{117}

Zhang explained that the University libraries have great changes in the library. Collection, staff, readers, services and other aspects. Especially, with the development and popularization of the computer communication technology and the network technology.\textsuperscript{118}

\begin{itemize}
\item\textsuperscript{116} Jiang, Qian & Zhang, Yonghong (2011). Main factors to restrain the development of library and their counter measures. International Education Studies, 4(2), 54-57.
\item\textsuperscript{118} Zhand, Xiuling (2011). Talk about the change and development of college library since the 30 Years of reform and opening-up. Asian Social Science, 7(5), .219-221.
\end{itemize}
Kaushik, Sharma and Rajput have elucidated that totally focused on Popular Open Source Software for Digital Libraries. Open source software has much potential for libraries and it also incorporates an interface that makes it easy for people to create their own library collections.\textsuperscript{119}

Singh and Singh have indicated that the Mostly the libraries will be utilizing the web page to provide services to an increasingly sophisticated and demanding computer user.\textsuperscript{120}

McQuillan has opined that another growing area of ERM is the work being performed to develop a suite of standards to support the vast amount of access and management knowledge and myriad of tools needed to maintain adequate access to electronic resources.\textsuperscript{121}


Sarah has opined that “KBART and IOTA are both working to decrease Open URL link failures that are caused by metadata deficiencies.” In addition, “PIE-J differs from KBART and IOTA because it is not focused on link resolver errors.”

National Information Standards Organisations (NISO) informed that this area has also been highlighted by the National Information Standards Organization (NISO), which has created a working group, ERM Data Standards and Best Practices Review, to undertake a gap analysis regarding ERM.

In the United Kingdom, the Managing Electronic Resource Issues (MERI) project at the University of Salford aimed to produce a use case of ERM systems and a preliminary set of requirements for an electronic resource management system, for use by the University of Salford and other HE institutions and system suppliers.

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SCONUL shared ERM requirements project. An output of these projects was a set of workflows that describe the various processes involved in managing electronic resources.125

A recent press release by JISC in the United Kingdom has suggested that international collaboration is needed to transform ERM in libraries—“Many of the concerns libraries have in the management of electronic resources are the same across the world.”126

Gakibayo et.al. in Uganda has emphasized that academic libraries were an integral part of universities and had a critical role to play in supporting the core mission of the university that is teaching, learning and research.127

Dhandavan et.al has pointed out that although a majority of users were satisfied with e-resources available in the library, they encountered problems of downloading and that lack of knowledge was the major problems.128


Kuali has explained that the community of nine research libraries working together to build the first open-source system designed by and for academic and research libraries for managing and delivering intellectual information.  

The University of Wisconsin established that the library community at large has been interested in the development of in-person presentations on TERMS, and so the authors have sought feedback at library events such as the Electronic Resources and Libraries annual conference and the LIBER conference, a premier library event held in Europe each year.

The Association of American Publishers/Book Industry Study Group has reported that sales of Trade e-books, which account for 97% of e-book sales, grew by more than 210% between 2010 and 2011.


Hoffman et.al explained that the availability of e-books through public libraries is also expanding. About two thirds of public libraries (67.2%) offered e-books in 2011, up from 55.4% in 2009 and 38.3% in 2007.\textsuperscript{132}

Velmurugan has conducted a study on “Awareness and utilization of e-resources by faculty members with special reference to an engineering college, Chennai, Tamilnadu, India: A case study”. The scope of the study is limited to SKR Engineering College in Chennai.\textsuperscript{133}

Sivakumaren has explained that the maximum number of open access journals in Library and Information Science are being published from USA whereas only five journals in this category are published from India.\textsuperscript{134}


\textsuperscript{134} Sivakumaren, K.S.,(2012). A study on open access journals in library and information science: with reference to DOAJ. International Journal of Library Science, .6(2).
Francis described that the digital information resources available online are increasing at an exponential rate; several practices have evolved for the economic and effective delivery of such information to the end users. In this context, consortia.

Singh and Kumar Dhiraj have explained that the awareness of Consortium for e-resources in Agriculture (CeRA) purpose of use, sources of information about consortium, search strategies used to access articles, users’ opinion about usefulness of consortium, and problems faced by them in using CeRA.

Kaur explained that the majority of the teachers want future e-journals to have features such as ‘full text index of every article’, ‘searching capability across a wide range of journal articles’, ‘searching capability within an article, display relationship between a wide range of works’ and ‘links to multimedia files’, etc.

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Sundareswari has explained that the provision of e-resources as one of the library functions plays a very important role in students’ academic output in this era of online publishing. Their role includes identification and selection of information, retrieval, storage and dissemination to the exact users at the right time at actual place at an affordable price and in right format.\textsuperscript{138}

Schonfeld et.al explained that the growth in e-journals. “At all but the largest academic libraries, collection sizes in the electronic format are significantly larger than they ever were for print”\textsuperscript{139}

Tobia et.al explained that the actual costs for the library to participate in consortium packages are insignificant compared to potential subscription costs. Despite criticisms of the “big deal,” they can be a “good deal” for libraries that work together through consortia.\textsuperscript{140}

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\textsuperscript{140} Tobia R.C., Schorr A.N., & Lynch J.A., (2013). The big deal: is it a bad deal after all? a case study in an academic health sciences library. Poster presented at MLA '05, the 105th Annual Meeting, Medical Library Association; San Antonio, TX; 2005.
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Obst has found that during the first two years of the introduction of online journals, journals available in print and online lost 30% of their print usage, while journals available only in print lost 46% of their usage, and online usage outstripped that of print by a factor.\footnote{Obst O., (2013) Patterns and costs of printed and online journal usage. Health Info Libr J.,20(1), 22–32.}

Flecker explained that e-journals have become the largest and the fastest growing segment of the digital collections for most of the libraries in the past 2 or 3 years and in many ways, archiving and preserving e-journals will be dramatically different from what has been done for paper based journals. He stressed that the process must be funded by the governments through the national libraries or similar bodies, particularly for materials subject to copyright deposit.\footnote{Flecker, D. (2013). Preserving scholarly e-journals. D-lib magazine, 7(9). Retrieved September 30, 2007. from \url{http://www.dlib.org/dlib/september01/flecker/09flecker.html}}

Sanchez-Tarrago et al examined that the attitudes of the Cuban health researchers towards the open access movement. The study found biomedical sciences i.e. PubMed Central, HINARI and BioMed Central as the best known initiatives for researchers.\footnote{Sanchez, Tarrago., Nancy, Molina., & Carlos, Fernandez (2013). Open access journals: knowledge and attitudes among Cuban health researchers. MEDICC Review, 10(1), 18- 21.}
Husain and Nazim have analyzed open access scholarly journals by highlighting that 106 journals are listed in DOAJ under the subject heading ‘Media and Communication’. Most of the open access journals in this category started during late 1990s and are being published from 34 countries across 6 continents and in 13 different languages.¹⁴⁴

Patil and Parameshwar explained that the survey on faculty members and research scholars in Gulbarga University found that 72.01% researchers and 75.50% faculty members search information from the electronic journals.¹⁴⁵

Nemati and Babalhai have explained that the awareness and ability of medical students of Tehran University using the electronic resources of the integrated digital library portal and also used for Elsevier, Thomson, Scopus and Proquest databases most frequently used by the users.¹⁴⁶

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Nisha and Naushad Ali have explained that the several inherent problems especially with the use of e-journals such as slow downloading and other mechanical deficits were present while using e-journals.\textsuperscript{147}

Suber explained that the “Open-access (OA) literature is digital, online, free of charge, and free of most copyright and licensing restrictions.” The two types of OA found in the life sciences include Author Pays (also known as “gold” OA) and Open Access repositories (“green” OA). The Author Pays model has attracted most of the attention, both positive and negative. In this model, authors of scientific publications pay a fee to the journal publisher to make their articles available for free immediately upon publication.\textsuperscript{148}

Archambault has explained that the series of reports commissioned for the European Commission’s Directorate-General for Research and Innovation showed that 40\% of articles published worldwide from 2004-2011 were available as Open Access.\textsuperscript{149}

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\textsuperscript{147} Nisha, F. & Naushad Ali, P.M. (2013). Awareness and use of e-journals by IIT Delhi and Delhi University library users. Collection Building, 32( 2), 57–64

\textsuperscript{148} Suber, P. (2013). Open Access. Overview. \url{http://legacy.earlham.edu/~peters/fos/overview.htm}

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Fosmire and Young described that the library access to free "electronic journals," in all subject fields. This included links on library web pages, coverage by major indexing services and whether or not they were cataloged in OCLC.\textsuperscript{150}

Harter identified that the titles on both of these lists were investigated for possible inclusion in our study. We also requested or located lists of titles from the indexing vendors for possible consideration. Once an initial list of potential e-only journals was drafted, a message was sent to several library mailing lists asking for possible additional titles to consider for the study.\textsuperscript{151}

Chanson explained that the searching, finding and accessing the right information were traditionally undertaken in libraries: i.e., university libraries, state libraries, professional libraries and personal collections. This approach has shifted towards Internet based searches for the last few decades, with the introduction of Internet library catalogues, international databases and specialised search engines.\textsuperscript{152}

\begin{enumerate}
\item \textsuperscript{150} Fosmire, M. & Young, E. (2014). Free scholarly electronic journals: what access do college and university libraries provide?. College and Research Libraries 61(6), 500-508.
\item \textsuperscript{152} Chanson, H. (2014). Commercial search engines: international databases or traditional libraries?. Journal of Hydraulic Research in International Association for Hydraulic Engineering and Research, 43 (6), A85-A87.
\end{enumerate}
Vaughan and Telwall explained that the traditional library resources may include a wide range of support including audio-visual, hard copies of older books and 3D animation that are not on-line. Internet "surfing" does not replace browsing the shelves of a good scientific library, nor some field experience. Moreover, digital materials are biased towards the American and English literature, at the expense of other sources.\textsuperscript{153}

Henze and Mavinic opined that the experience as journal editors to present unscrupulous activities, and each researcher should read their editorials. The writer has had some similar experience and he discusses recent examples of unethical situations.\textsuperscript{154}

Bentley et al., have explained that the academicians and students see value in technology enhanced lecturing. Multimedia tools of different learning designs have been used as self directed learning resources in higher education institutes around the world.\textsuperscript{155}

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Simoni opined that the tablet PCs with interactive software to teach IC design and illustrated through numerous examples how technology can facilitate active participation of students. Observations and comparisons between the assessment data suggested an improvement of retention and understanding of the course content for students.  

Buraphadeja & Kumnuanta explained that the multi-media content with video clips, power –point presentations and web resources were used in a learning management system to teach Microcomputer Applications laboratory in Thailand.  

Trenas et al. opined that the moodle module CT Practicals to teach practical aspects of Computer Organization. The automatic verification engine in the module was used effectively to process the VHDL designs submitted by students in real time. The authors went on to propose that this application can be extended to include other programming languages.

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Djenic et al., experimented the successful variant of teaching programming fundamentals. They used blended approach – classroom teaching with multi-media material and lessons delivered over internet.159

Lai explained that the impact of digital technologies in terms of improving the learning experiences of the students, is rather limited. However, using technology as a participatory communicative tool to support collaboration and co-construction of knowledge can improve the quality of the learning experiences.160

Munoz-Oreganaro et al. explained that the, learning pills were sent on mobile devices to teach students configuration of network services in Linux environment. The contextualized learning pills were successful in improving the ratio of student class attendance, student performance and student motivational patterns. Future work being planned includes multi-media (video) pills for mobile devices that summarize course concepts.161

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Claypool has pointed out that the basic tasks involved in creating e-books are very similar to those of creating a print book: acquisition, financing, production, marketing, sales and delivery of books.\textsuperscript{162}