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# Status of Electronic Resources in Libraries: A Review Study

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## **Status of Electronic Resources in Libraries: A Review Study**

**Abstract:** Information sources and in turn electronic resources form the basis of all the sectors of society especially healthcare. They represent a framework to describe the wide spread management of health science information across the globe via computerized systems and its secured and scrutinized exchange between the health science professionals and various associated personals. The overall worth, security and competence of the health research and health services are known to be well determined by means of quality health information sources. Electronic resources in health sciences play a vital role by enhancing the efficiency and accuracy of the information. It is evident that Information is the energy that drives health science (healthcare) decision making. The healthcare field is information intensive, because quality healthcare depends on quality information. Information is intrinsically inseparable from the operations and decisions made in healthcare. Electronic resources are the primary source of information in health science libraries & act as the backbone in every sector of the modern ICT (Information communication technology) based environment. Number of libraries throughout world have incorporated the electronic resources in their collection. The present review paper investigates the status of these electronic resources in various libraries.

**Key Words:** Electronic Resources, Electronic information sources, Health Science Libraries, Status, ICT (Information communication technology)

## **Introduction:**

### **Electronic Resources**

Electronic resources/Electronic information sources are those information resources which are available in electronic format and can be accessed by means of various electronic gadgets including computers, laptops, tablets or other electronic devices. They can be accessed either remotely via the internet or locally. Some of the types of Electronic resources include electronic books (E-books), electronic journals (E-journals), electronic images (E-images), electronic audio/visual resources ,full-text (aggregated) databases ,Indexing and abstracting databases ,numeric and statistical databases & reference databases (biographies, dictionaries, directories, encyclopedias, etc.) (**Johnson *et al.*, 2012**)

### **Electronic resources in Health Science Libraries: An introduction**

Health science information sources and in turn electronic resources form the basis of the health care sector. They represent a framework to describe the wide spread management of health science information across the globe via computerized systems and its secured and scrutinized exchange between the health science professionals and various associated personals. The overall worth, security and competence of the health research and health services are known to be well determined by means of quality health information sources. Electronic resources in health sciences play a vital role by enhancing the efficiency and accuracy of the information. It is evident that Information is the energy that drives health science (healthcare) decision making. The healthcare field is information intensive, because quality healthcare depends on quality information. Information is intrinsically inseparable from the operations and decisions made in healthcare.

Electronic resources have moved into practically every arena of health science including clinics, laboratories, hospitals, administrative offices, research institutes and health insurance companies. Electronic resources provide health science information at distances through telemedicine to manage healthcare facilities, perform research, educate patients and their families and access supportive resources, including information from global databases. “Adopting new health information technologies and finding ways to integrate them into practice” require a culture shift in the behaviors, beliefs and practices of individual health science researchers, healthcare providers and health service delivery organizations. The quantity and intricacy of health information plus the fact that the developing healthcare technology is information based have created an environment of dependency on electronic resources and information technology. The health science libraries play a vital role in providing the electronic resources to users and applying new information technologies to healthcare.

**(Cleveland & Cleveland, 2009)**

**Scope:** The study covers the literature related to the status of electronic resources in various health science libraries worldwide.

**Methodology:** The study was done by the exhaustive literature search on electronic resources in various health science libraries across various databases, search engines, various online information resources & other information sources.

**Review Study**

The presence of electronic resources is seen in every field in today's world but their status in terms of development is still in its embryonic phase in various libraries. The growth of electronic resources in various libraries has been a worldwide phenomenon in particular in the developed information societies due to technological progression in information communication technologies (ICTs). The studies highlight the status of e-resources in libraries and various issues responsible for poor implementation of such resources in various libraries.

**Farajpahlou (1994)** revealed that in Iran many libraries until 1991 were using Compact Disk – Read only Memory (CD-ROM) & other information technology based services but it was found that a majority of the libraries were facing problems due to lack of networked databases, lack of tactical automation plans & insufficiency & ineffectiveness of library education to deal with modern technologies.

In another study (**Idrees, 1995 as cited in Siddique & Mahmood, 2016**) explored the status of library automation in 40 libraries of Lahore and revealed that computerization of cataloguing was the leading activity and it was found that the most commonly used software was computerized documentation system/integrated set for information systems(CDS/ISIS). Some 60 per cent of the target libraries had one computer, 40 per cent were using CD-ROM technology, 32.5 per cent had e-mail facility and only two out of the 40 libraries were using Barcode Readers for circulation. 30 per cent of the respondent libraries had a network environment, but only one library had an internet facility. It was again revealed that libraries were lagging far behind in Information Technology (IT) implementation & need

to be fully automated & there was a need to equip libraries with more hardware.

**Ahmed, Munshi & Ahmad (1997)** revealed that in Bangladesh only 65 libraries including national library, special libraries and university libraries were using computers and most of these libraries were centered in Dhaka. It was noted in the study that the main use of the computers in these libraries was for creating and maintaining bibliographic databases and word processing applications. An unsatisfactory use of computers in these libraries was also concluded in the study.

**Alam (1998)** determined the computerization trends with regard to thirteen special libraries in Bangladesh. The results revealed that these libraries were using computers at that very time while the nature of computer use was basic & elementary. He also recognized the poor infrastructural facilities in terms of less reliable power supply and telecommunication system. Also most of the library authorities were concerned due to limited funds at their disposal for purchasing computers & related peripherals. Most of the libraries were using micro computers which in most of the cases do not support advanced systems.

**Haider (1998)** revealed that lack of planning, non availability of software, lack of skilled, competent & professional manpower, non-existence of standards and absence of co-operation & coordination as the leading obstacles of the library automation in Pakistan. This clearly witnessed that these factors were hindering the growth of e-resources in these libraries as well because unless and until library is not automated it cannot provide e-resources access to users.

**Mannan (1998)** analyzed the computerization facilities available for networking and resource sharing in libraries of Bangladesh. For this purpose he selected 25 major academic, special, public and national libraries & reported an unsatisfactory status of library automation. The barriers identified included inadequate financial supports, lack of skilled manpower, lack of proper planning and technological facilities which were witnessed to hinder the growth of e-resources in these libraries.

However **Shemberg and Grossman (1999)** explored that all the ARL Association of Research Libraries (ARL) institutions in the United States of America (USA) were operational with web-capable computers as well as the online public access catalogues (OPACs) and other e-services for their users.

As opined by **(Davarpanah, 2001 as cited in Mogaddham *et al.*, 2012)** after 1990s the Iran's policy makers had greatly incorporated the information technology (IT) in their libraries and have been revolving around the slogan "Software Movement" due to the importance of IT. IT has been necessary and omnipresent in most of Iranian organizations including health sector-related libraries.

**(Engstrom, 2001 as cited in Moghaddam *et al.*, 2012)** in his study explored the use and development of IT at two different university libraries in Costa Rica. It was revealed that one of the libraries has progressed over a quite long period of time while as the other library has evolved very quickly through the application of information technologies. Both the libraries in Costa Rica were considered developed and well-working libraries with a good level of equipment and service performance. It was found that both the librarians and students have modified to the use of IT very well.

**Nyamboga & Kemparaju (2002)** researched that six university libraries in Karnataka (India) were still lagging far behind some other Indian universities in the application of IT however it was witnessed that the libraries have introduced the internet access which was a noteworthy step ahead in the race of IT. The authors found that in spite of not having a fine image of IT application in Karnataka, the library staff & users were still found to be capable to get more up-to-date information from the internet that supplements more than they get from printed information sources. Thus introduction of internet was revealed as an escalating factor for the competence and effectiveness of the academic libraries as well as serving to bring the whole institution into the information age.

**Amekuedee (2005)** revealed that the library automation was hampered in some Ghanaian university libraries due to the paucity of financial resources, lack of support from the university administrations and lack of skilled & professional staff to embark on automation of all library processes.

**Greig (2005)** in his study revealed the status of e-resources in United Kingdom (UK) and found that many university libraries in UK have introduced Electronic Thesis & Dissertations (ETDs) and highlighted that funding and copyright issues were the main challenges faced by the libraries during implementation of these ETDs.

**Al-Fadhli & Johnson (2006)** revealed the current use of information (IT) technology in support of the Inter-Library Loan (ILL) services in the three major Kuwaiti academic establishment libraries. It was determined that most of the librarians believed that library services can be developed and enhanced by the application of IT. However he unfolded the barriers that hinder the appearance of Electronic Document Delivery (EDD) in the

concerned libraries and identified numerous issues that need stern consideration including the requirement for activation of resources sharing, a need for a clear understanding of the importance of the ILL service, the IT negligence in the state of Kuwait, the lack of human resources in particular lack of confidence in using IT among library professionals and need for developing IT skills.

In a similar study **Alhaji (2007)** determined the status of ETDs in Nigerian university libraries and established that even though these university libraries were providing automated services to users but still thesis and other local content materials were not digitized due to deficiency of funds, facilities, professionally skilled staff & regular failure of the electrical supply.

The other study done by **Haneefa (2007)** again explore the slow development of Information Communication Technology (ICT) in libraries. She revealed that the special libraries in the state of Kerala possess hardware, software & communication facilities to some extent. The study explored that the ICT-based resources and services were not reaching the users to the expected extent. Library automation in special libraries in Kerala was largely commenced during the period 1990-2000. Most of the libraries used Computerized Documentation System-Integrated Set for Information Systems (CDS/ISIS) than any other software. The most popular area for automation was the library catalog. Electronic mail (E-mail) was found to be the most widely used ICT-based resource by large percentage (%age) of users. Most the libraries were hindered by deficiency of funds, lack of infrastructure and lack of skilled professionals staff to embark on automation of all library management activities and application of ICT. Most of the

library users were not satisfied with the application of ICT in their libraries and witnessed “inadequate ICT infrastructure” as their major cause for dissatisfaction. **Igben and Akobo (2007)** report related factors curtailing the implementation and utilization of ICT in libraries in river states in Nigeria.

In their study **Ani & Ahiauzu (2008)** revealed that in Nigerian university libraries the major source of developing electronic information resources (EIRs) was the internet as they explored that majority 89.5% of the surveyed libraries had internet connectivity. This was followed by subscription to electronic databases. 68.4% of the libraries subscribed to online databases, 57.9% to CD-ROMs, 52.6% to electronic journals & library computerization whereas it was found that only 15.8% of the libraries were involved in the digitization of library materials. The authors highlight the elevated level of developing EIRs in Nigerian university libraries through direct subscription for electronic information (online databases, CD-ROMs etc.) than switching of information into electronic form in the library through computerization and digitization. Author recommends an awful need to encourage local research in Nigeria by improving on the current level of conversion of local information for national and international access by patrons. Also the mass computerization of library services and digitization of relevant library materials should be encouraged in university libraries in the country so that they can be at par with the other IT based libraries in the modern world. Similarly **Ramzan & Singh (2009)** explored that a few number of libraries in Pakistan witnessed a low level of information technology (IT) availability, especially the absence of computers, e-mail and internet. Likewise, the libraries were lagging far behind to attain outstanding IT levels. These libraries were operating & functioning through manual circulation &

information retrieval systems which seems to be awkward in today's IT based society. However, access to online resources through the Higher Education Commission (HEC) was found extensive and comprehensive. They revealed that although the Government of Pakistan was providing funds for the purchase of hardware and internet bandwidth to each academic institution through its Higher education commission (HEC), the Ministry of Science and the Technology and Pakistan Telecommunication Authority, it illustrated negligence on the part of the librarians concerned and/or their top management. It was established that libraries need to be fully automated using standard library software/management systems. The data indicated the need to enhance libraries' IT expenditure.

**Islam and Panda (2009)** revealed that the development of IT in special libraries of Bangladesh was still in its embryonic stage at that very time. They revealed that only 55% of the special libraries in Bangladesh had computers & majority of them were not having internet connectivity. It was also explored that only 5% libraries provided online public access catalogue (OPAC) services to users.

**Swain (2010)** revealed that many university libraries globally are increasingly adopting electronic theses and dissertations. **Al-Ansari (2011)** revealed in their study that the majority of the special libraries in Kuwait were partially automated. The most popular area for automation was the library catalogue. It was explored that more than one fourth of the libraries were still stick to traditional systems in their library operations & services. However the study identified some major problems including lack of adequate personnel, ICT training programs and low priority of libraries

within their organization as the main obstacles for application of ICT in special libraries in Kuwait.

**Olorunsola & Adeleke (2011)** revealed the status of e-journal subscription, subscription models and prospect of print version of journals in Nigerian universities & determined that all the participating libraries subscribed to e-journals i.e. full text journals & e-resource databases. However it was found that more than three quarters of the libraries subscribe to EBSCO (Elton B. Stephens Company) Host. This was because of the reason that the Federal Government of Nigeria through National Universities Commission (NUC) was found to pay for the subscriptions to the database for federal and state universities whereas it was explored that the private universities subscribed directly with the company through the regional representative in Nigeria. It reflected that the universities in Nigeria were going to continue to subscribe to this major database as it was found to be very useful and completely accepted. 72%, 77% & 68% of the libraries subscribe to Health Internetwork Access to Research Initiative (HINARI), Access to Global Online Research on Agriculture (AGORA) and Journal Storage (JSTOR), respectively. In nutshell a satisfactory subscription to e-journal databases was witnessed. The use of free with print subscription was found to rank high among university libraries, however, it found to be just slightly higher than the use of consortial deal. The study witnessed that most universities have already adopted, tested and acceptable subscription models for e-resources. However, there were few ones that were found to use the licenses for individual journal title model which involves so much details and technicalities. Majority (95%) of the libraries had not any plan to cancel print journal subscriptions. There was an only private university which had a

plan to substitute print for e-resources. More than half of the respondents (54.5 percent) claimed to have more than 130 journal titles of print version. Most libraries did not had enough funds to sustain print journal subscription, even when provisions were made in budgetary terms, there were occasions when funds were withheld. Overall, the size of the print journal collection was inadequate in some libraries. On e-journal subscriptions, most libraries had adequate collection. The concerns of such libraries bothered on frequent internet downtime and constant power. The widespread and increasing availability of full-text electronic periodical products had added a new twist to the process of decision making for substitutions. This indicated that the e-resources were making their place in the collection of libraries however most of the libraries wanted to retain print format.

The comparative research study carried out by **Farahi & Gandhi (2011)** revealed that medical libraries in Iran and India have hardware, software and communication facilities to some level however they should struggle to achieve outstanding IT levels. It was found that few medical libraries were fully automated. The most important problems encountered by the Iranian librarians included lack of institutional support, funds, trained and skilled professionals and the absence of planning and training courses in the application of IT in these libraries however none of the options were rated as the most important problems inhibiting the effective use of IT by Indian medical librarians.

**Islam & Hossain (2014)** researched that 38.5 per cent universities do not had any library websites in Bangladesh. Among those who had websites, 62.6 per cent were found to be visible and readable in English. These websites were not fully used for promoting library resources and services &

also these libraries were not maximizing their promotional activities. It was also explored that the libraries were not making any attempt to provide online literacy courses, live support and copyright documents. It was determined that there was a need to market & promote library resources & services in Bangladesh universities by successfully gaining support from the parent institution. This will help to improve the library image and further expand library use.

### **Conclusion**

It is clear that status of e-resources in terms of library automation & library e-resource collection is still in its developing phase and libraries are witnessing a positive feedback in terms improved library services with the introduction & implementation of information technology( IT) & e-resources in libraries however it is evident that lack of funds, lack of professional staff, lack of training programmes & lack of institutional support are the major factors hindering the growth & development of e-resources in libraries.

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