

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: - www.journalijar.com</p> <h2>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</h2> <p>Article DOI:10.21474/IJAR01/2672 DOI URL: http://dx.doi.org/10.21474/IJAR01/2672</p>	 <p>INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR) ISSN 2320-5407 Journal Homepage: http://www.journalijar.com Journal DOI:10.21474/IJAR01</p>
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RESEARCH ARTICLE

USE OF E-RESOURCES IN HIGHER EDUCATION: ADVANTAGES AND CONCERNS.

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Manuscript Info

Manuscript History

Received: 31 October 2016

Final Accepted: 30 November 2016

Published: December 2016

Key words:-

E-resources, Advantages and Concerns.

Abstract

Higher education system has grown exponentially in the last five decades and e-resources have become an inseparable part of this educational system. E-resources have a prominent role to play in supporting higher education and in fulfilling educational objectives. E-resources are rich source of information for those students who want extra learning materials in addition to their regular classroom activities. There are a number of e-books, reference books, e-journals, inter-linked hypertext documents, online help centres, expert's views and other study-oriented material that can make the learning process very easy. Furthermore, the cloud computing has made it possible for students and researchers to always keep their data with them. The use of e-resources in higher education lends itself to more student-centred learning settings. It, however, creates some tensions among parents and teachers. With the world moving rapidly into digital media and information, the role of e-resources in higher education is becoming more and more important and its importance will continue to grow and develop in the 21st century. Thus, the paper aims to examine the advantages of e-resources in higher education and to identify the various concerns related to e-resources.

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Introduction:-

Higher education systems have grown exponentially in the last five decades to meet the demands of quality education for all. In the last five decades, the growth of higher education presents a very impressive picture. There has been commendable quantitative expansion in terms of students' enrolment, number of teachers, colleges, universities and research degrees. The e-resources have become an inseparable part of the educational system.

According to AACR2, an electronic resource is: "Material (data and/or program(s)) encoded for manipulation by a computerized device. This material may require the use of a peripheral directly connected to a computerized device (e.g., CD-ROM drive) or a connection to a computer network (e.g., the Internet)."

IFLA defines Electronic Resources as "to those materials that require computer access, whether through a personal computer, mainframe, or handheld mobile device. They may either be accessed remotely via the Internet or locally". Some of the most frequently encountered types are: E-journals, E-books, Full-text (aggregated) databases, Indexing and abstracting databases, Reference database (biographies, dictionaries, directories, encyclopedias, etc.), Numeric and statistical databases, E-images, E-audio/visual resources (IFLA, 2012).

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The e-resources hold great potentials in higher education. It can innovate the higher education system and make it more productive and efficient. In teaching-learning process, first, the e-resources can be used to stimulate learners to learn actively and independently in a self-directed way and in collaboration with others. Second, teaching materials (e-books, e-journals, online database, etc.) are available online for students. Third, it encourages the democratization of education, that is, access to education for all. Every student (able/disabled, male/female, national/international etc.) has access to education, anywhere (home, hostel, college, library, etc.), any time (24 hours/day and seven day/week). Easy communication between teacher-student and student-student on teaching content is also possible. Furthermore, instructional content can be gotten by a teacher through the e-resources and it provides opportunities for sophisticated repertoire of teaching strategies (Go, 2000; Kirschner and Woperies, 2003). The relevance for teaching is not exhaustive but a teacher's ability will determine how efficiently the e-resources can be exploited to enhance teaching.

Types of E-Resources:-

The Internet is a heterogeneous channel with vast educational resources. These resources include: e-books, e-journals, e-mail, inter-linked hypertext documents, online help centres, expert's view, file transfer protocol and so on. Each of these resources has its own set of rules, but they relate to one another in several ways (Monereo et al., 2000). Some of these resources are discussed as follow.

E-books:-

An e-book is the electronic version of a book covering its full contents (text, tables, diagrams, illustrations, etc.). An e-book collection is usually set up in an e-database, which supports full-text searching within and across titles, advanced search and bookmark functions. Users can view full text of e-books in HTML or PDF format online. E-books are usually read on dedicated e-book readers or tablets using e-reader applications. Personal computer and many smart phones can also be used to read e-books.

E-thesis:-

An e-thesis or electronic thesis describes a thesis in digital form that is generally accessed via the internet. It is intellectual works or research of a researcher. It provides a technologically advanced medium for expressing ideas with less expensive, small space, easy handling and high longevity. Access to, and storage of, electronic theses is usually facilitated by open access repositories such as the UCC (Uniform Commercial Code) institutional repository, CORA (Cork Open Research Archive). UCC is developing an e-thesis programme to ensure that postgraduate research conducted in UCC is widely disseminated. In many countries, a move has been made in recent years to electronic submission of theses, in parallel with hard-copy submission, enabling theses to be searchable and readable online. E-thesis is stored in CORA, the UCC institutional repository. This is an open access repository based on D-Space software. There is no file size limit imposed on e-theses in CORA.

E-journals:-

With the advent of the internet, researchers and academics have recognized the capabilities of the information and communication technologies as efficient means to share results and to get around barriers by full transfer of intellectual property rights from the author to the publisher; it is also a means of improving the slow turn-over of traditional publishing (Correia and Neto, 2006).

An electronic journal is a periodical publication which is published in electronic format, usually on the Internet. An e-journal is a journal available online or offline containing research papers, review articles, scholarly communications etc. It is useful in higher education. Electronic journals relatively provide efficient access to information and thus they are easier to distribute to library patrons than traditional print; in the financial stringent environment of higher education system, electronic journals have become a medium which is cheaper than the traditional printed journals (Ellis and Oldman, 2005). According to Rowley (2006) electronic journals take two different forms: journals that are published in print form, available in digital form and electronic journals which do not necessarily need a publisher, and which can be managed by an editor and the scholarly community. Both types may have a significant impact on scholarly communication and in the way knowledge is created and disseminated.

Online databases:-

The most effective way to provide access to electronic books/journals in University libraries is through subscription to online databases which can be accessed through the internet. Online databases are a collection of electronic information sources (e-journals/e-books) by publishers from various fields and disciplines (Afolabi, 2007). Some of

these databases are provided free of charge to libraries in developing countries by their publishers or vendors. Some of these include NARI, <http://www.healthinternet.org/scipub.php> and AGORA:<http://www.agininternet.org/en/>. Others require subscription fee such as emerald database, <http://www.emeraldinsight.com> and Blackwelsynergy:<http://www.blackwell-synergy.com>. Access to these databases provides researchers and students with thousands of scholarly articles in their fields of specialization or research (Fatoki, 2004). For students to utilize the growing range of electronic resources they must acquire and practice the skills necessary to exploit them (Okello-Obura, 2010).

CD-ROM databases:-

CD-ROM databases allow users access to relevant databases without robust Internet connectivity in libraries. It is therefore cost effective than online databases as information could be accessed off-line without paying for telecommunications fee (Afolabi, 2007). Besides, CD-ROM databases are of immense value over print if the system is networked, as patrons at their terminals could access information without coming to the library. The information revolution brought forth by advances in information and communication technology has enabled universities and colleges around the world to take advantage of these developments. New modes of teaching, learning and accessing information have emerged as a result of Internet and World Wide Web (Darkwa et al., 2007). CD-ROM databases are important tools for identifying the bibliographic details of potentially useful documents and ensure easy access to large volumes of literature for research.

Electronic Mail (e-mail):-

This is an instantaneous electronic message from a sender to the recipient. It is the most used application on the internet. Another variant of the e-mail is to provide a list through which a subscriber receives and participates in a group discussion through e-mail. Each user has a mail box address to which messages are sent (Griffith, 2002; UCB Library; 2004c&d, University Libraries, 2003;Steinger, 2001). The e-mail is relevant for communication between teachers and students, peers (teacher-teacher, student-student), and with parents.

File Transfer Protocol (FTP):-

File Transfer Protocol (FTP) is a standard internet protocol for transmitting files between computers on the internet. It allows a computer to rapidly retrieve complex files intact from a remote computer and view and save such files on your computer (UCB Library, 2004d).

Remote Login:-

This permits a computer user to log on to another computer and use it as if the user were there. Through remote login, lecturers can access to their university's computer from any other computer connected to the internet anywhere in the world. Files can be downloaded, even common computer operation like rebooting can be accomplished (UCB Library, 2004c&d). To remote login to a computer, you must know its address which can be words (mail.yahoo.com) or numbers (216.109.127.28).

Gopher:-

It is one of the earliest resources on the internet. It is the only method for assessing internet documents. Some gopher texts may still be found linked on the web page, but they are more or less subsumed in the World Wide Web (Griffith, 2002; UCB Library, 2004d).

The World Wide Web (WWW):-

The World Wide Web (www, W3) is an information system of interlinked hypertext documents that are accessed via the internet. It has also commonly become known simply as the Web. The WWW incorporates almost every protocol available on the internet (e-mail, FTP, Telnet, Usenet, etc.). The web provides opportunities for retrieving text documents, viewing images, animation, and video, listening to sound, speaking and hearing voices, provided one's computer has the capacity and software (UCB library, 2004a&d; University Libraries, 2003). The web relies on hypertext as its means of information retrieval. Hypertext is a document that connects to other documents, that is, the ability to have web pages containing links, which are areas on pages or button or graphic which can be clicked to retrieve another file unto the user's computer.

Hypertext files can be retrieved and searched through a special protocol known as HyperText Transfer Protocol (HTTP) which simplifies the writing of addresses, which are searched on the internet and called up for viewing (Griffith, 2002; UCB Library, 2004d; University Libraries, 2003). The WWW documents are viewed using Internet

Browsers, which are software programmes that allow an Internet user to view documents. Examples are Microsoft Internet Explorer (IE), the most popular and prevalent in our environment, Netscape, Lynx (text only documents), Mosaic, Macweb, NetCruiser, and so forth. They translate HTML encoded files into sounds, text, image, sound and other web features (Griffith, 2003; UCB Library, 2003d).

Through these resources, a student has access to study and research materials, communication tools with teachers and peers, and other developmental benefits.

Advantages:-

In literature there are many studies related to use e-resources in different fields of education such as medical education, college education, engineering education, and so on. In these studies (e.g. Day and Bartle, 1998; Okello-Obura and Magara, 2008), the effects of the use of technology on students' academic performance and efficacy have been investigated. The common point of the studies is that e-resources use can have a positive effect on students' performance if it is properly used. The findings of most studies showed that use of the e-resources are useful for education, in that it can supply many beneficial opportunities to find different resources. On the basis of these studies there are following advantages of e-resources:

Accessing information through electronic Libraries:-

Electronic Libraries which offer an important advantage in accessing information required from related sites are classified into two different groups: open or closed access web sites of universities, and other web sites which are completely open through the internet. The closed sources in Electronic Libraries in universities are based on e-books and e-journals and are completely trustworthy. These collections are ideal for the undergraduate, post-graduate students, researchers, and academicians.

Helpful in conducting research:-

The e-resource is a powerful tool for assisting students and educators with conducting research. Going to a library and searching through a card catalogue by hand can be laborious and inefficient compared to searching for the same information on a computer. Many institutions offer online library systems which allow students to find information on books using lab computers and to access databases of scholarly articles that they can read online.

Submission of assignment through e-mail:-

E-mail allows students and teachers to contact one another even if they cannot physically meet. It enables educators to send out announcements, such as assignments or a course syllabus, without having to hand out paper copies. Students can submit assignments via email or some other online submission system, which can cut down on the amount of paper waste produced by the institution. E-mail is also advantageous for those students who miss the class and important class-notes

Data/ File storage through Cloud Computing:-

Cloud computing offers the possibility of outsourcing IT requirements to suppliers on the internet. To take full advantage of the opportunities offered requires a professional approach to procuring cloud services and culture change in the way ICT is provided and exploited within research, teaching- learning and the management of universities. Sourcing from the cloud is one way of meeting short-term peaks in demand for computing requirements, individual software applications, or larger and long-term support and processing services.

The most obvious example of cloud services, now widely exploited by many higher education institutions, is the provision of e-mail, particularly for students. Many colleges and universities also use Web 2.0 tools such as YouTube and wikis for disseminating information and blogs for communicating remotely, usually within closed communities such as a student class or research team. All of these tools facilitate collaboration.

Concerns:-

Besides the benefits of e-resources use, a number of publications have shown the adverse impact of e-resources on university and college students, such as discomfiture in reading on the screen, problems in internet access and speed, poor infrastructure, lack of sufficient skills to use the e-resources, and perceptual change resulting from right to use rather than physical possession (Chauhan, 2004) etc. Some of the adverse impact are discussed as follow:

Plagiarism:-

The abundance of e-resources on the internet do encourage students to copy out others work to be presented as theirs. These resources are free and downloadable. Even though they are easily acquired, the continuity of availability of such resource would be an important issue.

Lack of reliability and quality of information:-

Not every information on the Internet is useful for educational purposes. At times information comes from unknown and sometimes unreliable sources. The e-resources on the internet are sometimes not regulated or monitored, for there is no quality control. (Monereo et al., 2000; Paris, 2003).

Quality control issues with online information:-

Part of what makes the issue of information overload so problematic is that not all of the information on the internet is of high quality, and there is no quality control mechanism to help parcel out the reliable from unreliable information. Many papers that have not been peer reviewed or gone through some other vetting process are now out in the public domain. This results in the need for scholars to sort through and figure out what is quality information on their own.

Overload of information:-

Because of the large amount of material on the internet, many scholars feel that they are overloaded with information, and many faculty and students surveyed report that this can be overwhelming for them.

Financial constraints:-

E-resources are expensive in nature. Downloading and printing each article will be a costly affair. This means a net increase in economic and ecological costs and it becomes a relatively expensive way to acquire a single copy. Many e- journals do charge subscription fees. The pricing schemes of some suppliers are very complicated and limiting, and this might hinder libraries from utilizing e- journals.

Changes in work habits:-

Changes in work habits include reading from a computer screen, and the physical discomfort of eyestrain and hunched posture that accompanies this. Further, many faculty and students expressed a preference for something they can hold in their hands (e.g. a book and journal). A combination of these factors leads faculty and students to print out most online materials. They will read an abstract of an article or glance through an online document to judge if it is something they want to read further, but will print it out in order to read it fully.

Conclusion:-

E-resources represent many challenges at every level of their selection, acquisition, preservation, maintenance and management as discussed in this above article. At the same time, these resources have also come with many advantages giving solution to many professional problems like solution to space problem, providing remote access, convenience in use, increased readership with improved services, leading to more opportunities for productive research output and academic excellence within short time. Recent studies have also proved that in researchers' opinion, improved access to e-resources have positively influenced their research activities by helping them to keep up-to-date and by saving time.

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