Relative Effect Of E- Resources to Undergraduate Students' Use of Libraries in Federal University of Technology Minna and Ibrahim Badamasi Babangida Lapai, Niger State

*Georgina U. Oyedum, Ph.D[1] Patricia Chukwu[2] Fatimah Jibril Abduldayan[3]
Godwin O. Abedoh[4]*
***Library and Information Technology Department, Federal University of
Technology, Minna [1,3,4]Federal University of Technology, Minna Library[2]
mrsoyedum@yahoo.com[1] pat.chuk@futminna.edu.ng[2] nnafatima@gmail.com[3]
abedohg@yahoo.com[4]***

Abstract:

Purpose: *This study was carried out to assess the relative effect of the available e-resources to undergraduate students' use of university libraries in Niger State.*

Design/Methodology/Approach: *The descriptive survey research design was adopted for the study. Three objectives and three research questions were formulated to guide the study. Two tertiary institutions were purposively selected from Niger State. One federal and state owned institutions and the population of the study consists of all the undergraduate students of Federal University of Technology, Minna (F.U.T.) and Ibrahim Badamasi Babangida University, Lapai (IBBU). The population was restricted to eighty (80) undergraduates from F.U.T., Minna and fifty (50) undergraduate students from IBBU Lapai giving a total of one hundred and thirty (130) population used for the study. The random sampling technique was used for data collection. The instruments employed for data collection are the questionnaire, interview and observation. The study used frequency counts and percentages as statistical measures for data analysis.*

Findings: *The results revealed that FUT, Minna and IBBU, Lapai subscribe to Science Direct from which the library users mainly access e- journals, e-books and other e-resources to retrieve their information needs. The results also revealed that majority of the respondents (95.4%) indicated that of all the e-resources available in their libraries the e-resources that make greatest contributions to students' use of the university libraries are e-journals and bibliographic database accessed from Science Direct. Furthermore, some e-resources like e-research report, Index databases, e-data archives and online reference work that are available in these libraries are not frequently used by the undergraduates of the institutions.*

Implication: *Suggested solutions to challenges in the provision of stable network services by the university libraries in order to attract more library users to effectively use the library resources, provision of alternative power supply and adequate funding as factors that would enhance students' use of their libraries.*

Originality/Value: *it was recommended that there should be a regulatory body governing the implementation of electronic library services in Nigerian libraries and the need for provision of stable network services that would enhance the use of e-resources in the libraries.*

Keywords: *University Library, Electronic Resources, Use, Undergraduate Students, Niger State*

Introduction

Modern libraries of today endeavour to provide a package of many related services with the help of computer networking which enables wireless linkages between libraries and information centers to pool resources and services irrespective of their physical location. Libraries are now shifting their roles from custodians of traditional information resources to providers of service-oriented digital information resources.

Services such as automation of traditional library services, access to electronic resources to satisfy users' information needs are achieved in many academic libraries. In recent times electronic libraries are becoming more popular especially as they contain electronic resources. Electronic libraries are usually described as organized collections of digital information. They are collections organized for a particular community of users, and they are designed to support the information needs of that

community (Saracevic, 2000).   Electronic libraries can provide resources from many sources and in many formats, including audio and video. The items in these electronic collections do not have to reside on one server, but they share a common interface to assist the user in accessing the collection.

 Electronic resources (E-resources) are defined as those electronic information resources and services that users access electronically via a computing network from locations inside the library or remote to the library (Shim et al., 2001). Widespread use of computers, increased reliance on computer networks, rapid growth of the Internet and explosion in the quality and quantity of information compelled libraries to adopt new means and methods for the storage, retrieval and dissemination of information. The automation of libraries and information centers enabled information transfer and access, thereby establishing a network of libraries and information centres. This initiative helped in resource development, resource sharing and utilization at various levels. Nowadays, libraries subscribe to e-journals, CDROM databases, online databases, web-based resources, and a variety of other electronic resources to assist users in retrieving their information needs.

Literature has identified some resources such as index database, sound recordings, electronic journals, electronic books and other texts, electronic newspapers and magazines, electronic theses, image databases and reference sources as most available e-resources commonly observed and used in libraries. Indexes are reference source which provide bibliographic information about journal articles, as well as other types of materials. Indexes though have long existed in print format; online indexes have expanded the type of work done by researchers. Online indexes allow one to search beyond the subject, author, or title options. Searching for keywords throughout the bibliographic information- including the abstract could be achieved. Sometimes according to Shim et al (2001) people refer to indexes as "Article Databases," since they are mainly used to search for articles in journals. Many also include the full-text of an actual article online. However, it is important to realise that many indexes cover other research materials such as conference papers, book chapters, dissertations, research studies, etc.

Other e-resources such as e-books, e-journals and other printed works are made available and accessible by libraries in different varieties like essays, poems, or historical documents. E- books and texts are also part of large, searchable online databases, while sound recordings are some databases which provide access to sound recordings. Similarly, reference sources like dictionaries, almanacs, encyclopaedias, and other reference sources are now online in full-text and image databases like Art, Maps, graphics or images like photos, paintings etc are also available online. The university libraries used as the case study of this research, Federal University of Technology (F.U.T.), Minna and Ibrahim Badamasi Babangida Lapai (IBBL) libraries mainly subscribe to Science Direct from where library users access e-journals, e-books and other e-resources to satisfy their information needs. This is why the study is necessary in order to identify the electronic resources the patrons use most during their information searching.

University libraries are established in order to provide adequate resources and services that would satisfy the information needs of the users. Thus, the Federal government through the university management provides fund for the building and maintenance of university libraries in Nigerian tertiary institutions. Accordingly, one therefore expects to observe efficient electronic resources supplementing the print resources in Nigerian university libraries. However, previous studies on the use of electronic resources available in the university libraries have revealed that not all the electronic resources satisfy users' information needs and so they are not frequently used. This is contrary to what is obtained in the developed countries where according to Chauhan (2004) most users in the university/ academic libraries search for their information needs using various e-resources such as electronic journals (e-Journals), bibliographic databases, electronic books (e-books), index databases, e-newspapers etc.

This situation is really worrisome considering the fact that a lot is spent in providing library resources and services in tertiary institutions in Nigeria. It is based on this background that it became necessary for one to carry out a study and identify which of the electronic resources are mostly used in the libraries studied. Such knowledge is important especially these days that electronic libraries are identified and used as an indispensable tool in searching and retrieving information of various kinds. Also, such

Georgina U. Oyedum, Ph.D[1] Patricia Chukwu[2] Fatimah Jibril Abduldayan[3] Godwin O. Abedoh[4]

information would serve as a guide to these university libraries to improve in the provision of certain e-resources and de-emphasise others. Provision of inadequate e-resources in the libraries of tertiary institutions would lead to low use of the libraries which would invariably affect the academic achievement of the students. This will in turn cause a great loss of resources and budget on the side of the government and this needs to be checked.

Statement of the Problem

ICT and emergence of electronic information resources have greatly enhanced information-handling and management, especially in tertiary institutions in Nigeria where financial support towards library services is quite substantial. However, e-resources have not received adequate attention in some institutions while other institutions acquire less useful e-resources to the students at the expense of more useful ones. Although many studies have been conducted on the effects of e-resources on students' use of university libraries worldwide in order to recommend the best ways to improve library services for more effective library use, little attention has been given to the relative effect of e- resources such as e-journals, e-books, e-magazines, e-newspapers etc on students' use of university libraries. It is important to determine the relative needs for e-resources and prioritise access to more useful ones. This study investigates the relative effect of e- journals, e-books, e-newspapers, e-magazines etc on undergraduate students' use of university libraries in Nigeria, and attempts to determine the e-resources that make greatest contributions to the students' use of the university libraries so as to proffer suggestions for improvement. The study aims to achieve the following objectives:

1. to ascertain the availability of e-resources in FUT Minna and IBBU Lapai libraries;
2. to find out the relative effect of e-journals, e-books, e-newspapers, -e-magazines, index databases etc to undergraduates' use of university libraries in Nigeria;
3. to identify ways of enhancing better utilisation of e-resources in the university libraries by the undergraduate students.

Research Questions:

1. What are the available e-resources in FUT Minna and IBBU Lapai libraries?
2. What is the relative effect of e-journals, e-books, e-newspapers, e-magazine, index databases etc to undergraduates' use of university libraries in Nigeria?
3. What should be done to enhance better utilization of e-resources in the university libraries by undergraduate students?

Literature Review

Ebijuwa (2005) defined ICT as tools used for collection, processing, storage, transmission, and dissemination of information. With advances in ICT, electronic information resources such as electronic books, electronic journals, CDROM databases, OPAC, Online databases and the Internet have launched the world into an information age. No institution or organization can still rely on only traditional printed information resources to perform effectively and efficiently. To librarians, ICT is a significant development that provides tools for managing the avalanche of information generated by modern society.

Chiparausha and Sithole (2008) highlighted that electronic information services have a lot of benefits. Firstly, E-journal articles and books can be well up to date. This is particularly interesting when an online version of a print equivalent is made available earlier whilst the print version is still 'in press'. This is an advantage to researchers who seek after current information. Secondly, electronic information is also associated with quite a number of search facilities making it relatively easier for one to search for the specific information he wants. As an example, an ordinary Microsoft Word document or a document in portable document format (pdf) has got a facility to search through making it quite easy to skip from one section to another in search of relevant information in that document

Bavakutty, Salih and Haneefa (2006) highlighted that modern libraries have become more and more aware of the revolutionary impact of developments in Information and Communication Technology (ICT) on their major activities. The application of ICT facilitates to provide pinpointed, expeditious and exhaustive information at the right time to the right user. It provides opportunities for libraries

and information centers to widen the scope of their resources and services and to increase their significance within the organization they serve. The increasing availability of information in machine readable form allows much information needs to be satisfied with decreased involvement of libraries and librarians.

Many types of library materials such as journals, books, patents, newspapers, standards, photographs, pictures, motion pictures or music are now available in electronic or digital form. From the user's point of view, digital resources hold many advantages such as time and place convenience, timeliness, ability to search directly on text (as against the catalogue records), ability to link to further reading material and ability to disseminate and share information. From the library's point of view digital format offers convenience of storage and maintenance, cost advantage, ability to target global users, etc. However, digital resources also pose human, social and technological problems, such as discomfiture in reading on the screen, problems in Internet access and speed, poor infrastructure and lack of sufficient skills to use the digital resources (Chauhan, 2004).

Furthermore, libraries have been exploring to cope with the problems of ever increasing prices of journals, space requirements and decreasing level of usage as the journals get older. Nevertheless, libraries are required to maintain back issues of the journals, usually in bound form. Electronic journal helps the librarians in addressing these problems to a great extent without significantly affecting the service levels. E-journals can be accessed via Internet from any web enabled PC. Depending on the type of subscription, one or more users can access the service simultaneously, either directly from an independent web enabled PC or in a local area network through a proxy server (IP addresses based access). E- Journals also offer the benefit of full text searching and downloading of articles. Many publishers of electronic journals offer their journals through consortia of libraries at much lower rates. For instant INDEST *(Indian Digital Library of Engineering, Science and Technology),* and *INFLIBNET* are two such consortia operating in India (Chauhan, 2004).

Similarly, E-book has been described as a text analogous to a book that is in digital form to be displayed on a computer screen. E-books can be read just like a paper book, using dedicated E-Book reader such as *Gemstar eBook* or on a computer screen after downloading it. There are also some newer technologies developing such as electronic paper, which is much like paper, except that the text can be changed, and talking books in MP3 format. E-book offer advantages like portability, 24 hours access, text search, annotation, linking, and multimedia and self-publishing possibilities. Development of e-book is still in infancy stage and issues like compatibility, e-book readers, availability and intellectual property rights are to be addressed before it can be implemented on large scale (Chauhan, 2004).

Borrego et al. (2007) observe that there have been many studies of users of electronic resources in the professional literature in the last few years. In a recent exhaustive review of the literature on the subject, Tenopir (2003) analyzed the results of over 200 studies of the use of electronic resources in libraries published between 1995 and 2003. The main conclusion of this review is that electronic resources have been rapidly adopted in academic spheres, though the behaviour varies according to the discipline.

Electronic information sources are becoming more and more important for the academic community (Kumar and Kumar, 2008). The emergence of electronic information resources has tremendously transformed information – handling and management in Nigerian academic environments, and University libraries in particular (Ani and Ahiauzu, (2008). General user opinion towards the use of electronic resources, in particular CD-ROM, has been positive, with students enjoying using these sources and finding relatively few problems while using them (Ray and Day, 1998). Lohar and Roopashree (2006) studied the use of electronic resources and how the electronic resources are improving the academic carrier of the faculty and the problems that are faced in using the electronic resources. They indicated that electronic resources are often use in the libraries and concluded that application of information technology and use of e-resources in the libraries have brought remarkable changes in librarianship and they also highlighted the use of computers and e-resources in library operations /services.

However, some studies, for example, Kinengyere (2007) found out that available information is not necessarily accessed and used by users. The study shows that the availability of information does not necessarily mean actual use

Georgina U. Oyedum, Ph.D[1] Patricia Chukwu[2] Fatimah Jibril Abduldayan[3] Godwin O. Abedoh[4]

because the users may not be aware of the availability of such resources, they may not know how to access these resources, or do not know what the resources offer. Therefore, efforts to provide access to e-resources should also be matched with efforts to improve ICT awareness and compliance in the tertiary institutions.

Methodology

The descriptive survey research was used to collect data in the study. Two tertiary institutions were purposively selected from Niger State. One federal and state owned institutions and the population of the study consists of all the undergraduate students of Federal University of Technology, Minna (F.U.T.) and Ibrahim Badamasi Babangida University, Lapai (IBBU).

The population was restricted to eighty (80) undergraduates from F.U.T., Minna and fifty (50) undergraduate students from IBBU Lapai giving a total of one hundred and thirty (130) population used for the study. The random sampling technique was used for data collection. The instrument employed for data collection is the questionnaire. The questionnaire was randomly distributed to students during their lecture hours. Interview and observation were also used to collect data for the study. Some staff in the two institutions were interviewed to obtain information for the study and direct observation was undertaken to physically assess some e-resources in the libraries.

Data Analysis and Discussion

Table 1: Types of Electronic Resources available in the University Libraries.

Electronic resources	RESPONSES FROM F.U.T. MINNA AND IBBU LAPAI							
	Yes	%	No	%	No Response	%	Total Response	Total %
Electronic books (e-books)	120	92.3	10	7.7	0	0	130	100
Electronic Newspapers (e-newspapers)	40	30.8	85	65.4	5	3.8	130	100
Electronic Journals (e-journals)	124	95.4	6	4.6	0	0	130	100
Electronic Magazines (e-magazines)	32	24.6	88	67.7	10	7.7	130	100
Electronic Theses (e-theses)	110	84.6	20	15.4	0	0	130	100
Electronic Research Report (e-report)	28	21.5	98	75.4	4	3.1	130	100
Access to Electronic- databases	116	89.2	14	10.8	0	0	130	100
Index Databases	15	11.5	114	87.7	1	0.8	130	100
Bibliographic Database	124	95.4	6	4.6	0	0	130	100
Electronic Data Archives	6	4.6	120	92.3	4	3.1	130	100
Online Reference work	13	10.0	114	87.7	3	2.3	130	100

Table 1 shows that among the electronic resources listed, 92.3% of the respondents indicated that e-books are available in the library for use. Similarly, 30.8% of the respondents agreed that e-newspapers are available in the libraries, 95.4% of them indicated e-journals, 24.6% reported e-magazines, 84.6% of them disclosed electronic theses. In the same vein, 21.5% of the respondents indicated e-research report as one of the e-resources available in their libraries, 89.2% of them stated e-database, 11.5

reported Index databases, 95.4 of the respondents stated bibliographic databases. Also, 4.6% of the respondents indicated e-data archives as one of the e-resources available in their libraries, while 10.0% of them indicated that online reference work is equally available in their libraries. From Table 1 it can be deduced that F.U.T. Minna and IBBU, Lapai, through Science Direct, have quite a good number of electronic resources available in their libraries.

Table 2: Relative contribution of the e-resources to students' use of libraries

S/N	Electronic resources mostly used	Response rate	Percentages
1	E-journals	124	20.88
2	Bibliographic database	124	20.88
3	E- books	120	20.20
4	E- databases	116	19.53
5	E-theses	110	18.51
	Total	**594**	**100.00**

After the statistical analysis of the 5 factors, the respondents as revealed in Table 2 indicated they mostly use e-journals and bibliographic databases (Science Direct) when they visit their libraries. This shows that e-journals and bibliographic databases made the greatest contributions to undergraduate students' use of the university libraries, having 20.88% respectively. This is followed by e-books, 20.20%. The fourth in the order of magnitude was made by e-databases, 19.53%; while the least in the order is the contribution of e- theses, 18.51%.

To identify the suggested ways of better utilisation of e-resources in the university libraries by undergraduate students, the respondents were requested to identify with a number of listed recommendations as shown in Table 3. They were asked to tick as many options as they considered pertinent.

Table 3: Suggested ways of enhancing utilisation of electronic resources in university libraries.

Options	Response Rate	Percentage
Provision of stable network services	**115**	**24.42**
Provision of a regulatory body to govern the use of e-resources in libraries	**65**	**13.80**
Provision of alternative power supply	**80**	**16.99**
Provision of competent staff	**45**	**9.55**
Maintenance of facilities	**35**	**7.43**
Provision of sufficient e-resources facilities	**56**	**11.89**
Provision of adequate funding	**75**	**15.92**
Others (Please specify)	**0**	**0**
Total	**471**	**100**

Table 3 shows that 24.42% of the respondents disclosed that provision of stable network services would enhance the use of electronic resources in academic libraries. Similarly, 13.80% of them stated that there is need to set up a regulatory body to govern the use of e-resources in libraries, 16.99% of the respondents indicated that provision of alternative power supply is paramount to the enhancement of electronic resources usage in academic libraries. In the same vein, 9.55% of the respondents stated that provision of competent staff in academic libraries would enhance the use of e-resources facilities by the undergraduate students.   Also, 7.43% of the respondents reported that there is need to improve on the e-resources maintenance in order to attract more students to use the resources and the libraries, 11.89% of the respondents reported that provision of sufficient e-resources facilities would assist library users to visit and use library facilities frequently, while 15.92% of the respondents indicated provision of adequate funding for the use of e-resources to be improved,

From the above analysis it could be deduced that majority of the respondents indicated the need for provision of stable network services by the university libraries in order to attract more library users to effectively use the library resources. A good number of them also stated the need to provide alternative power supply and adequate funding as factors that would enhance students' use of their libraries.

Discussion

From the study it is revealed that FUT, Minna and IBBU, Lapai subscribe to Science Direct from which the library users mainly access e-journals, e-books and other e-resources to retrieve their information needs. Availability of e-resources in the libraries studied is not surprising since e-resources are generally viewed as information resources that usually provide a community of users with coherent access to a large, organized repository of information and

Georgina U. Oyedum, Ph.D[1]   Patricia Chukwu[2]   Fatimah Jibril Abduldayan[3]   Godwin O. Abedoh[4]

knowledge. Accessibility of information resources makes learning an interesting exercise and the academic library with e- resources can easily provide either print or soft copy information resources for specific assignments for the library users.

The study also revealed in Table 2 that majority of the respondents (95.4%) indicated that of all the e-resources available in their libraries the e-resources they use most are e-journals and bibliographic database accessed from Science Direct. This is not surprising bearing in mind that journal resources whether hard or soft copies are mainly consulted by the library users because they contain current information on different fields of knowledge. Many people visiting libraries prefer using current and up-to-date information resources, and the best library materials to consult are journals that are frequently published. In academic environment students usually use journal resources where they access current information for their assignments while the lecturers use them to update their knowledge in their areas of specialization.

Similarly, bibliographic database, as a database of bibliographic of records and organized digital collection of references to published literature, including journal and newspaper articles, conference proceedings, reports, government and legal publications, patents, books etc, is frequently used by the users of the two academic libraries studied because of the need for users to cite any work consulted in the course of writing. This is the only way such write-ups would be regarded as authentic. Thus, library users equally use bibliographic database as much as they use journals, books, newspapers articles, technical reports and conference proceedings in order to provide bibliographic information of all the users consulted in producing any article. This process of giving the particulars of authorship, or others who have contributed to the work, such as title, edition, place and year of publication, volume, issue number and pages (in the case of journals and newspapers) are necessary for identification. In summary, the idea behind all these could be seen as putting a name to a source. Probably, these benefits and others are reasons why students mostly use journals and bibliographic database whenever they visit the library. This finding is in line with Ebijuwa (2005) who argued that with advances in ICT, electronic information resources such as electronic books, electronic journals, CDROM

databases, OPAC, online databases and the Internet have launched the world into an information age. There is no doubt that the availability and use of Internet facilities such as e-resources pose some human, social, financial and technological problems in libraries, yet most scholars still believe that availability of e-resources in the libraries makes information resources easier for patrons to locate, and most importantly use of electronic resources has brought great changes that have positively affected the library services in the university libraries.

On the other hand, although in this study some e-resources such as e- books, e- databases and e-theses made the contributions that are not as high as that of e-journals and bibliographic database in affecting undergraduate students' use of university libraries, they are still important for effective academic pursuits to be achieved in the university libraries. Probably, as observed by the researchers, the universities studied have few competent staff who are knowledgeable enough in the use of e-resources and so they find it difficult imparting the knowledge to library users. Most times users struggle all alone to understand the searching techniques and use of e-resources in these libraries. To further portray this point, the researchers interviewed some of the staff in these libraries and it was revealed that many of the staff are presently involved in training and re-training of how to use e-resources in libraries.

Furthermore, from Table 1 some e-resources like e-research report, Index databases, e-data Archives and online reference work that are available in these libraries are not frequently used by the undergraduates of the institutions. Probably, majority of the students do not have much need to consult them in the course of their assignments. Bearing this in mind, especially with the financial constraints facing most university libraries today, one should suggest that the library management should pay more attention to the provision of the mostly used e-resources and de-emphasise others that make low impact on users.

Conclusion and Recommendations

One can therefore conclude that since the use of e-resources in higher institutions make a strong impact in the various library services available in most academic libraries, it is necessary that the management of the university libraries such as FUT, Minna and IBBU Lapai should strive to

have sufficient and adequate e-resources as this will encourage library users to visit and use these resources to satisfy their information needs. This is important because the advent of e-resources in academic libraries has not only radically transformed the way information search is handled in most libraries today, but has also greatly improved the quality and quantity of information used by the library users. Availability of and access to e-resources in academic libraries are important factors towards undergraduate students' optimal use of their libraries in achieving their academic pursuits.

Based on the findings of the study, the following recommendations were made:

1. There is need for university authorities to provide stable network services that would enhance the use of e-resources in the libraries.

2. There should be a regulatory body governing the implementation of electronic library services in Nigerian libraries which will as a matter of necessity enforce the usage of electronic resources in all institutions of higher learning.

3. Alternative power supply should be put in place by the library management in order to ensure steady and continuous access to available e-resources by the researchers. This could be an uninterruptible power supply or a generating set.

4. Competent manpower should be employed in the libraries by the library management to cater for the library activities especially in the area of ICT usage, in order to ensure easy running of the library services.

5. There is need for provision of adequate fund by the university authority to enable the libraries acquire sufficient number of ICT facilities, as well as equip the libraries and ensure proper maintenance of the facilities such as e-resources for effective utilisation of the libraries.

References

Ani, O. E. and Ahiauzu, B. (2008). Towards effective development of electronic information resources in Nigerian University Libraries. *Library Management* 29(6/7): 504 – 514.

Bavakutty, M., Salih, M.T.K and Haneefa, M. (2006). Research on Library Computerization. New Delhi: Ess Ess Publication. 562.

Borrego, A., et al. (2007). Use and users of electronic journals at Catalan Universities: The results of a survey. *Journal of Academic Librarianship. 33*(1).

Chauhan B.P. (2004). *ICT enabling library and information services*: Winter School on ICT Enabling Library & Information Services, Patiala.

Chiparausha, B. and Sithole N. (2008). *University Libraries in a Changing Environment: Experiences and the Way Forward in the New E-Learning Environment.* Presentation at the Inaugural Africa University National e- Learning Symposium. Africa University- Mutare, Zimbabwe.

Ebijuwa, A.A. (2005). Information and Communication Technology in university libraries: The Nigeria experience. *Journal of Library and Information Science 7* (1&2): 23-30.

Kinengyere, A.A. (2007). The effect of Information Literacy on the utilization of Electronic Resources in Selected Academic Research Institutions in Uganda. *The Electronic Library,* Vol. 25 No. 3. Pp. 328-341.

Kumar, G.T and Kumar, B.T.S. (2008). *Use of electronic information sources by the academic community:* A comparative study, 6th International CALIBER-2008, University of Allahabad, Allahabad: pp.684-692

Lohar M,S. and Roopashree, R.T. (2006). Use of Electronic Resources by Faculty Members in B.I.E.T, Davanagere: A Survey, J. Inform. Manage. 43(1).

Ray, K. and Day J. (1998). Student attitudes towards electronic information resources. *Information Research* Vol.4 no.2. Available at: http://informations.net/ir/4-2/paper 54.html. Accessed 8th June, 2008.

Saracevic, T. (2000). Digital library evaluation: Toward an evolution of concepts.

Library Trends, 49, 350-370. Retrieved November 22, 2002, from EBSCO database.

Shim, W. J. et al.(2001). *Measure and statistics for research library networked services: Procedures and issues* (ARL E-Metrics Phase II Report). Washington, DC: Association of Research Libraries. URL: http://www. arl.org/stats/newmeas/emetrics/phasetwo.pdf [viewed February 22, 2011]

Tenopir, C. (2003). *Use and users of electronic library resources: An overview and analysis of recent research studies*. Council on Library and Information Resources. Available: http://www.clir.org/pubs/reports/pub120.pdf