

EXPLORING THE CONSERVATION STRATEGIES OF ELECTRONIC INFORMATION RESOURCES (EIRs) IN ABUBAKAR TAFAWA BALEWA UNIVERSITY (ATBU) LIBRARY, BAUCHI.

BY

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ABSTRACT

The study examined the conservation strategies of electronic information resources (EIRs) in Abubakar Tafawa Balewa University (ATBU) Library, Bauchi. In carrying out this study, three research questions and three objectives guided the study. The study adopted descriptive survey design. Data were collected through a questionnaire and presented using frequency tables and then analyzed by descriptive statistics. The population of the study comprised 66 staff of ATBU Library, Bauchi. The major findings of the study revealed the following strategies used for conservation of EIRs in ATBU Library: metadata, migration of retrospective records, emulation of records, digitization of records, recapturing and refreshing of records. Lack of fund,, insufficient policy for conservation of EIRs, lack of qualified ICT personnel, erratic power supply and technological obsolescence are the major problems bedeviling conservation of EIRs in ATBU Library. Formulating new policies for conservation of EIRs, provision of adequate funds, training and re-training of librarians in the use of ICT, constant power supply and using current and past sources of information are the solutions to the problems facing conservation of EIRs. Thus, the study recommended that conservation strategies such as recapturing of records, migration of retrospective records and use of metadata should be given special priority in ATBU Library. In addition, policies related to the conservation of EIRS should be formulated and adequate equipment and materials for conservation of EIRS should be provided.

INTRODUCTION

With the emergence of Information and Communication Technology (ICT) in the 21st century, the university library system has witnessed a tremendous increase in information in electronic form while the needs of the library users have changed towards electronic resources. As such, it becomes pertinent that university libraries should conserve their electronic resources to slow down deterioration and prolong the life span of the resources in order to meet the information, research and curriculum needs of its students, faculty members, staff and the university community. For any academic library to thrive in this information age, the library irrespective of its collection must embrace Information Communication Technologies (ICTs).

The emergence of EIRs has greatly transformed information handling and management in Nigerian universities. EIRs have gradually become major resources in every university community. EIRs are resources provided in electronic form and these include: CD ROM databases, online databases, online journals, OPACs, internet and other computer- based electronic networks (Quadri, Adetimirin and Idowu,2014) . According to Bavakently, Veeran, and Salih (2003)

electronic resources are viewed as resources in which information are stored electronically and are accessible through electronic system and networks. Electronic resource is a broad term that includes a variety of items, such as Public Access Catalogues (OPACs), CD-ROM, online database, e-journals, e-books, internet resources. Shukla and Mishra (2011) described the electronic collection as the collection of information which can be accessed only by the use of electronic gadgets. IFLA (2010) defined electronic resources as those materials that require computer access, whether through a personal computer, mainframe or handheld mobile devices. They may be accessed remotely via the internet or locally.

According to Victoria (2019), the major advantage of electronic real sources is the ease of accessibility. Jadhao (2018) described a digital library as a library in which collections are stored in digital formats and contents accessible by computers. The print and electronic materials are vital and delicate. The way they are handled can affect the life of the records contained in them. Records must be preserved and conserved for future use. The emergence of ICT has brought about tremendous development of electronic resources. The university libraries are gradually shifting from the traditional library system to electronic in order to attain to the information needs of their users. The processes of preserving electronic resources are slightly different from prints that involve the use of internet network and power supply. Preservation and conservation of information resources have always been and will continue to be a source of concern to libraries, except a lasting solution is found. Efficiency in preservation and conservation of information resources has become necessary in this era of globalization as information explosion has also necessitated the increase of library patron's desire for information.

STATEMENT OF THE PROBLEM

Electronic Information Resources (EIRs) play vital roles in helping libraries in their quest to support the teaching and learning processes in universities and in providing quality assistance to users. Managing electronic information is very vital in any given library but it is becoming more and more challenging (Paper, 2018). The National Library of Australia (2014) observed that one of the major crises facing libraries throughout the world is the rate of deterioration of their collections. This constitutes a problem to library EIRs. The above observed problems prompt the need to undertake this study to explore the conservation strategies of EIRs in ATBU Library, Bauchi.

RESEACH OBJECTIVES

The objectives of the study were to:

1. Identify the conservation strategies of EIRs in ATBU Library, Bauchi.
2. Identify the challenges associated with the conservation of EIRs in ATBU Library, Bauchi.
3. Proffer solutions to the challenges associated with conservation of EIRs in ATBU Library, Bauchi.

RESEARCH QUESTIONS

The following research questions were raised for the study:

1. What are the conservation strategies of EIRs in ATBU Library, Bauchi?
2. What are the challenges associated with the conservation of EIRs in ATBU Library, Bauchi?
3. What are the solutions to the challenges associated with the conservation of EIRs in ATBU Library, Bauchi?

LITERATURE REVIEW

CONSERVATION

The term conservation has been defined by International Federation of Library Association (IFLA), principles for the care and handling of library materials (2010) as “specific practices taken to slow down deterioration and prolong the life span of an object by direct intervening in its physical or chemical make-up”. Conservation involves taking protective measures to prevent decay and consequently, the loss of library resources. It also includes taking preventive measures against agents of deterioration of books and other library resources.

Conservation includes studying, diagnosis, preventive care, examination, treatment, documentation using methods that may prove effective in keeping that property close to its original condition and for as long as possible. The conservation of library materials houses the documents by considering the long term preservation of the items while still allowing the end user to access the materials easily. But all library collections experience damage from use and decay from aging. So there is a need for conservation of library materials. (Julet and Comfort, 2019). Conservation is preservation at items level. It embraces those activities that improve the condition of the physical objects or protect it from damage. Conservation involves taking protective measures to prevent decay and consequently, the loss of library resources. (Jordan, 2003). Conservation can also be an act of preservation, protecting and shielding material from destructive influences that shorten their life span. Conservation involves taking protective measures to prevent decay and consequently, the loss of Library resources. It also includes taking preventive measures against agents of deterioration of books and other Library resources. Jordan (2003) describes preservation as an umbrella term for an array of activities; principles, practices, and organizations that ensure the usability, longevity, and accessibility of recorded knowledge.

ELECTRONIC INFORMATION RESOURCES (EIRs)

Bavakently, Veeran, and Salih (2003) viewed Electronic resources as resources in which information are stored electronically and are accessible through electronic system and networks. Electronic resource is a broad term that includes a variety of public Access Catalogues (OPACs), CD-ROM, online database, e-journals, e-books, internet resources. Shukla and Mishra (2011) described the electronic collection as the collection of information which can be accessed only by the use of electronic gadgets. IFLA (2010) defined electronic resources as those materials that require computer access, whether through a personal computer, mainframe or handheld mobile devices. They may be accessed remotely via the internet or locally.

Similarly, Mansur (2012) described E- resources as electronic products that deliver a collection of data, be it text referring to the full text database, e-journals, e-books, image, other multimedia products and numerical, graphical etc. EIRs are information resources provided in electronic form. The term “electronic resources appear not to be used consistently; they may be referred to as EIRs, EIRs and electronic library resources. Digital resources, digital materials and soft library resources are other terminologies used for EIRs.

The term electronic resource is seen by Sharma (2009), as library’s information materials that are in electronic form, and include e-books, e-news papers, e-journal, as well as internet resources. EIRs also consist of databases, magazines, archives, theses, conference papers, government papers, scripts and monograph in an electronic form. Electronic resource is digitized information, facilitated by computers, network connectivity, electricity, other peripheral

components and most importantly human beings. It comes in different format including text, videos, audio, maps, graphics, tables, pictures, etc. Amankwah (2014) also indicated that electronic resources include full text documents, CD-ROMs, resources available on the internet such as E-journals, Online Public Access Catalogues (OPAC) and other computer based electronic networks.

The various types and forms of e-resources in academic libraries are; e-databases, e-journals, e-data archives, e-manuscript, e-maps, e-books, e -magazines, e-thesis, WWW, e-newspapers, e- research reports, and e-bibliographic databases (Ankrah & Atuase, 2018). The major benefit of electronic resources in the university library besides ease of access to the needed information is that access can be done remotely by academic staff in their offices/laboratories or at homes without physical visit to the library.

Thus, electronic resources promote efficiency in dissemination of information for research purposes in universities, E_ resource is more of a tool to assist in conducting research, away of scanning a lot of materials quickly (Thanuskodi, 2012).

STRATEGIES FOR CONSERVATION OF EIRs

According to Capron and Johnson (2002), the following strategies are needed when handling a media storage devices for preserving and conserving electronic information, moderate and making temperature and humidity stable helps to keep storage alive, having a storage device that can read older media, having hardware that can read other files from the storage devices. George Firmin Kavishe and Frankwell Dulle (2010) in their research pointed out that 19(67.9%%) respondents indicated a need for training in metadata techniques for conservation of EIRs, while 18(64.3%) needed training in migration, emulation, maintenance and bit preservation techniques.

When conserving EIRs one should always consider file formats, selecting a file format that is not easily affected by rapid change of technology is a vital strategy. File format that go unsupported with short period of time (Hunter,2000). On the same point, paper(2008).indicated that critical information should not be held in a file that will no longer be compatible with the future software because as electronic information became more complex and integrated threat of file format obsolescence is set to increase. The strategies used for the conservation of EIRs are emulation, digitization, migration, recapturing, refreshing.

Migration in this method, the format of the saved files will be converted to another one. Emulsion is the process of preserving records by latest technology. Refreshing it is the copying of digital files from one storage to another. Digitization is the process of converting information into digital format, in which the information is organized in bit.

CHALLENGES ASSOCIATED WITH CONSERVATION OF EIRs

In a research conducted by Kavishe,George Firm and Dulle (2010), revealed that “ lack of staff with digital preservation / technological expertise, insufficient electronic resources for conservation, concern about technological obsolescence, insufficient policy or plan for preservation and conservation are the problems of preservation and conservation of EIRs. Moloi and Mutula (2007) identified that information centre in the third world countries are faced with issues in preserving and conserving EIRs, rapid change in technologies as well as lack of expertise in the personal preserving EIRs are among the challenges that made EIRs preservation / conservation a difficult task.

The challenges of electronic resources collections management in libraries are the problem of user training, technological up-grading, financial constraints, IT skill, manpower, perishable citation, online, website changes, Universal Resource Locator (URL), citation

disappear, authentication etc (Behara & Singh 2011, Balangue 2012). Similarly, Chisenga (2004), reported that lack of funds, lack of qualified ICT personnel, erratic power supply, under-use of ICT and shortage of staff who are expertise in managing EIRs are the challenges of conserving EIRs. The electronic resources have a lot of challenges as highlighted by Schwarts (2000). These include the following: the associated difficulties preserving and archiving, the worries about deterioration over time, technological obsolescence of software and hardware, and inadequate equipment/ materials.

Lack of adaptation is one of the problems that preservation and conservation of electronic information has to encounter. For example, if a file is created in windows 95, there is a probability that retrieving and reading of this file in windows 7 will face difficulties. So, the preservation/conservation itself is a lot easier but the process of retrieving is not that accessible and the reason is the extreme rapid changes and development in technology (Kagine, 2014).

METHODOLOGY

The study employed a descriptive survey design. Descriptive survey research has been described by Osuola (2009) as “that which studies both large population by selecting and studying sample chosen from the population to variable. Surveys permit the researcher to summarize the characteristics of different group of measure their attitudes and opinion toward some issue. The population of the study comprised professional, para-professional and non professional staff of ATBU Library, Bauchi. This composition did not include the administrative staff of the library; this is making the total population of sixty- six (66) staff. Structured questionnaire contained information related to the research questions was used. The data collected for this research were presented and analyzed using descriptive statistics expressed in frequency distribution tables and simple percentages.

A sample is a fraction of a population from which data for study is collected. Total population sampling (census) will be employed as the sample size (66) is considered manageable by the researcher. Hence, there is no need for sampling.

Research instruments are tools used to collect data on or about the phenomena under study, they are important in all types of research, their functions are mainly to enable a researcher collect reliable data which will later be analyzed. The instrument for data collection in this study will be self developed questionnaire.

The researcher will personally visit the Library and administered the questionnaire and solicited the help of some Library Staff to administer some.

Data analysis simply means interpretation of raw data of an investigation and the means by which the research problems are tested. The procedure for data analysis in this study will be descriptive analysis based on the use of the descriptive statistical method, using, percentages and frequency distribution table to enable the researcher to summarize and organize data in an effective and meaningful way.

DATA PRESENTATION, ANALYSIS AND DISCUSSION

The data collected for the study through the questionnaire was presented and analysed below.

RESPONSE RATE

The researcher was able to obtain considerable responses from the Library staff of ATBU, Bauchi. A total number of sixty six (66) questionnaires were distributed to staff; out of which fifty six (56) which represents (84.8%) were completed and returned to the researcher. The researcher

found these fifty six (56) questionnaires usable for the study. The table below indicates the response rate.

TABLE 1. RESPONSE RATE

Library	No. of questionnaire administered	No. of questionnaire returned	No. of questionnaire not returned	Total
ATBU	66	56(84.8%)	10(15.2%)	100%

The table above revealed that 56% (84.8%) copies of questionnaires were returned out of 66 (100%) that were administered. Therefore, 10(15.2%) number of questionnaires were not returned. The response rate was considered reasonable because 56(84.8%) of the total number can be regarded as high return.

TABLE 2: CONSERVATION STRATEGIES FOR EIRs AT ATBU LIBRARY, BAUCHI

S/N	CONSERVATION STRATEGIES FOR EIRs	AGRRED	DISAGREE D	TOTAL
1.	Use of metadata	27(48.2%)	29(51.7%)	56(100%)
2.	Migration of retrospective records	20(35.7%)	36(64.3%)	56(100%)
3.	Emulation of records	36(64.3%)	20(35.7%)	56(100%)
4.	Digitization of records	40(71.4%)	16(28.5%)	56(100%)
5.	Recapturing of records	40(71.4%)	16(28.5%)	56(100%)
6.	Refreshing of records	30(53.6%)	26(46.4%)	56(100%)

The results in this table indicated that, 40(71.4%) of the respondents agreed that digitization of records and recapturing records are the conservation strategies for EIRs while 16(28.5%) disagreed. 36(64.3%) agreed with emulation of records as the conservation strategies for EIRs while 20(35.7%) disagreed. 30(53.6%) of the respondents are of the believed that refreshing of records is the conservation strategies for EIRs while 26(46.4%) disagreed. 27(48.2%) of the respondents believed that use of metadata is the conservation strategies for EIRs and 29(51.7%) and then lastly, 27(48.2%) of the respondents chose migration of retrospective records as the conservation strategies for EIRs while 36(64.3%) disagreed. The findings indicated that all the above identified items are used as the strategies for conservation of EIRs in ATBU Library, Bauchi.

TABLE 3. CHALLENGES ASSOCIATED WITH CONSERVATION OF EIRs

S/N	CHALLENGES	AGREE	DISAGREE	TOTAL
1.	Insufficient policy for conservation of EIRs	36(64.3%)	20(35.7%)	56(100%)
2.	Paucity of funds	49(87.5%)	7(12.5%)	56(100%)
3.	Lack of qualified ICT personal	40(71.1%)	16(28.9%)	56(100%)
4.	Erratic power supply	38(67.9%)	18(32.1%)	56(100%)
5.	Technological obsolescence	41(73.2%)	15((26.8%)	56(100%)
6.	Inadequate equipments/ materials	45(80.4%)	11(19.6%)	56(100%)
7.	Others	3(5.4%)	53 (94.6)	56(100%)

The above table shown the responses of the respondents on the six (6) identified problems associated with conservation of EIRs. It indicated 49(87.5%) agree with paucity of fund, 7(12.5%)

disagree, 45(80.4%) of the respondents agreed that inadequate equipments/ materials is the problem associated with conservation of EIRs while 11(19.6%) disagreed, 41(73.2%) agree with technological obsolescence while 15(26.8%) disagree. Lack of qualified ICT personals recorded 40(71.1%) agreed, 16(28.9%) disagreed followed by erratic power supply which recorded 38(67.9%) agreed and 18(32.1%) disagreed. Insufficient policy for conservation has the least responses of 36(64.3%) agreed while 20(35.7%) disagreed. The findings indicated that all the above identified items are the problems associated with conservation of EIRs in ATBU library, Bauchi.

TABLE4: SOLUTIONS TO THE CHALLENGES ASSOCIATED WITH CONSERVATION OF EIRs

S/N	SOLUTIONS	AGREE	DISAGREE	TOTAL
1.	Formulating new policies for conservation of EIRs	36(64.3%)	20(35.7%)	56(100%)
2.	Provision of adequate funds	42(75%)	14(25%)	56(100%)
3.	Training of librarians in the use of ICTs	40(71.4%)	16(28.9%)	56(100%)
4.	Constant power supply	38(67.9%)	18(32.1%)	56(100%)
5.	Having current & past sources of information that is compatible	42(75%)	14(25%)	56(100%)
6.	Provision of adequate equipment / materials	46(82.1%)	10(17.9%)	56(100%)

The result in the table 4 above revealed that 46(82.1%) respondents agreed that provision of adequate equipment / materials is the solution to the problems associated with conservation of EIRs while 10(17.9%) disagreed. 42(75%) of the respondents agreed that provision of adequate funds and having current & past sources of information that is compatible are the solutions to the challenges s associated with conservation of EIRs. Constant power supply was selected by 38(67.9%) to be the solution to the challenges associated with conservation of EIRs while 18(32.1%) disagreed. 36(64.3%) respondents agreed that formulating new policies for conservation of EIRs is the solution to the challenges associated with conservation of EIRs while 20(35.7%) disagreed. The findings indicated that all the above identified items are used as the solutions to the challenges associated with conservation of EIRs in ATBU library, Bauchi.

Conclusion

The results of the study revealed that digitization of records and recapturing records, emulation of records, refreshing of records, metadata, and migration of retrospective records are the conservation strategies for EIRs in ATBU Library, Bauchi. The challenges associated with the conservation of EIRs in the Library are as follows: paucity of funds, inadequate equipment/ materials, technological obsolescence, lack of qualified ICT personnel, erratic power supply, and insufficient policy for conservation. The major solutions to these challenges include: provision of adequate equipment/ materials, provision of adequate funds, compatibility of current and past sources of information, constant power supply, and formulating new policies for conservation of EIRs.

Recommendations

Based on the results of the study, the following recommendations are offered.

1. Conservation strategies such as recapturing of records, migration of retrospective records and use of metadata should be given special priority in ATBU Library.
2. Policy on conservation of EIRs should be formulated and implemented.
3. Adequate equipment and materials for conservation of EIRs should be provided.

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