**INFLUENCE OF ELECTRONIC INFORMATION RESOURCES IN FEDERAL UNIVERSITY E-LIBRARIES, NORTH-WESTERN NIGERIA FOR SUSTAINABLE DEVELOPMENT GOAL**

 **BY**

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**Abstract**

***In this 21century the availability of ICT facilities bring about the advent of electronic information resources and ICT staff competencies. This paper investigated the followings: determine the types of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goals; ascertain the adequacy of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goals; determine the ICT competencies of library staff in e-libraries of federal universities, North-Western Nigeria for sustainable development goals; and the findings showed that there was low level of adequacy of electronic information resources in e-libraries of federal universities, North-Western, Nigeria and there was low level of ICT competencies possessed by the staff e-libraries of federal universities studied.***

**Keywords: sustainable development, electronic information resources and ICT staff competencies.**

**INTRODUCTION**

DEVELOPMENT AND SUSTAINABILITY

 “Resources management and sustainable development goal seem to be more inextricably intertwined than ever. References to ideas, principles and policies underpinning sustainability are everywhere, from planning policy guidance to good practice guides to inclusions in development plans. Yet it is also widely acknowledged that there is no single way forward to pursue sustainability. In fact, some even dispute that is desirable at all, others disagree over what the concept means and diverse views also exist into its interpretation and implementation. However, its principles have garnered widespread support even if it means different things to different people at different places; it can provide a touchstone for reflection. By thinking about sustainability we can understand the tensions and dilemmas these issues rise, since having something more than a much desired quality of life it requires us also to consider the interests of strangers in time and space as well as considering ecological limits and all species. Moreover, it requires a holism that is often missing when we concern ourselves solely with the here and now” (Layard etal, 2001). In words of Wall (2002) sustainable development as a concept delivers contradictory meanings. Sustainability gives a sense of durability in perpetuity and at the same time development implies a sense of change from one present situation to an improved or superior stage, underpinning a sense of endless material growth. Some proponents of sustainable development may emphasise a balance between human needs and the sustainability of the resources and environment, while others propose the improvement of life conditions of those peoples that do not know “where their next meal is coming from”(Wall, 2002) using the available resources.

Universities libraries are generally accepted as the hearts of universities as well as centres for information. The universal characterisation is not of pride but of influence of library in the lives of universities communities. University libraries were defined by Okogwu (2018) as libraries established, administered, and funded by universities to meet the information, research, and curriculum needs of its students, faculty, and staff. These libraries are the focal points of interest in all institutions of learning across the globe without which the institutions will not stand. Universities libraries have been widely recognised as indispensable repositories of useful information, and indeed, the ‘heart' of the university system. Arguably, it is a futile effort to establish a university system without a library, given that the mission and vision of education generally will be difficult to achieve as well as having a negative on attainment of sustainable development goal.

Information resources include not only traditional print-on-paper media like books, journals, newspapers, and maps, but also audio-visual materials like cinematograph film records, audiocassettes, video cassettes, projectors, microfiches, Compact Disk Read Only Memory (CD-ROM), computer software, online databases, electronic books and e-journals and other media via the Internet. Information resources therefore, can also be seen as the totality of documents and other non-book materials with which a library satisfies the information needs of its clientele (Popoola and Haliso,2009).

Electronic information resources are invaluable research tools which complement print-based resources in any traditional library; they provide access to information that might be restricted to the user because of geographical location or finances (Sabouri, et al 2010). According to Ngeme (2017) academic information environment has changed both librarians and patrons, since most of the information sources are now available and accessible in electronic format, the electronic information resources have unprecedented contribution on library collections. With electronic information resources, users can have multi-access to the resource at a given time.

 **Statement of research problem**

The emergence of information and communication technology in Africa Continent and Nigeria in particular in this 21 century has brought about different approach to the management of electronic information resources in academic library through ICT competent staff for sustainable development goal. Today library users prefer to use the electronic library with electronic information resources via Internet as primary sources of information and relying on printed resources as the last resort due to the issue of distance and time. As asserted by Ezema (2011) that library users accepted electronic library and information communication technology in their day-by-day activities to meet their information needs. Universities libraries invested huge amount of money every year on the purchase, process and storage of electronic information resources to provide quality library services that will lead to user satisfaction for sustainable development goals but could it be changing in information environment, inadequate application of ICT facilities, ICT staff incompetency in library and inadequate availability of electronic information resources both online and offline that made both library professionals and users confused to locate appropriate information that can contribute to users satisfaction for sustainable development goal. Onwukanjo (2017) also lamented poor and unsatisfactory reference service to student and research scholars of federal universities in North-Western Nigeria. Researcher investigation revealed that till today no study was done to investigate influence of electronic information resources and staff ICT competencies in e-libraries of federal universities, North-Western Nigeria for sustainable development goal. Therefore, this study was carried out at e-libraries of federal universities, North-Western Nigeria, to investigate influence of electronic information resources and staff ICT competencies on user’s satisfaction in e-libraries of federal universities, North-Western, Nigeria for sustainable development which will help to revise collection development policy and design new quality library services in digital era.

**Objectives of the study**

The aim of this study is to examined influence of electronic information resources and staff ICT competencies in e-libraries of federal universities, North-Western Nigeria for sustainable development goal.

The specific objectives of the study are to:

1. determine the types of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goal;
2. ascertain the adequacy of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goal;
3. determine the ICT competencies of library staff in e-libraries of federal universities, North-Western Nigeria for sustainable development goal;

**Research questions**

The following research questions were to guide the study.

1. What are the types of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goal?
2. How adequate are electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goal?
3. What are the staff ICT competencies of library staff in e-libraries of federal universities, North-Western Nigeria for sustainable development goal?

**Research methodology**

The study used descriptive correlation survey research design. The design is considered appropriate since the study seek opinion of the respondents as measure for investigating influence of electronic information resources and staff ICT competencies in e-libraries of federal universities, North-Western Nigeria for sustainable development goal. A descriptive survey research was defined by Ibrahim (2013) as a way of collecting information about the opinion, attitude, feeling, belief, and behavior of people where each member of the population has equal chance of being selected.

**Population of the study**

The population of the study comprised of e-libraries of federal universities, North-Western Nigeria, because they have the common characteristics needed for the research. There are seven (7) e-libraries of federal universities, North-Western Nigeria; (JAMB UME/DE Brochure 2018/19). The subject population for the study consist of 4190 (5) year registered library users, 175 librarians and 239 library officers which made up 414 librarians and library officers in e-libraries of federal universities, North-Western Nigeria.

**Sample and sampling technique**

This study adapted the formula by Glenn (2009) and census.

Sample size, n = N /1 + N (e)2

Where e = Margin of error (0.05) and N is the population (4190) = 365 respondents.

**Research Question 1: What are the types of electronic information resources available in e-libraries of federal universities, North-Western Nigeria for sustainable development goal?**

**Table 1: Observation checklist of available electronic information resources**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Types of Electronic Resources Available** | **A.B.U****ZARIA** | **UDU****SOKOTO** | **BUK****KANO** | **FUD****JIGAWA** | **FUDMA****KASTINA** | **FUB****KEBBI** | **FUG****ZAMFARA** |
| Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| E-Journals | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  |
| E-Book | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  |
| E-newspaper | $$√$$ |  | $$√$$ |  | $$√$$ |  |  | √ | $$√$$ |  |  | √ |  | √ |
| E-institution repository | $$√$$ |  | $$√$$ |  | $$√$$ |  |  | √ | $$√$$ |  | $$√$$ |  |  | √ |
| E-theses & dissertation | $$√$$ |  | √ |  | √ |  |  | $$√$$ | $$√$$ |  |  | $$√$$ |  | $$√$$ |
| OPAC | $$√$$ |  | $$√$$ |  | $$√$$ |  |  | √ | $$√$$ |  |  | √ | $$√$$ |  |
| Internet | $$√$$ |  | $$√$$ |  | $$√$$ |  |  | √ | $$√$$ |  |  | √ | √ |  |
| CD-ROM | $$√$$ |  | √ |  | √ |  |  | $$√$$ | √ |  | √ |  | √ |  |
| Science direct | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  | $$√$$ |  |
| AGORA |  | √ | √ |  |  | √ |  | √ | √ |  |  | √ | √ |  |
| EBSCOHOST |  | √ | √ |  |  | √ |  | √ |  | √ |  | √ |  | √ |
| AOL | √ |  | √ |  |  | √ |  | √ |  | √ |  | √ |  | √ |
| JSTOR | √ |  | √ |  | √ |  |  | √ | √ |  | √ |  | √ |  |
| HINARI | √ |  | √ |  | √ |  |  | √ | √ |  | √ |  |  | √ |
| **Total** | **12** | **2** | **14** |  | **11** | **3** | **3** | **11** | **12** | **2** | **7** | **7** | **8** | **6** |

**Source: Field work 2020**

**Key: ABU=** Ahmadu Bello University Zaria, Kaduna State; **UDUS**= Usman Danfodio Universty Sokoto, Sokoto State; **BUK**=Bayero University Kano, Kano State; **FUD**=Federal University Duste, Jigawa State; **FUDMA**=Federal University Dustima, Kastina State; **FUB**=Federal University Birrin-Kebbi Kebbi State; **FUG**= Federal University Gusau, Zamfara State.

In Table 1, it is noticeable that Usman Danfodio University E-Library Sokoko, Sokoto State has the highest electronic information resources. All the fourteen types of electronic information resources listed in the checklist were found in the library, followed by Ahmadu Bello University Library Zaria, Kaduna State and Federal University E-Library Dustima, Kastina State with twelve (12) types respectively, Bayero University E-Library Kano, Kano State has eleven (11) types of electronic information resources while Federal University E-Library Gusau, Zamfara State and Federal University E-Library Birnin-Kebbi, Kebbi State has 8 and 7 types respectively. It was also established in Table 1, that Federal University E-Library Duste, Jigawa state has the least electronic information resources in her e-library with 3 types only. This is in line with the findings of Bitagi (2013) who stated that the availability of all types and forms of information resources in academic libraries is profoundly basic if these libraries are to meet up with the information needs of users in their respective institutions. Sriram and Rajev (2014) also ascertained that the availability of the skilled staff, knowledge materials and physical environment can guarantee user satisfaction.

**Research Question 2: How adequate are electronic information resources available in** **e-libraries of federal universities, North-Western Nigeria for sustainable development goal?**

**Key: VA=Very Adequate; A=Adequate; I=Inadequate; VI-Very Inadequate**.

**Table 2:** **Adequacy of electronic information resources.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/N** | Electronic information resources Adequacy | VA | A | I | VI | ∑fx | $\overbar{x}$=836 | Decision |
| **1** | Electronic Journals  | 69 | 221 | 2 | 5 | 948 | Fx>$\overbar{x}$ | agreed |
| **2** | Electronic Books  | 73 | 217 | 3 | 5 | 954 | Fx>$\overbar{x}$ | agreed |
| **3** | E-Newspaper  | 75 | 100 | 113 | 6 | 832 | Fx<$\overbar{x}$ | disagreed |
|  **4** | E-Institution repository  | 46 | 97 | 19 | 108 | 621 | Fx<$\overbar{x}$ | disagreed |
| **5** | E-Theses and E-Dissertations  | 67 | 191 | 11 | 23 | 886 | Fx>$\overbar{x}$ | agreed |
| **6** | OPAC  | 92 | 186 | 13 | 5 | 957 | Fx>$\overbar{x}$ | agreed |
| **7** | Internet Services | 47 | 95 | 17 | 129 | 636 | Fx<$\overbar{x}$ | disagreed |
| **8** | CD-ROM  | 61 | 196 | 13 | 23 | 881 | Fx>$\overbar{x}$ | agreed |
| **9** | Sciencedirect | 62 | 108 | 115 | 6 | 808 | Fx<$\overbar{x}$ | disagreed |
| **10** | AGORA | 58 | 110 | 125 | 8 | 820 | Fx<$\overbar{x}$ | disagreed |
| **11** | EBSCOHOST | 52 | 120 | 116 | 5 | 805 | Fx<$\overbar{x}$ | disagreed |
| **12** | AJOL  | 49 | 91 | 39 | 108 | 655 | Fx<$\overbar{x}$ | disagreed |
| **13** | JSTOR | 59 | 116 | 110 | 6 | 810 | Fx<$\overbar{x}$ | disagreed |
| **14** | HINARI | 54 | 101 | 112 | 24 | 767 | Fx<$\overbar{x}$ | disagreed |

**Source: Field work 2020**

Table 2 showed that respondents agreed that five (5) out of the fourteen (14) electronic information resources set as parameter were adequate in their various university e-libraries after obtained a score above median value 836. The result also showed that OPAC have (957), e-book have (954), e-journals have (948), e-theses and dissertation have (886) and CD-ROM have (881). The table 2, further revealed that majority of the respondents agreed that e-newspapers with score of (832), AGORA with score of (820), JSTOR with score of (810) and Science Direct with score of (808) were not adequate. This implies that there was low level of adequacy of electronic information resources available in e-libraries of federal universities studied. The finding was in line Ishola (2014) stated that the information resources and library services available in federal university libraries must be capable of satisfying and supporting research activities among the students and faculty members.

**Research Question 3: What is the library staff ICT competencies in** **e-libraries of federal universities, North-Western Nigeria for sustainable development goal?**

**KEY: VH=Very High, H=High, L=Low, VL=Very Low**

**Table 3: Level of ICT competencies possessed by library staff**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S/N** | STAFF ICT COMPETENCIES | VH | H |  | L | VL | ∑fx | $\overbar{x}$=836 | Decision |
| **1** | My typing competency | 43 | 171 |  | 55 | 29 | 824 | Fx<$\overbar{x}$ | disagreed |
| **2** | My Scan and send document to recipients competency | 42 | 163 |  | 55 | 34 | 801 | Fx<$\overbar{x}$ | disagreed |
| **3** | My Printing documents from the system competency | 52 | 180 |  | 51 | 15 | 865 | Fx>$\overbar{x}$ | agreed |
| **4** | My Send and open received mails competency  | 44 | 69 |  | 139 | 46 | 707 | Fx<$\overbar{x}$ | disagreed |
| **5** | My browse and navigate effectively on the web competency | 40 | 61 |  | 132 | 65 | 672 | Fx<$\overbar{x}$ | disagreed |
| **6** | My download and save web page competency  | 48 | 164 |  | 67 | 18 | 836 | Fx=$\overbar{x}$ | agreed |
| **7** | My ability to use online databases competency  | 50 | 43 |  | 122 | 82 | 655 | Fx<$\overbar{x}$ | disagreed |
| **8** |  My software’s manipulation competency | 39 | 46 |  | 127 | 86 | 634 | Fx<$\overbar{x}$ | disagreed |
| **9** | My searching of documents online  | 46 | 44 |  | 120 | 88 | 644 | Fx<$\overbar{x}$ | disagreed |
| **10** | My discussion on online group chatting competency | 36 | 49 |  | 124 | 89 | 628 | Fx<$\overbar{x}$ | disagreed |
| **11** | My opening online applications competency | 40 | 52 |  | 121 | 84 | 642 | Fx<$\overbar{x}$ | disagreed |
| **12** | My create and modify documents online competency | 41 | 44 |  | 97 | 84 | 574 | Fx<$\overbar{x}$ | disagreed |
| **13** | My trouble- shooting to solve system error competency | 29 | 45 |  | 58 | 166 | 533 | Fx<$\overbar{x}$ | disagreed |

Table 3 showed that majority of the respondents agreed that they possessed two (2) out of thirteen (13) listed ICT competencies set as parameter that can enhance user’s satisfaction for sustainable development goal following the 836 median value. The results indicated that: printing online document have$ 865$, download and save web page competency have $836$. Table 3, also shows that majority of respondents also agreed that they do not possessed high ICT competencies of 11 out of thirteen (13) listed such as my typing competency have 824, my sending email competency have 801, my opening/browsing a web site competency have 707, my browse and navigate competency have 672, my use of online database competency have 655, my online searching competency have 644, This implies that about 95% of ICT competencies needed to enhance user’s satisfaction set as a parameter are not possessed by the staff in e-libraries of federal universities studied following 836 median value. Ikenkwe (2014) who posited that the quality of services rendered to users or readers in any library reflect the quality of the staff. He argued that if a library is managed by well experienced and cultured staff, users will always be encouraged to make use of the library.

**Conclusion and recommendations**

Based on the findings of the study, the research has clearly shown that electronic information resources and staff ICT competencies in e-libraries of federal universities, North-western, Nigeria are low for sustainable development goal. With enormous benefits that are experienced with electronic information resources in this information age, library users at federal universities still experience challenges in efficient and effective utilisation of electronic information resources for research and these challenges may be identify include: inadequate funding, inadequate electronic information resources, inadequate computers connected to Internet, inadequate ICT facilities, high cost of software, inadequate in-depth ICT competent staff. To this end universities libraries should take advantage of every opportunity that comes their way by ensuring that relevant and up to date electronic information resources are available and are utilised.

 **Recommendations**

Based on the findings, the following recommendations were made:

1. There should be provision of sufficient ICT facilities in university libraries by the university management that would be accessible to users in order to contribute to sustainable development goal.
2. Information and Communication Technology (ICT) workshop and seminars should be regularly organised by the university authority for the library staff and registered e-library users as this will help them acquire adequate ICT skills for effective accessibility and use of the available information resources.
3. Federal government should show more commitment to the universities by making grants available for universities, which will allow university libraries to provide relevant and adequate e-resources/facilities, including constant training of staff.

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