INFLUENCE OF ELECTRONIC INFORMATION RESOURCES ON THE ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT GOALS IN FEDERAL UNIVERSITY E-LIBRARIES, NORTH-WESTERN NIGERIA

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Abstract

This paper investigated the followings: influence of electronic information resources on the achievement of sustainable development goals. determine the types of electronic information resources available for the achievement of sustainable development goals in e-libraries of federal universities, North-Western Nigeria; determine users satisfaction with electronic information resources for the achievement of sustainable development goals in e-libraries of federal universities, North-Western Nigeria, survey research method and kenda-tua statistical analysis was used, the findings showed that there was availability of electronic information resources in federal university e-libraries in North-Western Nigeria and there was low level of users satisfaction with electronic information resources in e-libraries of federal universities for sustainable development goal. While the recommendations are There should be provision of sufficient ICT facilities in university libraries by the university management that would be accessible to users for the achievement of sustainable development goal and 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.

Keywords: sustainable, sustainable development, information resources, electronic information resources and users satisfaction.

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 policies guidance to good practice guidance 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, 2011). In words of Wall (2012) 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.

User satisfaction, just like quality services, deal with expectations and draws on confirmation/ non-confirmation process. User satisfaction studies aimed at identifying if some general areas require scrutiny, whereas service quality studies provide data to examine problem areas for improvement. Overall user satisfaction on the other hand is a cumulative judgment based on collective encounters with a particular library staff over a period of time (Kithome, 2010). User satisfaction can also be described as a fulfilment response of library service and an attitude change as a result of the consumption (Kithome, 2010). Gibson further asserted that understanding the factors that influence user satisfaction makes it easier for library staff to design and deliver library service that correspond to users' demands. Kithome, (2010) asserted that user satisfaction can be viewed as an evaluation where expectations and experiences are compared. A service failure results when the service delivery does not manage to meet user expectations.

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 & Haliso,2019).

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 for sustainable development. 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 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 the influence of electronic information resources on the achievement of sustainable development goals.

Objectives of the study

The aim of this study is to examined influence of electronic information resources in e-libraries of federal universities, North-Western Nigeria for achievement of 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. Investigate registered e-library user's satisfaction with electronic information resources in e-libraries of federal universities, North-Western Nigeria.

Research methodology

The study used descriptive 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 for achievement of sustainable development goals in e-libraries of federal universities, North-Western Nigeria. 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 Yes	No	UDU SOKOTO Yes	No	BUK KANO Yes	No	FUD JIGAWA Yes	No	FUDMA KASTINA Yes	No	FUB KEBBI Yes	No	FUG ZAMFARA 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	$\sum fx$	$\bar{x}$=836	Decision
1	Electronic Journals	69	221	2	5	948	Fx>$\bar{x}$	agreed
2	Electronic Books	73	217	3	5	954	Fx>$\bar{x}$	agreed
3	E-Newspaper	75	100	113	6	832	Fx<$\bar{x}$	disagreed
4	E-Institution repository	46	97	19	108	621	Fx<$\bar{x}$	disagreed
5	E-Theses and E-Dissertations	67	191	11	23	886	Fx>$\bar{x}$	agreed
6	OPAC	92	186	13	5	957	Fx>$\bar{x}$	agreed
7	Internet Services	47	95	17	129	636	Fx<$\bar{x}$	disagreed
8	CD-ROM	61	196	13	23	881	Fx>$\bar{x}$	agreed
9	Sciencedirect	62	108	115	6	808	Fx<$\bar{x}$	disagreed
10	AGORA	58	110	125	8	820	Fx<$\bar{x}$	disagreed

S/N								
11	EBSCOHOST	52	120	116	5	805	Fx<$\bar{x}$	disagreed
12	AJOL	49	91	39	108	655	Fx<$\bar{x}$	disagreed
13	JSTOR	59	116	110	6	810	Fx<$\bar{x}$	disagreed
14	HINARI	54	101	112	24	767	Fx<$\bar{x}$	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.

Table 3: Registered E-Library Users Satisfaction with E-Libraries in Federal Universities Studied
Key: HS=Highly Satisfied, S=Satisfied, D=Dissatisfied, HD=Highly Dissatisfied

S/N	Electronic information resources	HS	S	D	HD	∑fx	$\bar{x}$=487	Decision
1	Am satisfied with e-journals in my university e-library	36	181	56	11	810	Fx>$\bar{x}$	Agreed
2	Am satisfied with e-books in my university e-library	33	180	58	13	801	Fx>$\bar{x}$	Agreed
3	Am satisfied with e-database `in my university e-library	28	55	59	90	485	Fx>$\bar{x}$	Disagreed
4	Am satisfied with frequent subscription of e-resources in my university e-library	24	54	50	90	484	Fx>$\bar{x}$	Disagreed
5	Am satisfied with Internet network in my university e-library	47	146	45	20	736	Fx>$\bar{x}$	Agreed
6	Am satisfied with easy access to ICT facilities in my university e-library	121	80	47	9	827	Fx>$\bar{x}$	Agreed
7	Am satisfied with available ICT facilities in my university e-library	36	67	32	11	401	Fx>$\bar{x}$	Disagreed
8	Am satisfied with the way e-library staff guided me in my university e-library	29	123	91	21	688	Fx>$\bar{x}$	Agreed

9	Am satisfied with staff ICT competencies in my university e-library	18	13	87	24	405	Fx>$\bar{x}$	Disagreed
10	Am satisfied with constant availability of electricity power in my university e-library	18	22	84	85	428	Fx>$\bar{x}$	Disagreed
11	Am satisfied with provision of standby generator in my university e-library	20	51	90	58	485	Fx>$\bar{x}$	Disagreed
12	Am satisfied with lighting system in my university e-library	30	21	22	94	431	Fx>$\bar{x}$	Disagreed
13	Am satisfied with availability of fund in my university e-library	25	56	57	89	483	Fx>$\bar{x}$	Disagreed
14	Am satisfied with available computers due to availability of fund in my university e-library	30	25	68	53	484	Fx>$\bar{x}$	Disagreed

Sources: Field survey, 2020

Table 3 revealed the opinion of the respondents' based on registered e-library users' satisfaction with federal university e-libraries in North-Western Nigeria. From the result, registered e-library users' were satisfied with five (5) out of fourteen (14) items set as parameter, using the median score of greater than 487. The following scores were obtained: Easy access to ICT facilities (827), E-JOURNAL (810), E-BOOK (801), Internet network (736) and Online guide by e-library staff (688). Using a 4-point likert scale, the table explained the median score obtained. Table 3 also showed that registered e-library users' are not satisfied with the remaining nine (9) items out of fourteen (14) listed, given that a median score less than 487 was obtained. However, the table showed that easy access to ICT facilities (medain = 827) was the most satisfactory followed by E-JOURNAL which has (mean = 810). This implies that registered e-library users' are not satisfied with all the items set as parameter for sustainable development goal.

Summary of findings

1. There was availability of electronic information resources for achievement of sustainable development goals in federal university e-libraries in North-Western Nigeria.

2. There was low level of adequacy of electronic information resources for achievement of sustainable development goal in federal university e-libraries in North-Western Nigeria.

3. There was low user's satisfaction with electronic information resources for achievement of sustainable development goals in federal university e-libraries in North-Western Nigeria.

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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