



Awareness and Utilization of Scholarly e-Resources by Student-librarians: Implication for the Realization of the UN Sustainable Development Goal

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Abstract: The United Nations Sustainable Development Goals (SDGs) can be realized through teaching, research and innovation and use of e-resources especially the scholarly type offers quality academic resources which contribute greatly to teaching, research and innovation. This study therefore, investigated student-librarians' level of awareness of the existence of electronic resources as well as the extent at which they utilize these resources and the implication for the realization of the UN set sustainable development goals. The study employed a descriptive survey design with a sampled population of 100 student-librarians derived from four universities in Southeast, Nigeria offering Library and Information Science while it was guided by four research questions formulated in line with the research objectives. The main instrument used to gather data for this study is a 4-point Likert scale structured questionnaire that had items on student-librarians' level of awareness and extent of utilization of e-resources as well as challenges in the utilization of e-resources by the students. The data collected were analyzed using frequency and percentages. The outcome of this study brings to fore the importance of the awareness of e-resources to enhancing research and innovation among student-librarians. The result further revealed that despite efforts by academic institutions to make scholarly e-resources available, they seem to be under-utilized by student-librarians and by extension students. The study among others recommended more practical training for student-librarians as well as librarians so as to familiarize them with several scholarly e-resources and their functionalities as it will assist student-librarians, stakeholders and policy makers comprehend how to harness human capital by ensuring quality education through the optimal utilization of scholarly e-resources for teaching, research and innovation as well as need for academic libraries to carry out from time-to-time, publicity of their services that they know are beneficial to the student as well as current awareness services with a view to alerting the students of the availability of new e-resources.

Keywords: Student-librarians, Awareness, Utilization, Scholarly E-resources, Research, Teaching, Innovation, Sustainable Development Goal (SDGs)

1. Introduction

The United Nations Sustainable Development Goals (SDGs) advocate that all learners will have the knowledge and skills needed to promote sustainable development [11]. The use of e-resources especially the scholarly type offers quality academic resources which contribute greatly to teaching, research and innovation which will lead to achieving sustainable development. Electronic resources (or e-resources) according to Heng are materials in digital format

accessible electronically [1]. As expressed by Renwick, the increase in the use of information and communication technology and online information facilitated the birth of e-resources and this has increased tremendously in popularity and utilization [2]. The utilization of e-resources presently is playing prominent role in academic enrichment in a digital era, as modern libraries are now blending both the electronic and traditional sources of information and some cases have gone virtual, in order to serve their clientele better in a dynamic world. The digital resources available in a library

play prominent role in facilitating access to the required information to the user in an expediency manner. Further, one needs not go to the library to make use of print formats as the digital resources can be made use of by any user through on-line access via networks or authentication methods at any time comfortably. Presently, web-based electronic resources have become most popular tools in academic research [2].

In a world ruled by information and communication technologies (ICTs), information which is so to speak one of the most expensive factors of production and national development has increased over the last couple of years. As reported by Layman and Varian, books (print) increased by 83% in the United States of America (USA) from 1999 to 2002 while online scholarly journals virtually doubled from 1991 to 2001 [3]. Recent studies for instance, Levine-Clark & Wang and Bai affirmed to this [4, 5] while Nicholas, et al were particularistic as they noted that e-book penetration is very strong [6]. All the same, being faced with a lot of competition from other major sources of information like, the internet combined with demands from patrons, the average library budget spent on electronic materials or resources has increased greatly almost four-fold from an estimated 4% between 1992 and 1993 to 13% in 1999 to 2000 (Association of Research Librarians) [7].

Education which is the process of facilitating learning or the acquisition of knowledge, skills, values, morals, beliefs, habits, and personal development (Wikipedia) [8] is connected with sustainable development (Zenela) [9]. The General Assembly of the United Nations in response to global challenge and to foster the course of humanity came together as a body on September 25, 2015 and adopted a developmental framework known as 'Sustainable Development Goals (SDGs) or 2030 agenda. The agenda is made up of 17 goals and 169 targets. This indeed is a transition from the Millennium Development Goals (MDGs) with a view to stimulating growth and development among member nations within a 15 year period [11].

AS revealed by Osborn, Cutter and Ullah, the Sustainable Development Goals is a global vision of progress towards ensuring a safe, just and sustainable space for all human beings to thrive on the planet [10]. The view is that, SDGs is a unanimously accepted set of universal goals by every member of the UN on the ground that they will bring about global progress and development within the given time. As asserted by the United Nation (11), all stakeholders including governments, agencies, institutions, civil societies and private sectors have pivotal roles to play for the realization of these goals.

The truth is that academic libraries all over the world are spending a lot providing scholarly e-resources and ensuring their accessibility to support teaching and research. According to Vakkari, government and academic institutions invest large sums of money to furnish students and researchers with information resources required for their work with the hope that enhanced access to scholarly e-resources will enhance learning and boost research output [12]. There is not gain stating the fact that a wide range of databases such as journal databases, e-books, reference

databases, among others are increasingly accessible to the use of various electronic devices such as mobile phones, tablets and laptops. Electronic resources therefore are one of the emerging environment in libraries and Information communication in the competitive service. E-resources usually consist of e-books, e-Journals, articles, newspaper, thesis, dissertation, databases and CD-ROMs, which are likely to be the alternative to the print media. Emerald, Ebsco, Scopus are some of the examples of online databases.

As posited by Garcia-Febo, et al, academic and research libraries in all part of the world are essential in providing information access to academic communities [13]. The availability of these electronic resources and their easy accessibility no doubt are suppose to be encouragement to students to utilize the scholarly e-resources available as to keeping abreast with current information and research which is capable of inspiring new ideas and enhancing their quality of work. The familiarity and use of electronic information resources in the libraries by students for an enhanced learning, research and innovation rapid development is very imperative thus the need for this study aimed at establishing the level of awareness and extent of utilization of e-resources by student-librarians.

1.1. Statement of the Problem

In spite of government and academic institutions' effort at making scholarly e-resources available through subscriptions and direct purchases, these resources seem to be under-utilized by students as they prefer to utilize internet search engine for their scholarly materials [Dlamini, [14], Saunders, [15]; Emmanuel & Jegede, [16]. However, the birth of ICT has made it imperative for academic librarians in most part of the globe to invest in different types of e-resources (considering the fact that information seems to be growing in geometrical proportion and information as contained in print seems not to be enough as to satisfying the information needs of students) to meet the needs of students and other patrons. It is therefore an aberration noting that despite these huge spending by academic institutions subscribing for theses scholarly e-resources, students still do not optimally utilize these resources for research and learning.

Stating the obvious, several researches have been conducted on the importance of e-resources and its use as a preferred means of retrieving information by students and academics but most of them have been either focused on postgraduate students, academics or both and only few have focused on student-librarians. Perhaps, it may be on the assumption that student-librarians are supposed to know everything about information through their training in academic institutions and by so being knowledgeable and comfortable with e-resources usage.

It is in search for an answer to the 'why; and to establishing if truly student-librarians are knowledgeable and comfortable with the utilization of e-resources that this study becomes necessary as to establishing their level of awareness as well as the extent of their utilization of e-resources in learning and research.

1.2. Objectives of the Study

The main objective of this study is to ascertain student-librarians' level of awareness and extent of utilization of scholarly e-resources. Other objectives are:

- a. To establish student-librarians level of awareness of the availability of scholarly e-resources.
- b. To know the extent to which student-librarians use the scholarly e-resources.
- c. To ascertain the extent student-librarians utilize the social media.
- d. To identify challenges faced by student-librarians in the utilization of e-resources.

1.3. Research Questions

This study was guided by the following research question:

- a. What is the student-librarians level of awareness of the existence of scholarly e-resources?
- b. To what extent do student-librarians utilize the scholarly e-resources?
- c. What is the extent at which student-librarians use social media?
- d. What are the challenges faced by student-librarians in the utilization of e-resources?

2. Literature Review

Theoretical and Empirical Framework

There have been studies on the use of e-resources in higher institutions globally. Recent researches point to the fact that ICT has a lot of effects on the way students seek information with tremendous increase in the use of the internet and electronic resources [Mogase & Kalama, [17]. Some of these studies have developed models and theoretical frameworks while others examined factors that affect students' use of e-resources. Furthermore, recent studies in several disciplines such as medicine [Ahmed & Reyee, [18]; Anandhalli & Shakuntal, [19], business [Sharma & Sharma, [20], Law (Amusa & Atinmo, [21], library and information science [Krakowska, [22]; Akpojotor, [23] among others suggest that young people of today think, learn, socialize, shape identity and seek information differently in this digital age, the era of web 2.0 and participatory culture [Dresang & Koh, [24]. Rogers studied faculty and graduate students' use of electronic journals, printed journals and electronic databases at Ohio State University (OSU) during the years 1998-2000. The findings of the surveys showed that since 1998 there has been a significant progress in the acceptance and usage of electronic journals at OSU. In 1998, only 200 e-journals were available, while in 2000, the number of available e-journals increased to more than 3,000. In 1998, 19% of the respondents used e-journals at least once a week, while in 2000, the percentage increased to 36%. At the same time, the least weekly usage of printed journals decreased from 45% in 1998 to 34% in 2000 [25]. Weingart and Anderson measured the Awareness of the faculty and administrators toward electronic resources at the University of Utah. The findings

showed greater need for publicity and training [26].

In a research conducted by Shakeel and Vinayagamorthy on students of Business school of Universities and colleges located in Academic City in Dubai, it was discovered that internet and e-resources have become an easy source of accessing information. They further revealed that as technology has gained an ever foothold in the domain of business education, the digital resources appeared to have a significant impact on the information seeking behaviour of the majority of the library users [27]. As noted by Emmanuel & Jegede and Dlamini, studies have shown that the level of awareness is low and students have preference for free internet search engine for information retrieval as in their research carried out among MBA students in a Nigerian university discovered that internet is the most consulted source of information as the MBA students prefer to search for information on the internet before considering any other source of information putting the level of significance of internet source to the students at 99.9%. [16, 14]

Ge conducted a research in the Tennessee State University in the US where he explored the degree to which specific e-resources are significant to the social sciences and humanities researchers and he discovered that e-information resources played an essential role in the researchers' information seeking pursuit. Among the 8 types of e-information technologies rated, the web databases and e-journals ranked first, second and third while online catalog and e-mails took the fourth and fifth positions [28].

According to Dlamini, the case of independence on the internet should be due to the fact that it is easy to log on to search engines an input key terms in search of any information [14]. In a study conducted in South Africa on information behavior of Generation Y students in the University of the Western Cape Town by Gardiner and Eng, it was revealed that the students' main source of information is the internet as they believe that it satisfies both academic and non-academic information needs [29]. Other related results are that of Saunderson, [15] and Naude [30] while that of Komolafe-Opadeji discovered that students have regular access to the internet and also preferred using resources from Wikipedia, Google and some selected online databases such as EBSCO Host, JSTOR, Questia, HINARI and High Beam [31].

In a study of library and information students (LIS) in Croatia Tanackovic, Lacovic and Stanarevic found out that the most prominent method adopted by LIS students for finding information sources was searching the internet for information followed by the use of library catalog and databases [32]. Togia and Torobili in their research on information seeking behavior of LIS students in Greece discovered the heavy use of the internet by majority of the students which confirms the well documented growing dependence of students on the public search engines or internet sites which are usually, the Google [33].

The promotion of sustainable development in this century demands access to quality information and this role is mainly played by libraries globally. As explained by Igbini (34), libraries and other information centres play crucial role in

achieving SDGs [34]. Members of Communities with access to timely and relevant information are better placed to eradicate inequality and poverty, provide quality education, improves agriculture and support people's health, culture, research and innovation [IFLA, [35]]. It is glaring that access to information is key aspect of SDGs and information centres have the responsibilities of providing relevant and up-to-date information to promote research. The target 16.10 of the SDG Agenda states inter-alia that a well informed society is capable of contributing significantly to the development of the nation as the availability of information resources will promote peaceful and inclusive societies for sustainable development, providing access to justice for all and build effective, accountable and inclusive institutions at all levels [Bradley, [36]]. One key ways libraries can contribute to SDGs is through access to research, information and data he added. According to Garcio-Febo, et al, academic and research libraries in all part of the world are essential in providing information access to academic communities and promoting SDGs to drive development alongside other libraries [13]. One of the ways this role is being played is by providing access to scholarly e-resources to improve research and innovation.

As posited by International Federation of Library Associations, libraries are key institutions for achieving the SDGs that is why they were actively involved with the creation of the UN 2030 agenda, advocating for the inclusion of access to information, safeguarding of cultural heritage, universal literacy and access to information and communication technologies (ICTs) in the framework [37]. This no doubt places librarians and libraries in strategic position in the realization of this agenda.

On the challenges facing utilization of e-resources, most studies in developing counties Talla et-al,; Okello-Obura, and Adetunla, recorded low usage of scholarly e-resources and attributed it to factors like inadequate networked computer among other factors [38-40]. Igun identified the challenges faced by the libraries and information centre in Africa in the

establishment of electronic publishing. Apart from the information source that can be obtained through the internet and downloaded online, the actual acquisition of electronic books is still not possible [41]. Dadzie attributed the low usage of the scholarly e-resources to lack of awareness and information about the existence of those resources [42]. Makgahela and Bopape in a study on the use of e-information resources for academic research by postgraduate students in Nigeria found out that despite the awareness of e-resources by students, they are rarely used due to lack of information searching skills, complexity and lack of basic understanding of e-resources and academic databases [43]. Akporhonor and Akpojotor also explored the challenges confronting postgraduate library and information students in the use of e-resources in Southern-Nigeria and found that some of the challenges faced by the students are poor internet connectivity, epileptic power supply; information overload, high cost of access, download delay and difficulties in accessing some websites [44].

3. Methodology

The study employed a descriptive survey design with a sampled population of 100 student-librarians (40 male and 60 female) derived from three hundred levels students of four universities in Southeast, Nigeria; Abia State University, Uturu (ABSU), Imo State University, Owerri (IMSU), Nnamdi Azikiwe University, Awka (NAU) and University of Nigeria, Nsukka (UNN) with each university producing 25 respondents offering Library and Information Science while the study was guided by four research questions formulated in line with the research objectives. The main instrument used to gather data for this study is a 4-point Likert scale structured questionnaire that had items on student-librarians' level of awareness and extent of utilization of e-resources as well as challenges in the utilization of e-resources by the students as well as interview. The data collected were analyzed using frequency and percentages.

Table 1. Level of awareness of the existence of e-resources by student-librarians.

S/No	Item	HA		A		SA		UA	
		F	%	F	%	F	%	F	%
1	Subscribed Databases	15		10		5	5	70	70
2	DVD/CD-rom	30	30	28	28	20	20	22	22
3	e-books	100	100	-	-	-	-	-	-
4	e-journals	100	100	-	-	-	-	-	-
5	Internet free search engines (Google etc)	100	100	-	-	-	-	-	-
6	e-newspapers	80	80	20	20	-	-	-	-
7	e-articles	100	100	-	-	-	-	-	-
8	e-theses/e-dissertations	18	18	11	11	8	8	63	63

Key: HA=Highly aware; A=Aware; SHA=Somehow aware; UA=Unaware.

4. Presentation of Data

Table 1 above displays data collected in respect of the student-librarians level of awareness of the existence of e-resources. The data revealed that the 100 respondents

representing 100% are highly aware of the existence of the following e-resources; e-books; e-journals, internet free search engines (Google etc) and e-articles while only 15 or 15% are highly aware of the existence of subscribed databases in their schools with 70% or 70 respondents indicating that they were unaware of the existence of such e-resources in their schools.

Only paltry 30% of the respondents are highly aware of the existence of scholarly DVD/CD-rom whereas, 28% were aware, and 20% and 22% were somehow aware and unaware

respectively. On the existence of e-theses/e-dissertations, all the 100 respondents representing 100% indicated that they were ignorant of their existence.

Table 2. Extent of utilization of e-resources by student-librarians.

S/No	Items	VHU		HU		FU		NU	
		F	%	F	%	F	%	F	%
1	Subscribed Databases	12	12	6	6	20	20	62	62
2	DVD/CD-rom	10	10	17	17	11	11	72	72
3	e-books	13	13	34	34	27	27	26	26
4	e-journals	9	9	45	45	24	24	22	22
5	Internet free search engines (Google etc)	100	100	-	-	-	-	-	-
6	e-newspapers	10	10	-	-	-	-	90	90
7	e-articles	37	37	13	-	20	-	30	30
8	e-theses/e-dissertations	-	-	-	-	-	-	100	100

Key: VHU=Very highly utilized; HU=Highly utilized; FU=Fairly utilized; NU=Not utilized.

The data in table 2 on the extent of utilization of e-resources by student-librarians show that the 100 respondents representing 100% use internet free search engines when seeking for information in a very high extent. Other e-resources in use in VHE and HE include; e-journal 54%, e-articles 50%, e-books 47% and subscribed school databases 18% while the 100 respondents or 100% indicated Very low extent in the use of e-theses/e-dissertations also, e-newspapers had a very low extent of utilization as the indication stands at 90%. The data further revealed that 18 of the 100 respondents or 18% fully utilize their school subscribed databases while a total of 82% or 82 respondents indicated that the use is at LE or VLE an indication of underutilization of the databases as e-resources.

On the use of social media by student-librarians, the data in table 3 show that the use of whatsapp and facebook were in 100% as the 100 respondents indicated that the usage were at a very high extent while 61 respondents indicated that the utilization of Instagram was to a very high extent. On the other hand, student-librarians based on the data do not utilize Twitter as all the respondents or 100% indicated their non-usage of it. The data collected was further affirmed by some of the students in an interview in which they affirmed their total usage of facebook and whatsapp confirming that they use whatsapp attachment to share useful academic information as a group the data also show that only 5 of the respondents or 5% utilizes LinkedIn while the remaining 95% does not.

Table 3. Extent of utilization of social media by student-librarians.

S/No	Item	VHU		HU		FU		NU	
		F	%	F	%	F	%	F	%
1	Whatsapp	100	100	-	-	-	-	-	-
2	Facebook	100	100	-	-	-	-	-	-
3	Instagram	61	61	-	-	-	-	39	19
4	Twitter	-	-	-	-	-	-	100	100
5	LinkedIn	5	5	-	-	-	-	95	95

Key: VHU=Very highly utilized; HU=Highly utilized; FU=Fairly utilized; NU=Not utilized.

Tables 4. Challenges of utilizing scholarly e-resources by student-librarians.

S/No	Item	SA		A		DA		SDA	
		F	%	F	%	F	%	F	%
1	Lack of awareness creation	68	68	11	11	-	-	21	21
2	Slow speed/ connectivity/PCs & Others	77	77	10	10	10	10	3	3
3	Epileptic power supply	100	100	-	-	-	-	-	-
4	It takes too long to view/download web pages	87	87	13	13	-	-	-	-
5	Overload of information on the internet	45	45	20	30	16	16	19	19
6	Lack of knowledge / training	21	21	47	47	22	22	10	10
7	High cost of access	55	55	23	23	10	10	12	12
8	Lack information searching skills	43	43	20	20	21	21	16	16
9	Lack of basic understanding of e-resources and academic databases.	84	84	7	7	4	4	5	5

Key: SA=Strongly Agreed; A=Agreed; DA=Disagreed; SDA=Strongly Disagreed.

As shown in table 4, over 60% of the respondents agreed to all the items listed as the challenges of student-librarians in the utilization of scholarly e-resources. The data indicate that the challenges facing the student-librarians in the utilization

of scholarly e-resources include: lack of awareness creation 79%; slow speed/ connectivity/PCs 87%; epileptic power supply 100%.

It takes too long to view/download web pages 100%;

overload of information on the internet 65%, lack of knowledge/training 68%, high cost of access 78%, lack of information searching skills 63%, lack of basic understanding of e-resources and academic databases, 91% and staff attitude 79%.

5. Discussion of Findings

The outcome of this study as shown in table 1, reveals that student-librarians were highly aware of the existence of e-resources; especially e-books; e-journals, internet free search engines (Google etc) and e-articles however only 15% were highly aware of the existence of subscribed databases in their schools. The outcome of this study in respect of subscribed databases is in conformity with that of Okello-Obura and Magara who in their study on LIS undergraduates discovered that apart from the fact that very few students access the library's e-resources, majority of the students surveyed were unaware of e-resources such as Emerald and EBSCO host which are considered relevant to LIS students [39] but contrary to the findings of Emmanuel & Jegede and Dlamini, which posit that the level of awareness of e-resources generally among students is low [16, 14].

On the extent of utilization of e-resources by student-librarians (see table 2), it was discovered that the 100 respondents representing 100% use internet free search engines when seeking for information in a very high extent this is in line with Komolafe-Opadeji discovering that students have regular access to the internet and also preferred using resources from Wikipedia, Google [31] same as Togia and Torobili who in their research on information seeking behavior of LIS students in Greece discovered the heavy use of the internet by majority of the students which confirms the well documented growing dependence of students on the public search engines or internet sites which are usually, the Google [33]. The data further revealed that 18 of the 100 respondents or 18% fully utilize their school subscribed databases. An indication of underutilization of university libraries subscribed databases. This outcome is in conformity with the assertion that in spite of government and academic institutions' effort at making scholarly e-resources available through subscriptions and direct purchases, these resources seem to be under-utilized by students as they prefer to utilize internet search engine for their scholarly materials [Dlamini, [14], Saunders, [15]; Emmanuel & Jegede, [16]].

It was further discovered that student-librarians use social media to a very high extent more so, whatsapp and facebook as this was confirmed by some the student-librarians when interviewed. They explained whatsapp is a better, easy and fast e-resource to share documents and discuss academic matters as a group and personal chatting. This discovering affirms to the assertion of Krakowska and Akpojotor, that young people of today think, learn, socialize, shape identity and seek information differently in this digital age, the era of web 2.0 and participatory culture [22, 23].

The study also discovered some challenges facing student-librarians' utilization of scholarly e-resources to include; lack

of awareness creation; slow speed/ connectivity and inadequate PCs; Epileptic power supply; It takes too long to view/download web pages; overload of information on the internet; Lack of knowledge / training; High cost of access; students lack information searching skills, Lack of basic understanding of e-resources and academic databases and staff attitude [23]. This finding agrees with Makgahiela and Bopape who in a study on the use e-information resources for academic research by postgraduate students in Nigeria found out that despite the awareness of e-resources by students, they are rarely used due to lack of information searching skills, complexity and lack of basic understanding of e-resources and academic databases [43] and Akporhonor & Akpojotor who explored the challenges confronting postgraduate library and information students in the use of e-resources in Southern-Nigeria and found that some of the challenges faced by the students are poor internet connectivity, epileptic power supply; information overload, high cost of access, download delay and difficulties in accessing some websites [44].

The implication of the awareness and utilization of scholarly e-resources by student-librarians is on the fact that library and information services are employed in the attainment of United Nations Sustainable Development Goals (SDGs) through the provision of quality materials in order to support scholarship which will eventually lead to research and innovation for the attainment of the SDGs. Imperatively, quality education which is one of the 17 SDGs set by the UN can be achieved through research and innovation. The optimal utilization of scholarly e-resources by student-librarians therefore would be a major contributing factor to the realization of some of the United Nations SDGs. This assertion is in agreement with that of Igbinovia (34) who noted that libraries and other information centres play crucial role in achieving SDGs and the declaration that members of communities with access to timely and relevant information are better placed to eradicate inequality and poverty, provide quality education, improves agriculture and support people's health, culture, research and innovation [IFLA, [35]]. It is glaring that access to information is key aspect of SDGs and academic libraries have the responsibilities of providing relevant and up-to-date information to promote research by students which will eventually bring about innovations and development and anything contrary portends danger to the realization of the UN SDGs.

6. Conclusion and Recommendations

Despite the notable accrued benefits which include providing relevant and up-to-date information that will enhance research and innovation in line with UN SDGs and huge amount of money expended in the acquisition and subscription of these scholarly e-resources, the outcome of this study has shown that scholarly e-resources are underutilized by student librarians. The assertion that student-librarians are trained to be future information managers does not all that make them fully aware or skilled

in the utilization of scholarly e-resources. Some of the challenges as identified are related to the perception that these scholarly e-resources are complex to utilize which negates the findings of some studies. The obvious is that the availability of scholarly e-resources with the assumption of adequate internet connectivity does not guarantee the optimal utilization of these scholarly e-resources by student-librarians as a result of the already built mindset and lack of skills to retrieve needed information from the subscribed databases.

The dependence and existence of information on search engines like google.com and related free information retrieval search engines have adversely affected the utilization of e-resources available on subscribed databases for student-librarians. It is true that the use of search engines usually requires less effort to retrieve information but the implication is that it increases the rate of plagiarism among students [Lanzilotti, et al, [45]] and this may lead to low quality research work by student-librarians. It is in view of the above factors and more that the under listed recommendations are proffered.

- a) Librarians especially those in academic libraries and library schools should as a matter of necessity and need effectively address the information needs of student-librarians as future information managers as to understanding the type of information sought, the valued information and factors that influence how they search and obtain information they use. In other words, the academic libraries have to evolve more scientific methods to developing a standard collection of e-resources along with print documents assessing the requirements of the student-librarians.
- b) Student librarians should be exposed to more practical training on the utilization of e-resources so as to get themselves acquainted with the modus operandi of these databases. The era of teaching student-librarians theoretically without application should be frowned at and discontinued in all library schools. In other words, library schools regulating bodies should only grant accreditations to only schools that have the practical facilities to train student-librarians.
- c) Head of library schools and academic libraries management should make the orientation of newly admitted student-librarians mandatory during which, they will be exposed and acquainted with all the available subscribed databases and essence of their utilization by student-librarians throughout their duration in the school.
- d) System librarians manning the academic libraries databases should be sponsored for regular capacity training in the form of workshops, conferences, seminar and other professional courses that are commensurate with latest trends in databases management as to be skilled enough to handle students' enquiries. This is imperative because in Nigeria for instance, many system librarians are by mere paper qualifications and not by practice as many of them were taught theoretically with little or no knowledge of the practical aspect of databases management and this no doubt is

affecting the utilization of the databases of libraries with these crops of system librarians.

- e) On the attitude of staff, it has remained a nightmare to many organisations in Nigeria to be precise and the academic library has had her fair share. To this end, the staff should be meant to understand that they are social workers and their attitude to users can make or mar the entire library. The imperative is that staff working in the library should be trained on public relations and basic principles of human management while management should encourage students to report erring staff by providing complaint boxes that will be kept at strategic places within the library.
- f) In the words of Dadzie, the university management should acquire for student-librarians and by extension all students who could not afford one, laptops and make a flexible payment plan for them [42]. With this and good connectivity, most of them could access the databases from any part of the university thereby creating space, saving the time of the students and avoiding clustering of students in the e-library.
- g) The problem of epileptic power supply should be tackled headlong as the era of depending on public hydropower source of electricity supply should not be heard of in our institutions of her learning with the availability of solar-powered electricity. So, our universities should embrace it and have them installed on campuses for an uninterrupted power supply.
- h) There is also the need for academic libraries to carry out from time-to-time, publicity of their services that they know are beneficial to the student as well as current awareness services with a view to alerting the students of the availability of new e-resources as to enhancing teaching, research and innovation.

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