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Digital Literacy Skills of Undergraduate Students of Library and Information Science on the Utilization of Electronic Information Resources in Two Federal Universities in Nigeria

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1.0 Introduction

1.1 Background to the Study

In a fast changing world shaped by the advancement of information and communication technology (ICT), it has become absolutely imperative to learn, acquire, and utilize new skills to effectively harness available opportunities and contribute meaningfully in any chosen field of endeavour. This is an obvious reality for the 21st century undergraduate students of any academic discipline, in general and Library and Information Science, in particular. This fact builds on the premise that effective education is no longer measured by the literacy of reading and writing, but indisputably a blend of other skills including; information literacy skills, digital literacy skills and many other competencies. To say the least, digital literacy skills have become sine-qua-non and plays fundamental roles for university students in this digital age (Kaeophanuek, Na-Songkhla, & Nilsook, 2018; Sharpe, 2010).

According to Bawden (2008) digital literacy skill is defined as the embodiments or conglomeration of attitudes, understanding and skills to handle or communicate information and knowledge effectively, using some digital media and formats. Corroborating, Bell and Shank (2008) posit that digital literacy is the ability to use digital technology, communication tools or networks to locate, evaluate, use and create information. Digital literacy skills involve the whole gamut of life skills necessary for full, effective and productive participation in the media-saturated and information-rich society. Digital literacy skills entail the capabilities and competencies required by an individual to fit for living, learning and working in a digital society; the ability to locate, organize, understand, evaluate, analyze and present information digitally, while appreciating the essence of new technologies and managing digital identities (BCS: The Chartered Institute for Information Technology, 2013).

Digital literacy skill is conceived as techno-ability or techno-competence. The Joint Information Systems Committee (JISC) of United Kingdom (2014) posits that digital literacy skills extend beyond the development of functional information technology skills and defines a more evolving and richer set of digital behaviours, practices and identities; which encompasses critical thinking, reflection and lifelong learning, communication, collaboration and social engagement. It is an individual's realization, attitude and capacity of using digital tools for accessing, managing, integrating, analyzing and synthesizing digital information sources as well as generating new

knowledge and producing new forms of digital media in order to communicate, create and reflect the concepts within other daily life situations. This connotes that LIS students in Nigeria can derive great impacts of digital literacy in their academic endeavours. They can equally compete favourably within the global market and stand out professionally within the librarianship profession. In their academic responsibilities, digital literacy skills can anable LIS students to independently utilize digital technology tools in understanding, locating, organizing, analyzing, creating and of course, communicating information that are useful to them and others.

It can be further deduced that digital literacy skills are prerequisite for undergraduate students of Library and Information Science to function effectively in the digitized and globalized learning environment. Digital literacy skills are very essential in accessing and utilizing electronic information resources. This is because, students with digital literacy skills will able to use the ever-changing technologies as the information management tools of the digital age (Jun & Pow, 2011), and specifically, in pursuing academic success by effectively searching, accessing and retrieving information for assignments, research report writings and other daily academic routines. Competence in digital literacy would also be useful to students in information management (information generation, storage, retrieval, utilization, dissemination/communication and evaluation), and in doing this lawfully and ethically.

However, electronic information resources are those resources that are available online and accessible via the use of technological devices such as computer networks, internet, desktop computers, laptop computers, tablets, smarts phones, CD-ROMs readers, memory card readers, projectors, world wide web (www), and digital libraries (Obaseki, 2014). Similarly, Odunewu and Aluko-Arowolo (2018) posit that electronic information resources are computer-based resources such as e-books, e-journals, e-conference proceedings, e-dictionaries, e-encyclopaedias, e-newspapers, e-magazines, Online Public Access Catalogues (OPACs), Web public access catalogues (WebPAC), e-manuscripts, e-maps, e-thesis, e-dissertations, e-research reports, e-reference services, among others. In fact, utilization electronic information resources require some fundamental digital literacy skills such search, access and retrieval skills, downloading skills, documents conversion skills, etc. This implies digital literary skills enable undergraduate students of Library and Information Science as future professionals and educators to apply digital technologies and tools like the internet, computer systems and accessories, mobile phones, etc., in problem solving, communication with others (e.g. lecturers, scholars and

colleagues), receiving and sharing knowledge and information, as well as in being aware of their responsibilities and rights in the digital academic community. Digital literacy skills facilitate LIS students' ability to access the vast electronic information resources and services for their academic tasks, as well as enhance their practical capability in using digital tools for information management. This competence can assist them in generating and sharing information through various media, while efficiently presenting or communicating with colleagues and others using technological processes and tools (Hague, 2010; Gee, 2012). As a matter of fact, digital literacy skills, which transcends just the ability to read, write, chat, make and receive calls and electronic mails can promote more proactive and effective use of digitized gadgets in solving academic and other multifaceted real-life problems of the students. Hence, Kaeophanuek, Na-Songkhla, and Nilsook (2018), underscore the imperatives of digital literacy skills to LIS students by clarifying that digital literacy skills are competencies needed to learn and use various software applications and digital tools conveniently for meeting academic and life goals, managing and solving basic computer problems, communication skills, managing personal information on networks and the application of digital technologies.

From the above perspectives, it becomes apparent that digital literacy skills have a marked effect on undergraduate students of Library and Information Science in the learning process vis-à-vis accessibility and utilization of electronic information resources for academic responsibilities. This also enhances their personal development, communication (sending and receiving information, files, images, and documents using several digital media), as well as getting along with global trends and events in the digitized society. Meanwhile, despite the obvious numerous benefits of digital literacy skills to undergraduate students of Library and Information Science, observations reveal that most undergraduate students in Nigeria, including those specifically targeted by this study (the Final Year Students of Library and Information Science, Michael Okpara University of Agriculture, Umudike, Abia State and University of Uyo, Uyo, Akwa Ibom State, Nigeria) do not have adequate digital literacy skills. These observed inadequacies in digital literacy skills rob them of maximum benefits derivable from the emerging digital realities of their learning environment and for effective utilization of electronic information resources in their academic responsibilities.

Therefore, based on the above backdrop, this study examines digital literacy skills of undergraduate students of Library and Information Science on the utilization of electronic

information resources in Michael Okpara University of Agriculture Umudike (MOUAU), Abia State, and University of Uyo, (UNIUYO), Uyo, Akwa Ibom State, Nigeria.

1.2 Statement of the Problem

Digital literacy skills are fundamental skills for high academic performance and professional effectiveness in today's global academic system. It eases the difficulties associated with accessing and utilizing electronic information resources, which have become a preference for successful learning and research in educational institutions in developed countries of the world. With digital literacy skills, undergraduate LIS students can easily carry out academic tasks and communicate results within a short period of time to their lecturers and colleagues by sharing files, documents, and other requirements digitally. However, despite the enormous usefulness of digital literacy skills, most undergraduate LIS students in Nigeria do not have adequate digital literacy skills because access and use of digital tools in many Nigerian University-based library schools is still very low. The curriculum of most Nigerian University-based library schools still focuses more on analogue or traditional teaching practices with low level of digital technology applications. Most undergraduate LIS students don't have access to digital technology gadgets like computer system, network, internets, etc. Some undergraduate LIS students do not show serious interest in digital technology related courses, which will facilitate their digital literacy skills. This often is due to some ineffective teaching styles by some IT instructors/lecturers. In fact, the most disheartening scenarios in many Nigerian University libraries which are observed to hamper undergraduate LIS students' digital literacy skills in utilizing electronic information resources include: lack of internet facilities, epileptic power supply and non-functional or unusable digital tools such as computers in the university libraries. Additionally, most undergraduate LIS students are technophobic in their approach to digital technology application for academic dealings. It is, therefore, in the light of this background that this present study was conceived.

1.3 Research Objectives

The broad purpose of this study is to examine digital literacy skills of undergraduate students of Library and Information Science on the utilization of electronic information resources in two Federal Universities in Nigeria. However, the specific objectives are to:-

i.   identify the electronic information resources available for utilization by the undergraduate students of Library and Information Science in MOUAU and UNIUYO;

ii.   identify the digital literacy skills possessed by undergraduates students of Library and Information Science on the utilization of electronic information resources in MOUAU and UNIUYO;

iii.   find out how digital literacy skills are acquired by undergraduate students of Library and Information Science on the utilization of electronic information resources in MOUAU and UNIUYO;

iv.   identify the uses of digital literacy skills by undergraduate students of Library and Information Science in MOUAU and UNIUYO;

v.   identify the factors militating against the acquisition of digital literacy skills among undergraduate students of Library and Information Science on the utilization of electronic information resources in MOUAU and UNIUYO.

2.0 Literature Review

Digital literacy skills refer to the individual realization, attitude, competence and capacity of digital tools usage for the purpose of accessing, managing, integrating, analyzing and synthesizing digital information sources, including generating new knowledge and producing many forms of digital media in order to communicate, create and reflect the concepts within other daily life situations (Martin, 2006). Differently put, Bell and Shank (2008) defined digital literacy skills as the abilities and competencies required to use digital technologies, communication tools or technology networks to locate, evaluate, use and create information. Digital literacy skill is a 21st century skill consisting of the awareness, attitude and ability of individuals to appropriately use digital tools and facilities to identify, access, manage, integrate, evaluate, analyse and synthesize digital resources, construct new knowledge, create media expressions, and communicate with others, in the context of specific life situations, in order to enable constructive social action; and to reflect upon this process (Martin & Grudziecki, 2006; Innovation and Business Skills Australia, 2010).

Corroborating the above perspective, Bawde (2008), observes that digital literacy skills entail a wide variety of competencies, capacities and practical knowledge for understanding and utilizing information in multiple digital formats from a range of sources when it is presented through

computers and related tools in order to perform tasks effectively in a digital environment. Emiri (2015) opines that digital literacy skills refer to the ability to read and interpret media, reproduce data and images through digital manipulation, and to evaluate and apply new knowledge gained from digital environments. Hobbs (2010), avers that digital literacy skills is a constellation or assemblage of life skills that are pertinent and fundamental for full and active participation in a media-saturated and information-rich society. Digital literacy skills cover those capabilities which make an individual fit for living, learning and working in a digital society; the ability to locate, organize, understand, evaluate, analyze and present digital information as well as appraise the impacts of new technologies and manage digital identities (BCS: The Chartered Institute for Information Technology, 2013).

Providing further insights to the concept and imperatives of digital literacy skills to undergraduate students of Library and Information Science vis-à-vis the utilization of electronic information resources, Emiri (2015); Martzoukou and Elliott (2016); and Kaeophanuek, Na-Songkhla, and Nilsook (2018) point out that digital literacy skills capture a bouquet of knowledge, competencies, skills, attitude and behaviours necessary for them to work with and utilize digital devices such as smart phones, tablets, laptops and desktop computers, as network of technologies in performing tasks competently and effectively. These skills facilitate the ease of utilizing electronic information resources in solving academic problems like doing assignments, writing term-papers, conducting research, getting acquainted with general happenings on political, healthcare or other frontiers of the society. Digital literacy skills can assist students to obtain e-books, e-journals or online novels, newspapers, magazines and other creative writings for their recreational reading.

Moreover, Obaseki (2014) posits that electronic information resources, which digital literacy skills can aid undergraduate LIS students to utilize are those resources that are available online and accessible via the use of technological devices such as computer networks, internet, desktop computers, laptop computers, tablets, smarts phones, CD-ROMs readers, memory card readers, projectors, world wide web (www), and digital libraries. Affirming the foregoing, Odunewu and Aluko-Arowolo (2018) in their study aver that electronic information resources are computer-based resources such as e-books, e-journals, e-conference proceedings, e-dictionaries, e-encyclopaedias, e-newspapers, e-magazines, Online Public Access Catalogues (OPACs), Web public access catalogues (WebPAC), e-manuscripts, e-maps, e-thesis, e-dissertations, e-research

reports, e-reference services, etc. As a matter of fact, as long as the universities are the citadel of learning for skilled manpower, LIS undergraduate students can have unlimited access and utilization of vital e-resources with the right digital literacy skills. This is even the more reason why Kaeophanuek, Na-Songkhla, and Nilsook (2018) argue that digital literacy skills is a contemporary fundamental practical ability to use digital devices such as computer systems like laptops, smartphones, tablets, internet and other technological facilities to communicate, share, retrieve and utilize information (including files, images, sounds, music, and other digital information contents). Digital literacy skills are essential in effectively and critically navigating, accessing, retrieving, evaluating, creating and communicating information using a range of digital technologies (Czarnecki, 2009; Jenkins, 2009). It requires individual students to recognize and key into the digital advantages to manipulate and transform digital media, distribute and adapt them to create new forms for his or her advantage and those of others.

Digital literacy skills hold a lot of potentials for undergraduate LIS students in the utilization of electronic information resources. This is because as future professionals and educators in Library and Information Science disciplines, possessing digital literacy skills presupposes that they will be much more relevant and contributes effectively to librarianship in today's digital age. Possessing digital literacy skills equip undergraduate LIS students with the ability to easily access, locate, manage, utilize and communicate information to their lecturers, colleagues and other players in the educational sector. Studies revealed that digital literacy skills have lots of usefulness to any individual in the present information age. Digital literacy skills enable students to make informed use of digital technologies and media, and to tap from diverse opportunities offered by such skills to participate in new kinds of social activities (Hague & Williamson, 2009). It facilitates students learning skills and processes, reports writing speed, speed of sending and receiving files, images, documents including learning and instructional materials, quality of academic results and research as well as other competencies for widening the horizon of the individual students about world views (UNESCO IITE, 2011). Digital literacy skills also enhance students' employability qualifications since most employment and job opportunities are increasingly undertaken online while such opportunities are mostly open to those with digital technology skills and in so doing provide the necessary skills needed for people to gain access to modern days work places (Odu & Omosigho, 2017).

Studies further show that digital literacy skills enhance collaborative, creative and recordable communicative techniques of students essential for the next generation of Library and Information Science professionals. In this regards, undergraduate students who are digitally literate possesses a wide range of digital skills including: knowledge of the basic principles of computing devices, competencies in using computer networks, ability to engage in online communities and social networks while adhering to behavioural protocols, and are able to find, access, capture, evaluate, send, share and receive information from digital media with consideration to societal and legal issues governing digital technologies (Gui & Argentin, 2011). Another study conducted by Bitri and Akkaya (2018), confirmed the earlier assessment of Gui and Argentin (2011) that digital literacy skills possessed by undergraduate students include: skills of using web sites, search engines, MS Office programs (word-processing, presentation, and spreadsheets programs), uploading and downloading of files, desktop publishing, web based learning systems, web page design, database management and programming, etc.

Furthermore, Ndinoshiho (2010) carried out a study which revealed that most often students acquired digital literacy skills from their lecturers during lectures, from fellow students, on their own personal studies, from librarians, from family members and internet course. Also, Anjaiah (2016), in a study entitled, "Digital information literacy among research scholars and students community at Dravidian University, Kuppam-Andra Pradesh (India): An exploratory study", revealed that the factors militating against digital information literacy include frequent power off, Wi-Fi problems while browsing the digital resources, limited computer terminals in the library and digital library timings and serious internet connection problems while browsing digital resources. This corroborates Ojeniyi and Adetimirin (2016) who point out that limited access to computer, poor internet connection, erratic power supply, lack of technical know-how, technophobia, difficulty using search terms, etc., are the factors militating against digital literacy skills in utilizing electronic information resources.

In summary, it can be deduced from literature that digital literacy skills remain indispensable for the 21st century students. This in essence, is because digital literacy skills involves the whole gamut of an individual's aptitude and capabilities in working with and using technological tools competently in interpreting and understanding digital contents as well as assessing its credibility, creating, researching, and communicating with appropriate digital tools and gadgets. It can be

crowned as a must for today's living, learning and academic success for undergraduate students who must thrive in our present digital economy.

3.0 Methodology

This study adopted the descriptive survey research design, with a population of two hundred and fifty (250) final year LIS students. The population comprises 182 students from the Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike (MOUAU), Abia State and 68 students from the Department of Library and Information Science, University of Uyo (UNIUYO), Uyo, Akwa Ibom State from the 2015/2016 session (DLIS Admission File, 2015). Out of this study population, 120 respondents representing 48% of the study population were proportionately selected based on the recommendation of (Nworgu, 2015). That is, 48% each for MOUAU and UNIUYO students. The accidental (otherwise called convenience) sampling technique was used in selecting the respondents on the ground of convenience for the researchers. A 4-point structured questionnaire titled: "*Questionnaire on Digital Literacy Skills of Undergraduate Students of Library and Information Science on the Utilization of Electronic Information Resources in Two Federal Universities in Nigeria (QDLSUSLISTFU)"*was used as instrument for data collection. The researchers personally distributed 120 copies of the questionnaire to the respondents in the two federal universities. At the end of the distribution and retrieval of questionnaire, 112 copies representing 93.33% response rate were recorded. However, data collected were analysed using descriptive statistics to determine the frequency counts and mean scores. A four point rating scale of 2.50 was used to determine the degree of agreement or disagreement for each of the item statements in accordance with the Statistical Package for Social Sciences (IBM-SPSS Version 23). This implies that any item statement with a mean score of less than 2.50 indicated disagreement while items with mean scores of 2.50 and above show agreement. The presentation of results was done using frequency tables.

4.0 Results and Discussion of Findings

Table 1: Distribution of Students by University and Gender

GENDER	MOUAU		UNIUYO		Total (%)
	Frequency	**Percentage (%)**	**Frequency**	**Percentage (%)**	
Male	37	30.83%	22	18.33%	57 (49.16%)
Female	43	35.83%	18	15.00%	61 (50.83%)
Total	**80**	**66.67%**	**40**	**33.33%**	**120 (100%)**

Table 1 shows that 80 final year students representing (66.67%) were selected for the study from the Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike (MOUAU), Abia State, Nigeria and 40 students representing (33.33%) were from the Department of Library and Information Science, University of Uyo (UNIUYO), Uyo, Akwa Ibom State, Nigeria. Out of the 80 students from MOUAU, 43 (35.83%) were females and 37 (30.83%) were males, whereas from the 40 students from UNIUYO, 22 (18.33%) were males and 18 (15%) were females.

Table 2: Response Rate by University

Institutions	Expected Respondents (n=120)	Actual Respondents (n = 112)	Percentage (%) of Actual Respondents
MOUAU	80	78	65.00%
UNIUYO	40	34	28.33%
Total	**120**	**112**	**93.33%**

Table 2 reveals that 120 copies of questionnaire were distributed, out of which 112 (93.33%) copies were completed and retrieved with valid information for the analysis. A further breakdown shows that 80 copies distributed to the respondents at MOUAU, 78 (65%) were successfully completed and retrieved, while 34 (28.33%) from the 40 distributed at UNIUYO were retrieved. Therefore, successfully valid instrument for this study was 93.33%. This is deemed encouraging and satisfactory for the study.

Table 3: Mean Responses on the Electronic Information Resources available for Utilization by the Undergraduate Students of Library and Information Science in MOUAU and UNIUYO (n = 112)

S/No.	Item Statements	SA	A	D	SD	Mean	Decision
1.	E-books	16	58	31	7	2.74	Agreed
2.	E-journals	13	67	28	4	2.79	Agreed
3.	E-conference proceedings	7	28	52	25	2.15	Disagreed
4.	E-dictionaries	49	63	-	-	3.44	Agreed
5.	E-encyclopedias	31	64	17	-	3.13	Agreed
6.	E-newspapers	36	48	28	-	3.07	Agreed
7.	E-magazines	8	29	64	11	2.30	Disagreed
8.	Online Public Access Catalogues (OPACs)	-	24	35	53	1.74	Disagreed
9.	Web public access catalogues (WebPAC)	10	22	66	14	2.25	Disagreed
10.	E-manuscripts	2	13	52	45	1.75	Disagreed
11.	E-research reports	24	58	27	3	2.93	Agreed
12.	Library blogs	11	19	49	33	2.07	Disagreed
13.	Online databases	28	42	37	5	2.83	Agreed
14.	Internet search engines (Google, Wikipedia, etc.)	34	57	21	-	3.12	Agreed
15.	CD-ROMs databases	20	46	42	14	2.64	Agreed
	Grand Mean					*2.60*	*Agreed*

Criterion Mean = 2.50

The results in table 3 show the electronic information resources available for utilization by undergraduate students of Library and Information Science from both MOUAU and UNIUYO. It indicates a Grand Mean of 2.60 against the Criterion Mean of 2.50. This reflects an agreement that most of these e-resources are available in the two federal universities understudy. However, individual mean scores present some disagreements which point to the non-availability of: e-magazines (2.30), Web public access catalogues (WebPAC) (2.25), e-conference proceedings (2.15), library blog (2.07), e-manuscripts (1.75), and Online Public Access Catalogues (OPACs) (1.74). On the other hand, the results disclose available e-resources in the two federal universities indicated by the respondents' varying degree of agreements to include: e-dictionaries (3.44), e-encyclopedias (3.13), Internet search engines (Google, Wikipedia, etc.) (3.12) and e-newspapers (3.07). Others are: e-research reports (2.93), online databases (2.83), e-journals (2.79), e-books (2.74), and CD-ROMs databases (2.64) are the e-resources available for utilization by undergraduate students of LIS in MOUAU and UNIUYO. This finding agrees with the study conducted by Odunewu and Aluko-Arowolo (2018), which revealed that electronic information resources include: e-books, e-journals, e-conference proceedings, e-dictionaries, e-encyclopaedias, e-newspapers, etc. Meanwhile it could be considered that more electronic

information resources in federal university libraries can facilitate enhanced academic performance of undergraduate students in the face of the prevailing global digital environment.

Table 4: Mean Responses on the Digital Literacy Skills of Undergraduate Students of Library and Information Science on the Utilization of Electronic Information Resources in MOUAU and UNIUYO (n = 112)

S/No.	Item Statements	SA	A	D	SD	Mean	Decision
1.	Skills for accessing electronic resources like e-books, e-reference materials, e-journals, etc.) via diverse search engines (e.g. Google, Wikipedia, Yahoo, etc.)	25	43	26	18	2.67	Agreed
2.	Electronic mailing skills	39	46	20	7	3.04	Agreed
3.	Files Management and Windows Explorer Skills	15	28	44	25	2.29	Disagreed
4.	Electronic search and retrieval skills	17	49	41	5	2.70	Agreed
5.	Skills for manipulating computer digital tools like flash drive, USB cords, memory cards, etc.	20	57	90	28	2.28	Disagreed
6.	Internet surfing skills	29	55	18	10	2.92	Agreed
7.	Skills for downloading databases like OPAC, HINARI, AGORA, EBSCOHOST, etc	11	34	47	20	2.32	Disagreed
8.	Basic Computer operations skills like type-setting, formatting, printing, etc.	24	53	15	20	2.72	Agreed
9.	Social networking (social media) skills	35	48	29	-	2.79	Agreed
10.	Multimedia projecting skills like power point presentation	22	28	43	19	2.47	Disagreed
	Grand Mean					*2.62*	*Agreed*

Criterion Mean = 2.50

Table 4 presents the result of the digital literacy skills of the undergraduate students of Library and Information Science in MOUAU and UNIUYO. It shows a Grand Mean of 2.62 against the benchmark mean of 2.50, which indicates that the digital literacy skills of the LIS students in the two federal universities are relatively inadequate in a number of ways. Specifically, the results indicate that out of the 10 digital literacy skills covered in the research instrument to take care of this objective, the respondents agreed in affirmative to 6 digital literacy skills such as: electronic mailing skills (3.04); Internet surfing skills (2.92); social networking (social media) skills (2.79); basic computer operations skills (e.g. type-setting, formatting, printing, etc. (2.72); electronic search and retrieval skills (2.70) and skills for accessing electronic resources like e-books, e-reference materials, e-journals, etc. via diverse search engines (e.g. Google, Wikipedia, Yahoo, etc.) (2.67). On the contrary, the respondents disagreed to possessing such digital literacy skills

as: multimedia projecting skills like power point presentation (2.47); skills for downloading databases like OPAC, HINARI, AGORA, EBSCOHOST, etc. (2.32); files Management and Windows Explorer skills (2.29), and skills for manipulating computer digital tools like flash drive, USB cords, memory cards, etc. (2.28). This finding agrees with the studies conducted by Bitri and Akkaya (2018); Gui and Argentin (2011), which revealed that undergraduate students possessed digital literacy skills for using web sites, search engines, MS Office programs (word-processing, presentation, and spreadsheets programs), uploading and downloading of files, desktop publishing, etc. However, from the results, it could be seem that most LIS students in MOUAU and UNIUYO are lacking behind in some fundamental digital literacy skills. This can rob them of great opportunities in utilizing electronic information resources in their academic tasks and later on, in meeting up with the evolving nature of the LIS profession as graduate librarians in a digitized world.

Table 5: Mean Responses on How Digital Literacy Skills are Acquired by Undergraduate Students of Library and Information Science on the Utilization of Electronic Information Resources in MOUAU and UNIUYO (n = 112)

S/No.	Item Statement	SA	A	D	SD	Mean	Decision
1.	Trial and error	18	46	40	8	2.66	Agreed
2.	Formal lectures as part of course works in my department	25	61	26	-	2.99	Agreed
3.	Assistance and learning from colleagues	10	58	12	32	2.41	Disagreed
4.	Online ICT self-study guides	-	43	54	15	2.25	Disagreed
5.	Self-sponsored IT training programmes	22	67	23	-	2.99	Agreed
6.	Digital technology training programmes/practical sessions in MOUAU and UNIUYO	27	60	25	-	3.02	Agreed
7.	Workshop/seminars organized by MOUAU and UNIUYO for students	9	23	52	28	2.11	Disagreed
8.	Assistance from friends and course mates	15	48	29	20	2.52	Agreed
	Grand Mean					*2.62*	*Agreed*

Criterion Mean = 2.50

The result in table 5 shows how digital literacy skills are acquired by the undergraduate students of Library and Information Science in MOUAU and UNIUYO. It revealed a Grand Mean of 2.62 against the 2.50 criterion mean. The table clearly shows that the students acquire digital literacy skills through: digital technology training programmes/practical sessions in MOUAU and UNIUYO (3.02); formal lectures as part of course works in my department (2.99); self-sponsored IT training programmes (2.99); trial and error (2.66); and Assistance from friends and

course mates (2.52). On the other hand, the respondents disagreed with the item statements examining the acquisition of digital literacy skills through: assistance and learning from colleagues (2.41); online ICT self-study guides (2.25); and workshop/seminars organized by MOUAU and UNIUYO for students (2.11). This finding aligns with the study conducted by Ndinoshiho (2010) which revealed that students acquired digital literacy skills from their lecturers during lectures, fellow students, personal studies, and Internet courses. However, from the result, it could be seen that the respondents acquired digital literacy skills from diverse sources such as personal efforts and as parts of their academic activities.

Table 6: Mean Responses on the Uses of Digital Literacy Skills by Undergraduate Students of Library and Information Science in MOUAU and UNIUYO (n = 112)

S/No.	Item Statements	SA	A	D	SD	Mean	Decision
1.	Downloading of e-resources (e.g. e-books, e-journals, e-reference materials, etc.) for academic works	34	57	21	-	3.21	Agreed
2.	Sending of assignments and term-papers online for assessment by lecturers	20	92	-	-	3.18	Agreed
3.	Social networking like facebook, twitter, whatsapp, instagram, blogs, etc.	36	65	2	9	3.14	Agreed
4.	Reading online recreational resources like novels, newspapers, etc.	25	33	48	6	2.69	Agreed
5.	Sending and receiving of e-mails, pictures, files, etc.	18	77	10	7	2.95	Agreed
6.	Installing and updating software applications like Windows, SPSS, antivirus, internet browser, etc. in a computer system	-	79	13	20	2.53	Agreed
7.	Uploading journal articles and other write-ups on the internet	5	34	68	5	2.35	Disagreed
8.	Converting files and documents like PDF to Microsoft and vice versa	30	37	24	21	2.68	Agreed
9.	Typesetting, formatting, and printing of documents	35	72	1	4	3.23	Agreed
10.	Scanning and digitization of documents, files, images, etc.	26	39	27	20	2.63	Agreed
11.	Multimedia presentation (e.g. power point)	-	38	61	13	2.49	Disagreed
	Grand Mean					*2.83*	*Agreed*

Table 6 shows the results of the uses of digital literacy skills by undergraduate students of Library and Information Science in MOUAU and UNIUYO. It reveals majority of the respondents agreed in affirmative to the item statements coved in the research instrument for this objective. It also indicates a Grand Mean of 2.83 against the 2.50 criterion mean to portray a greater level of acceptability. Pointedly, the respondents agreed that they use digital literacy skills for: typesetting, formatting, and printing of documents (3.23); downloading of e-resources (e.g. e-books, e-journals, e-reference materials, etc.) for academic works (3.21); sending of assignments and term-papers online for assessment by lecturers (3.18); and social networking like facebook, twitter, whatsapp, instagram, blogs, etc. (3.14). Another set of agreement indices show that the respondents use digital literacy skills for: sending and receiving of e-mails, pictures, files, etc. (2.95); reading online recreational resources like novels, newspapers, etc. (2.69); converting files and documents like PDF to Microsoft and vice versa (2.68); scanning and digitization of documents, files, images, etc. (2.63); installing and updating software applications like Windows, SPSS, antivirus, internet browser, etc. in a computer system (2.53). On the contrary, the respondents disagreed on using digital literacy skills for: multimedia presentation (e.g. power point) (2.49); and uploading journal articles and other write-ups on the internet (2.35). This findings agrees with the work of Gui and Argentin (2011), which revealed that digital literacy skills can be used in MS Office programs (word-processing, presentation, and spreadsheets programs), uploading and downloading of files and documents for academic purposes as well as other web based learning activities. From the result, it could be seem that digital literacy skills are very essential in all academic and social activities. Thus, university institutions across Nigeria and the globe should make effort to ensure that all students are trained to become literate in digital tools and environment.

Table 7: Mean Responses on the Factors militating against the Acquisition of Digital Literacy Skills of Undergraduate Students of Library and Information Science on the Utilization of Electronic Information Resources in MOUAU and UNIUYO (n = 112)

S/No.	Item Statement	SA	A	D	SD	Mean	Decision
1.	Poor teaching methods by IT lecturers	22	48	25	17	2.67	Agreed
2.	Technophobia	18	36	40	18	2.48	Disagreed
3.	Lack of conducive digital literacy learning environment	30	44	28	10	2.84	Agreed
4.	Inaccessibility to internet facilities	45	38	10	19	2.97	Agreed
5.	Poor interest in digital revolution	-	35	61	16	2.17	Disagreed
6.	Inadequate digital facilities	15	74	14	9	2.85	Agreed
7.	High cost of digital skill training programmes	37	62	2	10	3.13	Agreed
8.	Financial incapacitation to acquire digital tools	41	43	28	-	3.12	Agreed
9.	Epileptic electricity power supply	58	29	11	14	3.17	Agreed
10.	Inadequate digital technology training/practical in MOUAU and UNIUYO	5	59	42	6	2.56	Agreed
	Grand Mean					*2.80*	*Agreed*

In table 7 the results show the factors militating against the acquisition of digital literacy skills of the undergraduate students of Library and Information Science on the utilization of electronic information resources in MOUAU and UNIUYO. It reveals that majority of the students agreed in affirmative that such factors as: epileptic electricity supply (3.17); high cost of digital skill training programmes (3.13); financial incapacitation to acquire digital tools (3.12); inaccessibility to internet facilities (2.97); and inadequate digital facilities (2.85), militate against digital literacy skills of the undergraduate students of the two federal universities understudy. Other factors include: lack of conducive digital literacy learning environment (2.84); poor teaching methods by IT lecturers (2.67); and inadequate digital technology training/practical in MOUAU and UNIUYO (2.56). The result equally reveals that technophobia (2.48); and poor interest in digital revolution (2.17), are not accepted by the students as the factors militating against their digital literacy skills. Confirming the individual analysis on the challenges facing digital literacy skills of the undergraduate students in MOUAU and UNIUYO, the finding shows a Grand Mean of 2.80 against the 2.50 criterion mean. This result agrees with the study conducted by Anjaiah (2016), which revealed that the factors militating against digital literacy skills include; frequent power off, Wi-Fi problems while browsing the digital resources, limited computer terminals and serious internet connection problems while browsing digital resources.

However, the findings indicate that if the teaching methods by IT lecturers are poor, with a poor digital literacy learning environment, coupled with poor access to internet facilities and inadequate digital facilities, combined with high cost digital skill training, and epileptic electricity power supply, acquiring digital literacy skills by the undergraduate students will be very hard, if not absolutely impossible.

5.0 Conclusion

Based on the findings of this study, digital literacy skills is fundamental for undergraduate students of Library and Information Science to achieve quality academic success and social engagements in the present digital world. Digital literacy skills are empowerment skills which transcend the four walls of the university in terms of accessing and utilizing electronic information resources. It holds so much for the future professional dealings of graduate librarians and librarianship as a profession. As seen from the findings, the students' digital literacy skills are relatively inadequate, mostly acquired through trials and errors, and are hampered by series of factors like poor teaching methods by IT lecturers, poor learning environment, inadequate digital technology trainings/practical, among others. However, this study concludes with a call on the university-based library schools in Nigeria to redouble their efforts and ensure that these future professionals and scholars in librarianship are well-trained to be digitally up-to-date in order to salvage the future of LIS profession and contribute maximally to the Nigerian digital technology renaissance.

6.0 Recommendations

In the light of the findings of this study, the following recommendations are pertinent in improving the digital literacy skills of LIS students:

i. University-based library schools should design and implement digital literacy programmes to educate and train undergraduate students to develop their knowledge and practical skills on the use of digital technologies.

ii. Nigerian universities should restructure their curriculum in accordance with current trends in practical digital technology learning instead of dwelling on the traditional analogue methods of teaching.

iii. Undergraduate students should see digital literacy skills as a necessity for living and success and thus, should embrace it with open arms by making their personal sacrifice in acquiring relevant digital literacy skills through self-sponsored training;

iv.   IT lecturers and instructors should brace up for the task of providing practical-based teaching with relevant-up-to-date teaching and communication skills that will drive interest and motivate the acquisition of digital literacy skills by their students;

v.   Management of universities should provide functional digital infrastructures like computers and internet facilities in order to prepare their students for global competitiveness in the present information-saturated world.

vi.   Decision makers in governments and businesses should partner to formulate policies that will regulate prices of digital tools and facilities in order to make them affordable for students.

vii.   Government of Nigeria should make conscious effort to improve electricity power supply in order to enable universities and their students maximize the use of their digital tools for the advancement of their digital literacy skills.

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