

Digital Literacy Skills among Certified Librarians in Nigerian Libraries: Library Overview

Atanda Saliu Sambo^{1*} , Abdulakeem Akoworada Imran², Mohammed Lawal Akanbi³ 

¹Federal University of Petroleum Resources, Effurun Delta State 330102, Nigeria

²Serial Publication Unit, Federal College of Education (Special) Oyo 1089, Nigeria

³Department of Library and Information Science, Faculty of Communication and Information Science, University of Ilorin, Kwara 240003, Nigeria

*Corresponding author: sambo.atanda@fupre.edu.ng

Received: 2 February 2022; Accepted: 8 August 2022; Published: 29 August 2022

Abstract: Certified librarians in Nigeria libraries must be proactive and come on board to adopt a new intellectualizes digital literacy as a required ability that an individual must compulsorily possess. Three objectives such as types digital literacy skills, how it acquires and challenges faced by certified librarians. The study employed a social survey technique of research with a questionnaire as the research instrument. The study was carried out using the Statistical Package for the Social Sciences (SPSS) application software. The findings of this study show that the majority of certified librarians have digital literacy skills that they sponsor themselves for digital literacy training, and that some acquired digital literacy skills through trial and error among others. Certified librarians in Nigerian libraries to redouble their efforts in ensuring that these future librarians and scholars are well-trained to be digitally up-to-date in order to save the profession's future and contribute as much as possible to Nigeria's digital technology revival.

Keywords: Certified Librarian, Digital Technology, Digital Literacy Skills

INTRODUCTION

The changing technical advancements, globalization, and digitalization of knowledge have confronted libraries all over the world. Library automation, digital and virtual libraries, virtual conferences, webcasts, podcasts, community and online learning, Web 2.0, and Library 2.0 are all results of these developments. Digital technology, according to [Campbell \(2006\)](#), has pervaded every aspect of our civilization, ushering in a revolution not only in how we store and transmit recorded knowledge, historical records, and a variety of other forms of communication, but also in how we seek and obtain access to these materials. In recent years, many occupations have required workers to have a functional understanding of computers and the internet in order to accomplish particular tasks. Computing has become an integral component of our daily lives in the twenty-first century. Digital literacy teaches the principles of computers, including the components of a computer and the operating system's core. Literacy today, according to [Jones & Flannigan \(2006\)](#), is dependent on comprehending the many media that make up our high-tech environment and gaining the skills to use them successfully. To execute fundamental operations, many vocations need a decent grasp of computers and the Internet. As wireless technology advances, more occupations will require knowledge of mobile phones and personal digital assistants (PDAs) (sometimes combined into smart phones). Job recruiters frequently utilize employment Web sites to discover candidates, emphasizing the significance of digital literacy in obtaining work ([Wikipedia, 2018](#)). Digital literacy, visual literacy, media literacy, computer literacy, library literacy, network

literacy, cultural literacy, and other fields of information literacy have all been expanded. However, the focus of this study is on digital literacy abilities.

Certified Librarians in Nigeria libraries must be proactive and come on board to adopt a new intellectualized digital literacy as a required ability that an individual must compulsorily possess in mandate to pilot the Internet, bargain accessible material, achieve, control, and pile numerical material, simply expressed, digital literacy is the capacity to analyze and successfully use digital information resources, digital technologies, and online services in the lifelong learning process. The capacity to make educated judgements about information discovered online is the most crucial part of digital literacy, because, like traditional media, much digital content accessible online is unfiltered by editors and open to contributions from everyone. When digital information travels through the library, it is properly appraised, relevant, and valuable to the user. To put it another way, digital literacy equips professionals from all walks of life (certified librarians) with the abilities they need to better their economic and social standing. Certified librarians, according to [Cooke \(2012\)](#), must be not just more intelligent as their customers, but even savvy than their clients, because the profession's ethics require it. Material resources that can only be opened through a digital device such as a computer are known as digital resources ([Ibrahim, 2015](#)).

In today's global academic system, digital literacy skills are essential for strong academic success and professional efficiency. Certified librarians with digital literacy abilities may effectively do several jobs and transmit findings to their users and colleagues in a short amount of time by exchanging files, papers, and other requirements digitally. Despite the enormous value of digital literacy abilities, the majority of Nigerian licensed librarians lack basic digital literacy skills due to the limited availability and use of digital resources in many Nigerian libraries. The majority of qualified librarians do not have access to digital technology such as computers, networks, and the internet. Some certified librarians are uninterested in taking digital technology courses that might improve their digital literacy abilities. This is frequently due to librarians' poor training. In reality, in many Nigerian libraries, the most discouraging conditions identified to impede certified librarians' digital literacy abilities are a lack of internet access, epileptic electricity, and non-functional or useless digital instruments such as PCs. As a result, this investigation was necessary in light of the surrounding situation.

There are several sorts of libraries. The subject of this study is certified librarians in Nigerian libraries who have been admitted by the Nigerian Librarians Registration Council (LRCN). In light of this, the goal of this study is to learn more about the digital literacy abilities carried by licensed librarians in Nigerian libraries. More specifically, the objectives of this study are:

1. To identify the types digital literacy skills possessed by certified librarians in Nigeria libraries
2. To investigate how the certified librarians in Nigeria libraries acquire their digital literacy skills.
3. To identify the challenges faced by certified librarians in Nigeria libraries to acquiring digital literacy skills.

LITERATURE REVIEW

In this era of digitization, certified libraries in Nigeria are particularly challenged to improve their systems. Users and students of all disciplines need quick access to information, and the internet has become a valuable resource for everyone. Librarians can provide a long-term solution by supporting academics at higher education institutions and assisting students by providing enough information resources and a platform for their use. Digital resources are information resources that can only be accessed through computers and other ICT devices, such as CD-ROMs, the Internet, the OPAC, e-books, e-journals, and e-databases. Libraries are now building digital libraries and institutional repositories, which are accessible via library websites. These documents may need the use of a computer peripheral device, such as a CD-ROM drive or a link to a computer network or the Internet. According to [Van Deursen & van Dijk \(2009\)](#), disparities in digital literacy are mostly determined by age and educational level. In general, a digitally literate individual may seek for and

comprehend needed information, freely express and share their own ideas or thoughts, and get a better knowledge of others' (Kwon & Hyun, 2014).

To be recruited or promoted, many of these positions demand proof of digital literacy. In a nutshell, digital technology has ushered in a revolution not only in how many stores, transmits, and disseminates recorded knowledge, historical records, and a variety of other forms of communication, but also in how man seeks for and obtains access to these data-carrying resources (Emiri, 2017). 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, according to Kaeophanuek et al. (2018), who emphasize the importance of digital literacy skills to certified librarians 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 In this era of digitalization, Certified Librarians and other libraries in Nigeria are particularly challenged to improve their systems. Librarians and users of all disciplines, as well as all library staff, want convenient access to information, and the internet has proven to be a valuable resource for all.

Certified librarians can provide a long-term solution by assisting lecturers and researchers at higher education institutions, as well as students, by providing enough and timely information resources, as well as a suitable platform for optimal usage. Okiy (2010) stated that libraries have such a strong position and reputation in organizations because they provide the crucial material to users, lecturers, and students to help them achieve their teaching, learning, and research goals in the simplest, fastest, and most comprehensive way possible. Over time, the library has occupied a vital position in organizations. It becomes necessary for organizations and licensed librarians to change and adapt to the changing circumstances. This would allow them to meet the needs of the organization's community. As a result, the library can match the clientele's wants in the organization's configuration. Clearly, library technology is evolving, and both professional librarians and paraprofessional library personnel must enhance their abilities in order to keep up. As we all know, digitization has had an influence not only on the information world, but also on the role, talents, and methods of service delivery of information professionals (Ezeani et al., 2012). Certified librarians are well-trained information experts who, in this digital age, have no option but to embrace and utilize digital literacy skills in their work more than ever before. To be honest, organizations and library schools are favourably but gradually rising to this challenge. However, if we are to properly solve the challenges produced by dynamic changes in professional environment, a continual and quicker developing strategy is required. Digital literacy is the capacity to locate, analyze, produce, and convey information using information and communication technologies, which requires both cognitive and technical abilities (ALA, 2012).

Digital literacy, according to Wikipedia (2018), is the knowledge, skills, and behavior utilized in a wide range of digital devices, including smartphones, tablets, laptops, and desktop PCs, all of which are considered network rather than computer devices. The focus of digital literacy used to be on digital skills and stand-alone computers, but it has shifted to network devices. The phrase "digital literacy" is relatively recent, however it refers only to practical skills in utilizing digital devices (such as laptops and smart phones). It is the capacity to use a variety of digital tools to efficiently and critically explore, assess, and produce information.

Furthermore, according to Obaseki (2014), electronic information resources are those that are available online and accessible through the use of technological devices such as computer networks, the internet, desktop computers, laptop computers, tablets, smart phones, CD-ROM readers, memory card readers, projectors, the world wide web (www), and digital libraries. Electronic information resources, according to Odunewu & Aluko-Arowolo (2018), 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, etc in reality, with the correct digital literacy abilities, certified librarians can have unrestricted access and use of critical e-resources as

long as universities are the bastion of learning for trained personnel. This is why [Kaeophanuek et al. \(2018\)](#) argue that digital literacy skills are a contemporary fundamental practical ability to communicate, share, retrieve, and use information using digital devices such as laptops, smartphones, tablets, the internet, and other technological facilities (including files, images, sounds, music, and other digital information contents).

Another study by [Bitri & Akkaya \(2018\)](#) confirmed [Gui & Argentin's \(2011\)](#) findings that undergraduate students have skills in using web sites, search engines, MS Office programs (word-processing, presentation, and spreadsheet programs), uploading and downloading files, desktop publishing, web-based learning systems, web page design, database management, and programming, among other things. Furthermore, according to [Megameno \(2010\)](#), students learned digital literacy skills from their lecturers during lectures, from fellow students, on their own personal studies, from librarians, from family members, and through online courses. In a study titled "Digital information literacy among research scholars and students' community at Dravidian University, Kuppam-Andra Pradesh (India): An exploratory study," [Anjaiah \(2016\)](#) found that factors militating against digital information literacy include frequent power outages, Wi-Fi problems while browsing digital resources, limited computer terminals in the library and digital library timings, and serious internet connection problems while browsing digital resources. This supports the findings of [Ojeniyi & Adetimirin \(2016\)](#), who state that limited access to computers, poor internet connections, erratic power supplies, a lack of technical know-how, technophobia, difficulty using search terms, and other factors impede digital literacy skills in the use of electronic information resources.

Complications Affecting the Use of Digital Resources

In terms of digital literacy, more computer analysts and other ICT personnel are needed to counteract disintermediation Scholars ([Odu & Omosigho, 2017](#); [Emiri, 2017](#); [Salaam & Adegboire, 2010](#); [Dadzie, 2007](#); [Watts & Ibegbulem, 2006](#); [Adomi, 2005](#)) have identified several factors that prevent academic librarians from effectively using their digital literacy skills on the job, including insufficient information and communication technology infrastructures and efficient online access, a lack of in-depth digital skills plus information searching skills among library staff and users, and a lack of adequate digital literacy, constant power supply among others. The inaccessibility of digital library materials makes it difficult for librarians and library users to use them. This is in contrast to the simple accessibility of internet search engines such as Google, Yahoo, and others, which may return thousands of results for a single keyword search, regardless of the topic. Students must choose a specific database and be more selective in their search terms at the library ([Waldman, 2003](#)).

In conclusion, it is clear from the research that digital literacy abilities are still necessary for 21st-century pupils. This is because digital literacy skills encompass the entire spectrum of an individual's aptitude and capabilities in working with and using technological tools competently in interpreting and understanding digital contents, assessing their credibility, creating, researching, and communicating with appropriate digital tools and gadgets. It might be seen as a must for scholar (certified librarians) who must succeed in today's digital economy in terms of living, learning, and academic performance.

METHOD

A social survey approach was used to conduct this research. The questionnaire was used as a research tool in this study. It was divided into two sections: the first was aimed to collect personal and demographic information from respondents, and the second section was designed to collect information on digital literacy abilities and how licensed librarians acquire them. For examination and expertise assessment, the instrument was sent to three experts whose research interests include information preservation, digital context, and digital resources. This was done to ensure that the instrument was suitable. The instrument's performance was measured using the test retests technique, which yielded a reliability value of 0.85.

In Abuja, Nigeria's capital, fifteen surveys were sent to librarians. The completed questionnaire was returned and re-administered to the same group of librarians, with the same results as before. The study's participants were 502 Nigerian certified librarians from various libraries and institutions who were entered by the Librarians' Registration Council of Nigeria (LRCN) on November 24th, 2021. The librarians who took part in the survey were chosen using a rigorous random sample method. One out of every three librarians being admitted on that day was given the questionnaire. A total of 450 surveys were issued to librarians, with 391 completed and returned, reflecting an 86.8% response rate. The study was carried out using the Statistical Package for the Social Sciences (SPSS) application software, with simple percentages chosen for easier analysis and interpretation.

RESULT AND DISCUSSION

Result

Out of 450 copies of the questionnaire administered, 391 (86.8%) were completed and returned. Data were presented for analysis using the descriptive statistics which include; frequency count and percentages. The second part of the questionnaire was administered to collect information on types of digital literacy skills possess. How the certified librarians acquire digital literacy skills as well as recommendations were made to enhance efficiency and effective digital literacy skills among certified librarians in Nigeria libraries.

Table 1. Distribution of respondent by gender

Gender	Frequency	Percentage
Male	238	60.8%
Female	153	39.1%
Total	391	100%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

Table 1 reveals that 238 (60.8%) were male while 153 (39.1%) were female. This shows that there are more male certified librarians in Nigerian libraries than females.

Table 2. Distribution of respondents by working experiences

Working Experiences	Frequency	Percentage
0 - 5 Years	224	57.2%
6 - 10 Years	91	23.2%
11- 15 Years	62	15.8%
16 - 20 Years	6	1.5%
20 Years & Above	8	2%
Total	391	100

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2019

Table 2 shows working experiences of the respondents involved in the survey. 224 (57.2%) were between 0- 5 years experiences while 91 (23.2%) were between 6 – 10 years experiences whereas 62 (15.8%) were between 11-15 years experiences while 6 (1.5%) were between 16-20 years experiences and 8(2%) were between 20 years and above. **Table 3** shown academic qualifications of the respondents. 201 (51.4%) had bachelor degree in library science while 60 (15.3%) had postgraduate diploma in library whereas 112 (28.6%) had masters in library and information science and 18(4.6%) had doctorate degree.

Table 3. Distribution of academic qualifications of respondents

Variable	Frequency	Percentage
BLIS	201	51.4%
PGDL	60	15.3%
MLIS	112	28.6%
PHD	18	4.6%
Total	391	100%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

Table 4. Distribution of respondents by libraries

Type of Library	Frequency	Percentage
Academic Library	279	71.3%
School Library	21	5.3%
National Library	29	7.4%
Public Library	43	10.9%
Special/Research Library	19	4.8%
Private/Corporate Library	17	7%
Total	391	100%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

Table 4 revealed types of libraries that present at (LRCN) induction, 279 (71.3%) were majority from academic library, 21 (5.3%) school library, 29 (7.4%) national library, 43 (10.9%) public library, 19 (4.8%) special/research library and 17 (7%) private/corporate library. This indicated that academic librarians were the majority involved in the survey.

Table 5. Digital literacy skills possessed by certified librarians in Nigeria Libraries

S/N	Statement	Frequency	Percentage
1	I Have the Ability to Engage in Online Communities	191	48.8%
2	I Can Analyse Facts Objectively	199	50.8%
3	I Can Use Digital Devises Such as Laptops, Smartphones, iPad, Desktops Etc.	306	78.2%
4	I Can Find and Evaluate Online Information	199	50.8%
5	I Have an Email and I Am A Member of Nla Online	325	83.1%
6	I Network with Other Colleagues Via Computers	201	51.4%
7	I Participate in Professional Online Webinar Meeting	199	50.8%
8	I Know How to Share Resources with Other Colleagues Online	103	26.3%
9	I Can Find and Evaluate Online Information	237	60.6%
10	I Belong to Social Networks Like LinkedIn, Facebook, Instagram Etc.	205	52.4%
11	I Navigate Through the Cyberspace Very Easily	97	24.8%
12	I Am A Registered Member of Research4life, ResearchGate, Academia, Orchid, Publons	276	70.5%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

Table 5 reveals digital literacy possess by the certified librarians in Nigeria libraries, 325 (83.1%) of the respondents had an email and they were member of Nigeria Library Association online (NLA), 306 (78.2%) of the respondents can used digital devises such as laptops, smartphones,

iPad/desktop whereas 276 (70.5%) of the respondents were registered member of research4life, research gate, academia, Orchid/Publons while, 237 (60.6%) of the respondents can find and evaluate online information whereas 205 (52.4%) of the respondents belong to social networks like LinkedIn, Facebook/Instagram, 201 (51.4%) of the respondents can network with other colleagues via computer, likewise 199 (50.8%) of the respondents can analyse fact objectively/can find and evaluate information/participated in professional online webinar meeting. Also, 191 (48.8%) of the respondents had ability to engage in online communities, 103 (26.3%) of the respondents know how to share resources with other colleagues online and 97 (24.8%) of the respondents can navigate through the cyberspace very easily.

Table 6. How certified librarians acquire digital literacy skills

S/N	Statement	Frequency	Percentage
1	I have improved over time by virtue of my training and work	172	43.9%
2	My office organizes computer training for staff over time	231	59%
3	I sponsor myself to acquire digital literacy training workshops	175	44.7%
4	My institution provides adequate fund for staff training sponsorship	201	51.4%
5	It is not easy for me to learn and practice using ICT gadgets	76	19.4%
6	I enrolled in private computer and Internet training	198	50.6%
7	Assistance from friends and course mates	198	50.6%
8	By trial and error	81	20.7%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

The analysis from [Table 6](#) shows how certified librarians in Nigeria libraries acquired digital literacy skills, 231 (59%) offices organise computer training for staff over time, 201 (51.4%) institutions provides adequate fund for staff training sponsorships, 198 (50.6%) enrolled in private computer and Internet training/ assistance from friends and course mates while 175 (44.7%) I sponsor myself to acquire digital literacy training whereas 172 (43.9%) had improved over time by virtue of their training and work, 81 (20.7%) by trial and error and 76 (19.4%) not easy for me to learn and practice using ICT gadget.

Table 7. Challenges faced by certified librarians in Nigeria libraries applying digital literacy skills

s/n	Challenges	Frequency	Percentage
1	My workload is quite overwhelming	297	75.9%
2	I am not computer literate	201	51.4%
3	There is power failure most time	321	82%
4	I have limited time in my office due to other official assignments	198	50.6%
5	Cost of digital skills training	297	75.9%
6	Lack of digital equipment	305	78%
7	Lack of basic digital literacy skills	261	66.7%

Source: Generated by Researcher using SPSS 20.0 from questionnaire response, 2021

Challenges of use digital literacy skills highlighted in [Table 7](#) above such as power failure most time 321 (82%), lack of digital equipment 305 (78%), my workload is quite overwhelming/cost of digital skills training 297 (75.9%), lack of basic digital literacy skills 261(66.7%), I am not computer literate 201 (51.4%), I had limited time in my offices due to other official assignments 198 (50.6%).

Discussion

The findings of this study discovered that, digital literacy skills possess by certified librarians in Nigeria libraries were moderate and most of certified librarians were sponsor themselves to

acquired digital literacy skills training, by trial and error also, not easy for them to learn and practice using ICT gadget. This in line with Kaeophanuek (2018) stress the necessities of digital literacy skills to certified librarians by clarifying that digital literacy skills are abilities needed to learn and use various software applications and digital tools suitably 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 all involved training and retraining on the job. The findings revealed that certified librarians were facing numerous obstacles such as power failure most time, lack of digital equipment, workload is quite overwhelming, cost of digital skills training, lack of basic digital literacy skills, not computer literate and limited time in my offices due to other official assignments. This is in line with (Odu & Omosigho, 2017; Emiri, 2017; Salaam & Adegboire 2010; Dadzie 2007; Watts & Ibegbulem 2006; Adomi, 2005), who identified several factors that prevent academic librarians from effectively using their digital literacy skills on the job, including insufficient information and communication technology infrastructures and efficient online access, lack of in-depth digital skills plus information searching skills among library staff and users, and lack of in-depth digital.

CONCLUSION

According to the study's conclusions, digital literacy skills are essential for licensed librarians to achieve quality career achievement and social activities in today's digital environment. In terms of accessing and exploiting digital context, digital literacy abilities transcend the four walls of academia. It has a lot to do with certified librarians' future profession dealings and librarianship as a profession. According to the findings, certified digital literacy skills are relatively inadequate, mostly acquired through trial and error, and are hampered by a number of factors such as power failure, a lack of digital equipment, an overwhelming workload, the cost of digital skills training, and a lack of basic digital equipment, among others. However, the study concludes with a call for certified librarians in Nigerian libraries to redouble their efforts in ensuring that these future librarians and scholars are well-trained to be digitally up-to-date in order to save the profession's future and contribute as much as possible to Nigeria's digital technology revival.

RECOMMENDATIONS

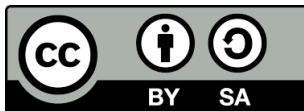
Organisations and libraries management should design and implement digital literacy programmes to educate and train and retraining certified librarians to develop their knowledge and practical skills on the use of digital technologies. More so, decision makers in governments and businesses should partner to formulate policies that will regulate prices of digital tools and facilities in order to make them affordable for researchers and individuals. Furthermore, government of Nigeria should make conscious effort to improve electricity power supply in order to enable organisations, libraries and their scholars maximize the use of their digital tools for the advancement of their digital literacy skills as well as library management should continue to mount pressure on organizational management to invest more in digital libraries services / skill development.

REFERENCES

- Adomi, E. E. (2005). Internet development and connectivity in Nigeria. *Program*, 39(3), 257-268. <https://doi.org/10.1108/00330330510610591>
- American Library Association. (2012). Digital Literacy, Libraries, and Public Policy: Report of the American Library Association Digital Literacy Task Force. *ALA, Chicago*.
- Anjaiah, M. (2016). Digital information literacy among research scholars and student's community at Dravidian University, Kuppam-Andra Pradesh (India): An exploratory study. *IOSR Journal of Humanities and Social Science*, 21(09), 01-08. <https://doi.org/10.9790/0837-2109120108>.

- Bitri, E., & Akkaya, M. A. (2018). A Comparative Study of Electronic Information Literacy Levels of Researchers: Instances from the Universities of Kastamonu and Çankırı Karatekin in Turkey. *Bilgi Yönetimi*, 1(2), 134-148. <https://doi.org/10.33721/by.492865>
- Campbell, J. D. (2006). Changing a cultural icon: The academic library as a virtual destination. *EDUCAUSE review*, 41(1), 16-18.
- Cooke, N. A. (2012). 'Professional development 2.0 for librarians: developing an online personal learning network (PLN). *Library Hi Tech News*. <https://doi.org/10.1108/07419051211241840>
- Dadzie, P. S. (2007). Information literacy: assessing the readiness of Ghanaian universities. *Information development*, 23(4), 266-277. <https://doi.org/10.1177%2F0266666907084762>
- Emiri, O. T. (2017). Digital literacy skills among librarians in university libraries in the 21st century in Edo and Delta states, Nigeria. *International Journal of Library and Information Services (IJLIS)*, 6(1), 37-52. <https://doi.org/10.4018/IJLIS.2017010103>
- Ezeani, C. N., Eke, H. N., & Ugwu, F. (2012). Professionalism in library and information science: trends, needs and opportunities in academic libraries in South East Nigeria. *Nigerian Library Association at*, 50, 52-70.
- Gui, M., & Argentin, G. (2011). Digital skills of internet natives: Different forms of digital literacy in a random sample of northern Italian high school students. *New media & society*, 13(6), 963-980. <https://doi.org/10.1177%2F1461444810389751>
- Ibrahim, W. (2015). Digital Librarian Competency in Managing digitized Library: A requirement for Cloud Computing Implementation in Libraries. *Information and Knowledge Management*. ISSN: 2224-5758.
- Jones, B., & Flannigan, S. L. (2006). Connecting the digital dots: Literacy of the 21st century. *Educause Quarterly*, 29(2), 8-10.
- Kaeophanuek, S., Na-Songkhla, J., & Nilsook, P. (2018). How to enhance digital literacy skills among information sciences students. *International Journal of Information and Education Technology*, 8 (4), 292-297. <https://doi.org/10.18178/ijiet.2018.8.4.1050>.
- Kwon, S., and Hyun, S. (2014). A study of the factors influencing the digital literacy capabilities of middle-aged people in online learning. *Korean Journal of the Learning Sciences*, 8 (1), 120-140.
- Megameno, N. J. (2010). The use of electronic information services by undergraduate nursing students at the University of Namibia's Northern Campus: A descriptive study. *Information Development*, 26(1), 57-65. <https://doi.org/10.1177/0266666909358307>
- Obaseki, T. I. (2014). *Availability and use of electronic information resources and service delivery in university libraries in South-South, Nigeria*. A thesis for the award of Doctor of Philosophy (Ph.D) in Library and Information Science, Department of Library and Information Science, University of Nigeria, Nsukka.
- Odu, O. A. & Omosigho, N. A. (2017). Digital literacy and the implication on Nigerian digital library. *International Journal of Library and Information Science Studies*, 3(2), 13-19.

- Odunewu, A. O., & Aluko-Arowolo, T. K. (2018). Information literacy, computer competence and use of electronic resources by Olabisi Onabanjo faculty members. *Journal of Information Engineering and Applications*, 8(4), 19-25.
- Ojeniyi, A. O., & Adetimirin, A. E. (2016). ICT Literacy Skills and Electronic Information Resources Use by Lecturers in Two Private Universities in Oyo State, Nigeria. *Library Philosophy & Practice*.
- Okiy, R. B. (2010) Globalization and ICT in Academic Libraries in Nigeria: The Way Forward. *Library Philosophy and Practice*, 1.
- Salaam, M. O., & Adegbore, A. M. (2010). Internet access and use by students of private universities in Ogun State, Nigeria. *Library philosophy and practice*, 3(2), 12-18.
- Van Deursen A. J., and van Dijk J. A. (2009). Improving digital skills for the use of online public information and services. *Government Information Quarterly*, 26 (2), 333–340. <https://doi.org/10.1016/j.giq.2008.11.002>
- Waldman, M. (2003). Freshmen’s Use of Library electronic resources and self-efficacy.
- Watts, C., & Ibegbulam, I. (2006). Access to electronic healthcare information resources in developing countries: Experiences from the Medical Library, College of Medicine, University of Nigeria. *IFLA journal*, 32(1), 54-61. <https://doi.org/10.1177/0340035206063903>
- Wikipedia http://en.wikipedia.org/wiki/Digital_literacy accessed at 3 February 2022



Copyright (c) 2022 by the authors. This work is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).