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# Assessment of ICT Literacy Skills of Digital Library Users and Staff in Salem University Lokoja, Kogi

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## **Introduction**

In the modern societies, Information and communications technologies (ICTs) have been universally developed as inevitable tools for enhancing the quality of education by providing access to information and knowledge contents leading to improvements and innovation in teaching, learning and research. ICT-driven library in academic institutions have assumed new roles in creation of new products and services.

The Salem University (SU), Lokoja, is a privately owned university located in Lokoja, Kogi State Nigeria. The university was founded by Archbishop Sam Amaga, the president of Salem International Christian Center, the global international base of Foundation Faith Worldwide. The university was founded in 2007 and commenced operation in 2008 alongside with a digital library. The essence of establishing digital library in SU is basically to provide online resources to staff and students in order to bridge the knowledge and digital divide between the developed and developing countries, enhance educational infrastructural development and provide educational resources for effective learning, perform library functions and provide innovative user services. The digital library provides lecturers and students with the resources to collect and analyse data, create multimedia presentations and acquire greater depth of knowledge. According to Salem University Student Handbook (2013), the focus of the library is that no matter where they may be, students and teachers can use technology to tap into the world's knowledge bank and explore exciting information about topics such as science, current events, history, and languages, the arts and communication, and share their findings with peers around the globe. Salem University digital library provides users with ample of ICT facilities and e-resources.

Development of digital libraries in Salem University (SU) changes the pattern of use and information seeking behaviour of the users. As a result of these changes, ICT devices and their creative application have without doubt transformed the quality of users' academic outcomes by improving the effectiveness of teaching, learning and research activities in the university. There is higher preference in the information age for utilizing digital libraries which is the reason Salem University is under pressure to provide the necessary ICT facilities and e-resources to enable its digital library function effectively.

However, to make effective use of information communication technologies in the digital library environment for information search and retrieval, the users and staff of the library must be well equipped with ICT literacy skills. This condition must be fulfilled if the users and staff must fully utilize digital library products and services. According to Anderson and Ainley (2010), one of the basic conditions for using the potential of ICT is to have access to the technology and the internet, and it is evident that there are wide disparities in the extent to which those technologies are available to patrons, both between and within countries. Secondly, another condition for active consummation of digital library product and services is the competence and expertise of users in utilizing ICT facilities and resources. The European Commission (2008) opines that ICT literacy is increasingly becoming an essential life competence and the inability to access or use ICT has effectively become a barrier to social integration and personal development. ICT literacy skill, in no small way has become increasingly necessary for users of digital library in Salem University. ICT literacy skills will enable the users of digital library to create, manage and distribute information.

### **Statement of Problem**

Information Communication Technologies (ICTs) have gradually transformed library environment into virtual or digital planet. Majority of library users prefer making use of digital library where information is packaged in electronic format. This necessitates the acquisition of ICT literacy skills to be able to make effective use of the library. ICT literacy skills enable the users to make effective use of avalanche digital information resources. Unless a user possesses ICT literacy skills it is impossible to navigate a world of information sources in the digital library environment.

Lack of ICT literacy skills among users might lead to underutilization of digital library resources. Due to lack of ICT literacy skills to navigate various e-portals, databases and other e-resources, users may conclude in their minds that the library has nothing valuable for use. Therefore, this would affect the teaching, learning and research objective of the university library.

It was observed that the students and staff of Salem University are underutilizing the digital library. This may be attributed to lack of requisite ICT literacy skills of the users. It

appears that there has not been any study carried out to assess if the users of digital library of Salem University possessed the ICT literacy skills to be able to access and retrieve digital information resources. It is based on this fact that the researcher embarks on this study to fill the knowledge gap by assessing ICT literacy skills among digital library users of Salem University, Lokoja, Kogi State.

### **Objective of the Study**

The general objective of the study is to assess ICT literacy skills of digital library users and staff of Salem University Lokoja, Kogi State. Specifically, the study intends to:

1. Examine the ICT facilities and resources available in Salem University digital library.
2. Assess the level of ICT literacy skills possessed by digital library users and staff of Salem University.
3. Assess the challenges associated with the acquisition of ICT literacy skills among digital library users and staff of Salem University.
4. Identify strategies for enhancing acquisition of ICT literacy skills of digital library users and staff in Salem University.

### **Research Questions**

The study is guided by the following research questions:

1. What are the ICT facilities and resources available in Salem University digital library?
2. What is the level of ICT literacy skills possessed by digital library users and staff in Salem University?
3. What are the challenges associated with the acquisition of ICT literacy skills among digital library users and staff in Salem University?

4. What are the strategies for enhancing acquisition of ICT literacy skills of digital library users and staff in Salem University?

### **Significance of the Study**

With respect to the objective of this study, it is expected that the findings of this study will be of great significance to the following groups: library managers and staff, lecturers, educational planners, students, researchers, government and university management.

The results of this study will provide useful information to library managers and staff in the identification of possible solutions to the problems of acquisition of ICT literacy skills.

The study will provide useful information to lecturers and educational planners on the need to integrate ICT in academic curriculum, teaching ICT literacy courses and to students and researchers on strategies for making fruitful and effective use of digital library services.

The government will also stand to gain from this research as it will help create an impact in policy formulation with regards to the National Information Technology Policy in the country.

Finally, this study will be beneficial to the university management in the sense that the findings of this research will serve as a tool for review of ICT facilities and resources available in the digital library and the need to provide others that are non-existence.

### **Scope of the Study**

The crux of this study is an assessment of ICT literacy skill among users and staff of SU digital library in Kogi State. The study specifically covers digital library at Salem University Lokoja.

## **Literature Review**

### **Concept of Digital Library**

Digital library is an electronic version of the conventional library. It is ICT driven library environment that provides information users access to digital information resources and services. Digital library is a home for avalanche ICT devices and applications used to access, store,

retrieve, evaluate, repackage and distribute information. Ekere, Omekwu and Nwoha (2016) define digital library as a collection of digital documents or objects. Their definition reflects universal perception of people about digital library. However, Smith (2001) defines a digital library as an organized and focused collection of digital objects, including text, images, video and audio, with the methods of access and retrieval and for the selection, creation, organization, maintenance and sharing of collection. Digital library is the library where the holdings of the library are available in electronic format, and the services of the library are also made available digitally and frequently over the Internet so that users can access them remotely (Onwuchekwa and Jegede, 2011).

The term ‘Digital Library’ may be used in different ways or replaced with some other terms. Chowdury and Chowdury (2000), Bishop, Battenfield and VanHouse (2000) and Borgman (1999) draw attention to both the complementarities and contradictions in various definitions as terms such as electronic library, virtual library, hybrid library, gateway library, library of the future, and library without walls, sometimes synonymously with digital library, sometimes to denote a subset, or a superset, of it whilst at other times to denote a rather different concept. Whatsoever term it bears, digital libraries have been a place where information resources and services are delivered electronically. Anyim (2018) posits that digital libraries make research more interesting as it serves as intellectually organized information resource centre and a world of knowledge at researchers’ fingertip. Okerson (2009) refers digital library as a place of hope and adventure for every sort of searcher after knowledge and a place where people and ideas meet and new ideas ignited, making possible new relationships and new possibilities.

The rationale for developing digital libraries in universities is basically to provide online resources to staff and students in order to bridge the knowledge and digital divide between the developed and developing countries, enhance educational infrastructural development and provide educational resources for effective learning, perform library functions and provide innovative user services. Kesavan (2009) states that developing digital libraries is basically for the following reasons:

- To increase access to resources and facilitate new research
- To aid conservation / preservation and add value to the collection of the parent organization

- To offer consistent access, give flexibility, provide enhanced capabilities for analysis and manipulation of information / data and to “save the time of the users”
- To support e-learning and online research
- To supplement traditional print resources, and integrate multimedia library resources on a common platform
- To increase productivity, and provide better service to users
- To make collections accessible to concurrent users
- To deliver a complete and complex round-the-clock set of aggregated information services irrespective of users’ location.

Digital library is an ICT-driven information resource centre serving similar function to conventional library in a digital or electronic format. Digital library provides different types of electronic resources and ICT facilities to aid research. E-resources used in digital library was stated by Okore, Asogwa and Eke (2009) to include integrated contents consisting of documents, databases, ebooks, e-journals, links to other resources and multimedia materials, CD-ROM, indexes, reference works and other digital collections. Digital resources could be subscription based or developed and customized using local information resources or can be a combination of both. Resources in a digital library include both electronic information resources and the facilities used to access them. Some examples include visual materials, news or other media sources and archives, portals that provide links or URLs relevant to particular disciplinary topics, online reference digital readers, digital film or video, maps, online or digitized documents, audio materials, data archives, digital facsimiles, curricular materials and web sites created by other faculty and/or other institutions, personal online diaries (blogs) etc. other online information resources, including bibliographic databases, electronic reference books, search engines for full text collections, digital collections of data and data sets (Harley, 2007).

Ekere, Omekwu and Nwoha (2016) posit that digital library is established to deliver personalized library caliber knowledge directly to their users without being caught in the web of unorganized and unmanaged information. Furthermore, digital library has the goal to perform all functions of the traditional library in an online fashion in addition to other services only available in the present digital world. Further benefits of digital libraries were identified by the UNESCO Institute for Information Technologies in Education (2003) and Okenna (2006). They stressed that digital libraries provide educational resources for electronic education which create easy

access to records of human knowledge, room for resource sharing around the globe, interconnectivity among networked libraries, inter library activity such as inter-library loan and lending as well as up to date information to its users.

Access to e-resources offered by the digital library induces users to prefer digital library over conventional library. The rationale behind the preference was identified by Iwehabura (2009) who attributes it to the ability to provide faster and easier access to current information by users in various places such as homes, offices and other workplaces, hostels and dormitories; easy storage and the possibility of sharing the same information resources among many users at a time, saving space with relatively easy maintenance and easy linkage to indexing and abstracting databases. The internet for example, provides the opportunity to access a wide range of topics on different subjects. It also allows students, staff and other researchers to retrieve information from diverse sources such as e-journals, e-books, databases, newspapers and other sources. Furthermore, it offers the students the opportunity to control their learning and helps them to have interactions with information pertaining to their needs (Jones and Madden, 2002; Harley, 2007).

### **Concept of Digital Library Users**

Digital library users are the people or group of people that make use of the digital library facilities, resources and services to achieve their information goals. In SU, Lokoja, digital library users include the students, staff, faculty members, researchers and other members of the university community. In other words, digital libraries serve patrons in pursuit of information for personal, academic and general purposes.

Nwalo (2003) defines library users as people who visit the library with the purpose of exploiting its resources to satisfy their information needs. The underlined word "visits" as used in the 21st century, include remote access to the library portal or website. Aina (2004) considers the term "user" to include all those who avail themselves of the services offered by a library. However, Snow (2008) opines that the term encompasses various terms such as patrons, clients, information users, information seekers, consumers, readers, etc. these terms can be used interchangeably, because they all apply to those seeking the services of a library Aina (2004) posits that library users are the focal point to the 21st century library and information services, as the library primarily exist to satisfy the user. This is the reason why the mission statement of any



library always reflects the determination of the other components of the library to render excellent services to library users. As such, a library is said to be productive when the library users are satisfied. Cited in Ekere, Omekwu and Nwoha (2016), Fuhr et al. asserts that information needs are central to all libraries whether digital or otherwise and as such efforts to design and implement digital libraries must be rooted in the information needs, characteristics and contexts of the beneficiaries of the library; the users, in order to ensure their acceptance by them and other application communities.

Users are very important in the library because without them, it would be useless and a waste of resources for establishing a library. Users are to the library what customers are to the business firm. According to Nwalo (2003) the library user is undisputedly, the most important person in any library setting. The library user being the most important person in the library entails that the sole reason for the existence of library is to serve the users. The satisfaction of library users is a function of the quality of information product(s) or resources received and the quality of information system as well as library facilities and services provided to access the information product. Therefore, satisfaction is a function of three main sources – quality of the information product, the information system and the services that make the information product available (Ekere, Omekwu and Nwoha, 2016). These three levels of measure of satisfaction are defined by the information resources, facilities and ICT literacy skill in this study. These sources of satisfaction, when properly harnessed may contribute to users' overall satisfaction (Sirkin, 2003). The users of library believe that digital library provides them with more current, accurate, precise and relevant information resources with the use of Information Communication Technological facilities.

### **Concept of ICT Literacy Skill**

In a digital library environment, knowledge of the use of ICT facilities and resources to access, evaluate and retrieve information is not negotiable. The users of digital libraries and library personnel must have requisite ICT literacy skills to enable them achieve their purpose. ICT literacy skill is the ability to use digital technology, communication tools, and/or networks to define access, manage, integrate, evaluate, create, and communicate information ethically and legally in order to function in a knowledge society. With ICT literacy skill the users of digital libraries can find information on the web, online databases, CD-ROMS and other digital sources

of information and be able to make a judicious presentation. In a general sense, ICT literacy skill was described by Tornero (2004) as the complex process of acquiring (by individual, humanity as a whole and institutions), abilities and skills that are intellectual (perspective, cognitive and even emotive), practical (physiological and motor) and organizational (institutions), and that corresponds to the intellectual technological and social transformation of the latter part of the twentieth century

ICT literacy skill is defined as the ability to use digital technologies, communication tools, and networks appropriately to solve information problems in order to fit in into the society. This includes the ability to use technology as a tool to research, organize, evaluate and communication and the possession of the ethical and legal issues surrounding the access and use of information (Education Testing Services, 2002). Information Communication Technology literacy skills has immeasurable importance on digital library use. Igun (2006) opines that one essential requirement to operate in the knowledge society of the 21st century is ICT skills which start from turning on a computer to create, store, retrieve and access information online. Meanwhile, digital library environment lays more emphasis on the users' knowledge of the applications, navigation, evaluation, retrieval of information. ICT literacy skill is the proficiency in using digital technology, communication tools, and network appropriately to solve information problems in order to function in the knowledge society.

Ugwuanyi (2011) posits that ICT literacy skills are very necessary as the new literacy is required for effectively using ICT to accomplish functions in an information age. He further states that capacity of users and librarians alike to exploit the internet depends on the level of literacy, education and mastery of the technologies concerned. It was observed by Leu, Kinzer, Coiro and Cammack (2004) that ICT literacy skills possessed by the users enable them to understand how to construct, design, manipulate, and upload their own information to add to the constantly growing and changing body of knowledge that defines internet.

### **Challenges Associated with Acquisition of ICT Literacy Skills.**

Acquisition of ICT literacy skill is indisputably a step in the right direction towards an effective utilization of digital library resources and services. To thrive in ICT library environment without requisite skills on navigation of digital information platforms to access, evaluate and retrieve pertinent information is like driving a car without engine. ICT literacy skill

acquisition has been fraught with many challenges which hinder the patronage of digital libraries.

Among the problems associated to acquisition of ICT literacy skill according to Jordan (2003) is lack of integration of ICT in academic curriculum. It was believed that proper integration of ICT related courses in academic curriculum will equip students beforehand with relevant ICT skill. Lwoga, Sife, Busagala, and Chilimo (2016) attribute challenges to acquisition of ICT literacy skill to material and human factors. They assert that over-dependency on donor support, low bandwidth, inadequate ICT facilities, under utilization of the few available ICT facilities, inadequate ICT training and failure to retain ICT manpower proved to be a threat to acquisition of ICT literacy skill.

The barriers mentioned above are of little or no different from those identified by Chiware (2007) which include funding, human resources, training and retention of skills, internet connectivity, telecommunication infrastructure, and copy right issue. He equally stated that the successful acquisition of ICT literacy skills depends on the commitment of management and availability of funds, trainers and time for participants to leave their jobs and go for short courses at given intervals over a long period of time. Lack of fund has always been a problem whenever the issue of skill acquisition raises head. This is because skill is an asset and to acquire an asset fund is required. Haneefa (2007) in the same vein, states that lack of fund, infrastructure and skilled professionals to embark on automation of all library management activities and application of ICT as problem of ICT literacy acquisition. Adeyoyin (2005) pointed out poor infrastructural development, funding, ICT skills among staff as problems facing Nigerian university libraries along the road to the 21st century.

Lack of enthusiasm to training in ICT has been discovered to be one of the causes of inadequate ICT literacy skill. Womboh and Abba (2008) observe laissez-faire attitude among lecturers, students and librarians who fold their alms waiting for their employer to train them in ICT instead of making their own efforts. They opine that people should employ self effort in becoming ICT literate as cybercafés is springing up in every street corner.

Womboh and Abba (2008) posit that the delay in the implementation of government policies on ICT projects retards ICT literacy acquisition. They further made reference to a failed national policy on information technology and state that “the non-implementation of the National

policy on information Technology with a mission to make Nigeria an ICT capable country in Africa and a key player in the information society by the year 2005...and the provision of National Information Infrastructure as the gateway to the global information infrastructure was as of 2008 not fully being implemented.

### **Enhancement Strategies for Effective Acquisition of ICT Literacy Skill**

To effectively mitigate the barriers to acquisition of ICT literacy skills, there must be creative strategies that could be adopted based on the identified problems. Having identified inadequate integration of ICT in academic curriculum and other factors, Education Testing Services (2004) suggested some of the following strategies that will help to promote digital literacy such as inclusion of a favourable environment for learning ICT in educational curriculum and creating a favourable environment for learning ICT competencies; innovative strategies or intuitive learning strategy by employing video games; parallel literacy strategies through the spread of more modern telephone systems, development of interactive digital television; and the convergence of audiovisual media and the internet connection equipment and multimedia facilities; and the involvement strategies through NGOs, government ,private companies, universities, research institutes and others.

When there is adequate funding in the University for Academic, Infrastructure and skill acquisition programme, performance of both staff and users of the library improves. Based on this, Womboh and Abba (2008) beckoned on the commission and other government agencies such as Ministry of Education, NUC, ETF to provide increased fund for Nigerian universities to sponsor staff and users of digital library for training in ICT, at least on a part-time basis. They further opine that those government agencies should be able to sponsor short training courses abroad for librarians especially on ICT. ICT training among librarians and users in digital library very paramount as recounted by Igun (2006) who suggest that there should be training of the librarians for the 21st century and must follow cooperative education which emphasizes knowledge and acquisition of work-related skills and practices in ICT library environment. She pointed out that this will remedy the theoretical knowledge and skill gap. She also reiterated that formal system produces people with facts and theoretical knowledge but limited practical skills and the apprenticeship (informal) system which produces people with limited practical skills and

no theoretical knowledge. Jordan (2003) on the other hand, stresses the need for in-house ICT training programs for library personnel from developing countries and users of the parent institution.

## Methodology

The descriptive survey research design was adopted for this study. The area of study was Lokoja located in the south north central region of Nigeria, Kogi State. The population of the study is 53 consisting of 3 digital library staff 50 registered users of digital library of Salem University. The entire population was used without sampling as it was not large enough. The instruments for data collection include a well-structured questionnaire and an observation checklist. A total of 53 questionnaires were distributed to the users and staff of the digital library. The study used frequency counts, percentages, mean scores and ranking as statistical measures for data analysis. The Research questions formed the basis for data analysis.

## Data Presentation and Analysis

A total of 53 copies of the questionnaire were distributed to the digital library users and staff and were completely retrieved from the respondents. The data obtained from this was organized and analyzed using mean average and percentages which are presented in tables as follows:

**Table 1: Age Range of Respondents**

S/N	AGE RANGE	FREQUENCY	PERCENTAGE (%)
1	15-24	23	43.4%
2	24-34	12	22.6%
3	34-44	10	18.9%
4	44 and Above	8	15.1%
	<b>Total</b>		100%

**Table 2: Academic Level of Respondents**

S/N	ACADEMIC	FREQUENCY	PERCENTAGE (%)
1	Students	30	56.6%
2	Lecturers	16	30.2%

3	Staff	7	13.2%
	<b>Total</b>		<b>100</b>

Tables 1 and 2 above show the average age range and academic level of users and staff of the Salem University digital library calculated in percentages. The data presented in Table 1 shows that majority of the library users (about 43.4%) fall between the ages of 15 – 24. In accordance, Table 2 shows that this 43.4% age ranges of users are likely to be students who make up the majority of the library’s users at 56.6%. Table 1 equally shows that a lesser percentage of users fall within the age range of 44 and above at 15.1% and 34 – 44 at 18.9% most of whom, as portrayed in Table 2, could be lecturers and staff with a lesser number of students in these age groups.

The implication of this data is that mostly students (undergraduates and postgraduates) patronize the SU digital library either for academic or other purposes. It also proves that students between the ages of 15 and 24 make use of the library more than students between the ages of 25 and above. This could be because they are likely to be more ICT literate and technologically inclined than their elderly counterparts. It could also mean that students from 25 and above either lack requisite ICT literacy skills or unaware of facilities and digital resources available in Salem University digital library which make them not to utilize the digital library much.

**Table 3: ICT resources and facilities available in Salem University (SU) digital library**

S/N	ICT Facilities	Available	Not Available
1	Computer Systems	✓	
2	Digital Cameras		✓
3	Projectors	✓	
4	High capacity printers	✓	
5	Scanners	✓	
6	Inverter	✓	
7	Photocopier Machines	✓	
8	Multimedia	✓	
9	Wide Area Network (WAN) i.e. WIFI	✓	
10	Power Generator		✓
11	CD-writer	✓	
12	Facsimile transmission systems (Fax)		✓
13	Telephone		✓
14	The World Wide Web (www)	✓	
15	Search Engines	✓	

16	Servers	✓	
17	VSAT based Internet connectivity		✓
18	Online databases	✓	
19	Online Public Access Catalogue (OPAC)	✓	
20	CD-ROMs	✓	
21	Video CDs		✓
22	Portals	✓	
23	Online indexes and abstracts	✓	
24	E-journals	✓	
25	E-books	✓	

Table 3 is an observation checklist of ICT resources and facilities available in Salem University digital library. Analysis shows the ICT facilities and resources available in Salem University digital library such as computer systems, Inverter, high capacity printers, projectors, scanners, photocopier machines, multimedia, Wide Area Network (WAN) i.e. WIFI, CD-writer, The World Wide Web (www), search engines, online databases, Online Public Access Catalogue (OPAC), CD-ROMs, portals, online indexes and abstracts, e-journals and e-books . Analysis also shows that certain ICT resources are not available in Salem University digital library such as digital cameras, power generator, facsimile transmission systems, telephone, VSAT based Internet connectivity and video CDs

**Table 4: Level of ICT literacy skills possessed by digital library staff and users**

S/N	ICT SKILL	VHE	HE	LE	NA	MEAN	RANK	DECISION
1	Turning on computer	53	0	0	0	4.0	1 <sup>st</sup>	VHE
2	Connecting to the Internet	46	4	2	1	3.8	2 <sup>nd</sup>	VHE
3	Opening a computer file	42	7	3	1	3.7	3 <sup>rd</sup>	VHE
4	Word processing	41	8	2	2	3.7	3 <sup>rd</sup>	VHE
5	Sending an email message	40	6	3	4	3.5	4 <sup>th</sup>	VHE
6	Deleting a file from computer	40	3	6	4	3.5	4 <sup>th</sup>	VHE
7	Using a www search engine eg google	38	5	6	4	3.5	4 <sup>th</sup>	VHE
8	World Wide Web(www) search	39	4	3	7	3.4	5 <sup>th</sup>	HE
9	Downloading a file from internet	32	12	6	3	3.4	5 <sup>th</sup>	HE
10	Creating files	39	4	3	7	3.4	5 <sup>th</sup>	HE

11	Using keyword phrases to search for information on the www	30	11	10	2	3.3	6 <sup>th</sup>	HE
12	Copying a file from one disk to another	32	9	9	3	3.3	7 <sup>th</sup>	HE
13	Saving an image or graphic from a www page	8	9	33	3	2.4	8 <sup>th</sup>	LE
14	Using more advance searching techniques than keywords	7	10	26	10	2.3	9 <sup>th</sup>	LE
15	Creating a directory or file folder	7	5	30	11	2.2	10 <sup>th</sup>	LE
16	PowerPoint Presentation	5	10	23	15	2.1	11 <sup>th</sup>	LE
17	Installing program software	7	9	19	18	2.1	11 <sup>th</sup>	LE
18	Using CD-ROM to find information	7	5	28	13	2.1	11 <sup>th</sup>	LE
19	Database navigation	6	6	26	15	2.1	11 <sup>th</sup>	LE
20	Downloading files from Databases	4	7	26	16	2.0	12 <sup>th</sup>	LE

**Hints:** 0.00 – 0.59 = Not At All (NA), 1.00 – 2.49 = Low Extent (LE), 2.50 - 3.49 = High Extent (HE) and 3.50 – 4.00 = Very High Extent (VHE)

Table 4 shows the level of ICT literacy skills possessed by Salem University digital library staff and users. Analysis shows that users and staff of Salem University digital library possess basic computer appreciation skills to a very high extent like turning on computer, connecting to the Internet, opening a computer file, word processing, sending an email messages, deleting a file from computer, using a www search engine eg google etc. It was also revealed by the analysis that Salem University users and staff of digital library low level of requisite ICT literacy skills in the aspect of information search, documentation and presentation such as using more advance searching techniques than keywords, saving an image or graphic from a www page, creating a directory or file folder, PowerPoint presentation, installing program software, using CD-ROM to find information, database navigation and downloading files from databases.

**Table 5: Challenges associated with the acquisition of ICT literacy skills among digital library staff and users in Salem University**

S/N	CHALLENGES	SA	A	D	SD	MEAN	RANK	DECISION
1	Inadequate funding	42	7	3	1	3.7	1 <sup>st</sup>	SA
2	Inadequate ICT in curriculum	38	5	6	4	3.5	2 <sup>nd</sup>	SA



3	Lack of commitment to learning ICT skill	39	6	5	3	3.5	2 <sup>nd</sup>	SA
4	Lack of training opportunity	40	3	6	4	3.5	2 <sup>nd</sup>	SA
5	Poor ICT facilities	36	7	6	4	3.4	3 <sup>rd</sup>	A
6	High cost of ICT literacy training	29	14	6	4	3.3	4 <sup>th</sup>	A
7	Lack of interest in digital information	30	6	5	12	3.0	5 <sup>th</sup>	A
8	Overload of working hours	6	5	25	17	1.8	6 <sup>th</sup>	D

**Hints:** 0.00 – 0.59 = Strongly Disagree (SD), 1.00 – 2.49 = Disagree (D), 2.50 - 3.49 = Agree (A) and 3.50 – 4.00 = Strongly Agree (SA)

Table 5 presents the analysis of challenges associated with the acquisition of ICT literacy skills among digital library staff and users in Salem University. It was discovered that some factors are responsible for inadequate acquisition of ICT literacy skills among users and staff of Salem University digital library such as inadequate funding with a mean weight of 3.7, inadequate ICT in curriculum (3.5), lack of commitment to learning ICT skill (3.5), lack of training opportunity (3.5), poor ICT facilities (3.4), high cost of ICT literacy training (3.3) and lack of interest in digital information (3.0). Analysis shows that inadequate funding is the major constraint to acquisition of ICT literacy skill but disagree that overload of working hours can pose a constraint.

**Table 6: Strategies for enhancing acquisition of ICT literacy skills**

S/N	STRATEGIES	SA	A	D	SD	MEAN	RANK	DECISION
1	There should be adequate funding of ICT literacy skill of the university staff and students	44	7	2	0	3.8	1 <sup>st</sup>	SA
2	ICT facilities of the university should be upgraded to encourage ICT literacy	42	9	1	1	3.8	1 <sup>st</sup>	SA
3	ICT should be integrated in curriculum	40	9	2	2	3.6	2 <sup>nd</sup>	SA
4	Designing and sponsoring specific ICT training programme	35	14	2	2	3.5	3 <sup>rd</sup>	SA
5	People should go extra	37	8	5	3	3.5	3 <sup>rd</sup>	SA

6	mile on their own to acquire ICT skill Involvement strategies through NGOs, government, private companies, universities and research institutes	36	10	4	3	3.5	3 <sup>rd</sup>	SA
7	Creating awareness on the potential of digital information resources	35	12	5	1	3.5	3 <sup>rd</sup>	SA

**Hints:** 0.00 – 0.59 = Strongly Disagree (SD), 1.00 – 2.49 = Disagree (D), 2.50 - 3.49 = Agree (A) and 3.50 – 4.00 = Strongly Agree (SA)

Table 6 shows the analysis of strategies for enhancing acquisition of ICT literacy skills. Analysis shows that for enhancement of acquisition of ICT literacy skill among users and staff of digital library, there should be adequate funding of ICT literacy skill of the university staff and students weighing the mean score of 3.8, ICT facilities of the university should be upgraded to encourage ICT literacy (3.8), ICT should be integrated in curriculum (3.6), designing and sponsoring specific ICT training programme (3.5), people should go extra mile on their own to acquire ICT skill (3.5), involvement strategies through NGOs, government, private companies, universities and research institutes (3.5) and creating awareness on the potential of digital information resources (3.5).

## Discussion of findings

### *ICT resources and Facilities available in Salem University digital library*

Findings from the observations made by the researcher of this study showed that there is availability of ICT resources and facilities in SU digital library such as computer systems, Inverter, high capacity printers, projectors, scanners, photocopier machines, multimedia, Wide Area Network (WAN) i.e. WIFI, CD-writer, The World Wide Web (www), Search Engines, Online databases, Online Public Access Catalogue (OPAC), CD-ROMs, portals, online indexes and abstracts, e-journals and e-books. This is supported by the findings of Okore, Asogwa and Eke (2009) that summarized e-resources to include all integrated contents consisting of documents, databases, e-books, e-journals, links to other resources and multimedia materials, CD-ROM, indexes, reference works and other digital collections. Similarly, the findings of the study agree with Harley (2007) who discovered the resources in a digital library to include both

electronic information resources and the facilities used to access them. Some examples include visual materials such as digital camera, CD-ROM, projector, PowerPoint presentation; portals that provide links or URLs relevant to particular disciplinary topics, online reference digital readers, digital film or video, maps, online or digitized documents, audio materials, digital facsimiles, curricular materials and web sites, etc. other online information resources, including bibliographic databases, electronic books, search engines etc. Findings also show that certain ICT resources and facilities are lacked in SU digital library such as digital cameras, power generator, facsimile transmission systems (Fax), telephone, VSAT based Internet connectivity and video CDs. The consequences of the absence of these resources and facilities are that the library would be hindered from rendering some essential services to the users.

### ***Level of ICT literacy skills possessed by digital library users and staff***

Findings of the study revealed that staff and users of Salem University digital library possess basic computer appreciation skills to a very high extent which include turning on computer, connecting to the Internet, opening a computer file, word processing, sending an email messages, deleting a file from computer, using a www search engine etc. the findings agree with Igun (2006) who opines that one essential requirement to operate in the knowledge society of the 21st century is ICT skills which start from turning on a computer to create, store, retrieve and access information online. However, it was revealed by the findings of the study that users and staff of the digital library lack adequate requisite ICT literacy skills in some areas which include using more advance searching techniques than keywords, saving an image or graphic from a www page, creating a directory or file folder, PowerPoint presentation, installing program software, using CD-ROM to find information, database navigation and downloading files from databases. The consequence of lack of requisite ICT literacy skill according to Leu, Kinzer, Coiro and Cammack (2004) limits the ability of digital library users to understand how to construct, design, manipulate, and upload their own information to add to the constantly growing and changing body of knowledge that defines internet.

### ***Challenges associated with the acquisition of ICT literacy skills among digital library users and staff in Salem University***

Findings of the study reveals challenges associated with the acquisition of ICT literacy skills among digital library users and staff in Salem University which includes inadequate

funding, inadequate ICT in curriculum, lack of commitment to learning ICT skill, lack of training opportunity, poor ICT facilities, high cost of ICT literacy training and lack of interest in digital information. The findings agree with Adeyoyin (2005) who posits poor infrastructural development, poor funding and lack of ICT training opportunity among staff as problems facing Nigerian university libraries in the acquisition of ICT literacy skill. On the other hand, the finding agrees with Jordan (2003) who observed that lack of integration of ICT in academic curriculum affect ICT literacy skill of students. Finding shows that overload of working hours would never pose a constraint to acquisition of ICT literacy skill.

### ***Strategies for enhancing acquisition of ICT literacy skills***

Findings revealed strategies for enhancing ICT literacy skill which state that there should be adequate funding of ICT literacy skill of the university staff and students, ICT facilities of the university should be upgraded to encourage ICT literacy, ICT should be integrated in curriculum, designing and sponsoring specific ICT training programme, people should go extra mile on their own to acquire ICT skill, involvement strategies through NGOs, government, private companies, universities and research institutes and creating awareness on the potential of digital information resources. The findings are supported by Womboh and Abba (2008) who beckoned on the commission and other government agencies such as Ministry of Education, NUC, ETF to provide increased fund for Nigerian Universities to sponsor staff and users of digital library for training in ICT, at least on a part-time basis. They further opine that those government agencies should be able to sponsor short training courses abroad for librarians especially on ICT.

### **Implications of the study**

This study has obvious implications for libraries in Nigerian higher education institutions as the lack of requisite ICT literacy skill among library users and staff in the use of digital library is very glaring. In more advanced countries these gap is at the barest minimum or non-existence, because most library users and staff are ICT literate. In addition, this study has implications for the following groups:

#### **Implications for the University and Library Management**

The university management and staff will benefit from this research in terms providing adequate ICT literacy, workshops and training programmes which will be beneficial to both students and staff of the library.

### **Implications for Students**

Students will equally benefit from this since the findings of this study can be used as a guideline by both the library management and the university administration in the provision of functional, efficient and effective facilities, resources and services that foster acquisition of ICT literacy skill.

### **Implications for Researchers and lecturers**

Researchers and lecturers will benefit from this study as it would serve as a basis for enhancement and effectiveness of further research works on ICT literacy towards digital library facilities, resources and services.

### **Conclusion**

Based on the observation checklist, the ICT facilities and resources available in SU digital library include computer Systems, Inverter, high capacity printers, Projectors, Scanners, Photocopier Machines, Multimedia, Wide Area Network (WAN) i.e. WIFI, CD-writer, The World Wide Web (www), Search Engines, Online databases, Online Public Access Catalogue (OPAC), CD-ROMs, Portals, online indexes and abstracts, E-journals and E-books. However, library has no facilities and resources such as digital cameras, Power Generator, Facsimile transmission systems (Fax) and Telephone, VSAT based Internet connectivity and video CDs. Based on the findings of this study, it was concluded that the users and staff possess basic ICT literacy skills to a very high extent such as turning on computer, connecting to the Internet, opening a computer file, word processing, sending an email messages, deleting a file from computer, using a www search engine etc. However, they equally expressed lack of requisite ICT literacy skills in some areas that include using more advance searching techniques than keywords, saving an image or graphic from a www page, creating a directory or file folder, PowerPoint presentation, installing program software, using CD-ROM to find information, database navigation and downloading files from databases. Both users and staff attributed their challenges with the acquisition of ICT literacy skills to inadequate funding, inadequate ICT in curriculum, lack of commitment to learning ICT skill, lack of training opportunity, poor ICT facilities high cost of ICT literacy training and lack of interest in digital information. Finally, the strategies for enhancing ICT literacy skill among users and staff were identified by the study as

follows: there should be adequate funding of ICT literacy skill of the university staff and students, ICT facilities of the university should be upgraded to encourage ICT literacy, ICT should be integrated in curriculum, designing and sponsoring specific ICT training programme, people should go extra mile on their own to acquire ICT skill, involvement strategies through NGOs, government, private companies, universities and research institutes and creating awareness on the potential of digital information resources.

### **Recommendations**

The university library environment is changing, therefore, users and staff of the library are advised to keep pace with these changes otherwise they would be left behind. Providing unlimited access to electronic information resources in the university digital libraries as well as possessing ICT literacy skill is one way of keeping pace with these changes. The more ICT savvy of library staff and users, the more the digital library environment becomes a 'promise land' for effective information delivery. Hence, the researcher made the following recommendations:

1. The library should try to add to its ICT facilities and resources such as digital cameras, Power Generator, facsimile transmission systems and telephone, VSAT based Internet connectivity and video CDs etc. in order to capture users and staff interest in acquisition of ICT literacy skills.
2. Library staff, students and faculty members should be provided with ICT literacy programmes such as workshop, seminars and in-house training to enable them learn how to access various digital information resources and services.
3. The use of newsgroups and online forums to discuss and create awareness of the emerging technologies in the library and their uses should also be adopted. In addition, a sort of communication and feedback mechanism should also exist between the SU and the library to see to the effective maintenance and sustainability of the digital library.
4. There should be continuous evaluation of the digital library system to determine the exact state of the library at any given point in time.

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