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Awareness of Information and Communication Technology-Based Information Resources in Library User Education Programmes in Colleges of Education in Southern Nigeria

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Abstract

The study investigated awareness of information and communication technology-based information resources in library user education programmes in South-South Nigeria. Three research questions and one hypothesis guided the study. Descriptive survey research design was adopted for the study. The population of the study comprised of 1022 respondents which consist of 62 staff and 960 library users. The instrument for data collection was questionnaire of a fourpoint rating scale and observation checklist. Tools used for data analysis of research questions were frequency, percentage, mean and standard deviation; t-test was used to test the null hypothesis at selected probability of 0.05 level significance. The findings revealed that more than half of the listed ICT-based resources were available in the six colleges of education libraries under study. The study also shows that the respondents had high awareness on these items. It was deduced from the findings that the method used to a high extent for awareness of ICT-based resources for user education programmes in colleges of education libraries was conferences. The study recommended among others, that, colleges of education authorities should embark on capacity building programmes in terms of training and re-training of librarians on ICT awareness.

Keywords Awareness, Information Resources, User education, ICT

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Introduction

Awareness of information and communication technology-based resources for user education programme is the ability of a library user to have the knowledge of ICT-based resources for user education programme. Awareness is to perceive, to feel, or to be conscious of events, objects, thoughts, emotions or sensory patterns. In this level of consciousness, sense data can be confirmed by an observer, without necessarily implying understanding. More broadly, it is the state or quality of being knowledgeable about something. According to <u>Izard (2007)</u>, awareness refers to public or common knowledge or understanding about a social, scientific or political issue. Thus, many movements try to foster awareness of a given subject as raising consciousness. Awareness leads to utilization, because if an individual is aware of an existing event, the next step is to make use of this event. The librarians have a lot to play in this regards. They should try as much as possible to acquaint the library users through orientation or other programmes in other for them to be aware of the resources in the library.

Edoka (2000) defined library, as alife expository of the cultural past and sustainers of intellectual activities that anticipates the future. The library is the agency devoted solely to the purpose of collecting, preserving, transmitting and securing the widest and most effective use of the record of civilization by the society. Its awareness as part of a social, political, economic or administrative set up cannot be over-emphasized. Tremendous increase in the volume of publications as well as the resulting complexity of libraries and the methods by which literature is organized and disseminated, coupled with the unprecedented rise in admission to institutions of higher learning in Nigeria made academic libraries to give priority to user education programme.

A Nigerian student in tertiary institution is expected to have an idea no matter how little of what is happening in other areas with the knowledge of how to exploit the resources of the library, both print and electronic materials. Librarians have to spread the awareness to library users on how to use the library; they have to familiarize the students with the techniques of the library use and information retrieval. The concept of the library as a store house of knowledge for educational programmes as embodied in books has been altered greatly by trends in the Information and Communication Technology (ICT) utilization in libraries, especially academic libraries. This has continued to revolutionize the pattern and scope of library services with the introduction of the use of ICT into library user education programme. ICT is a generic term that refers to technologies which are being used for collection, storing, editing and passing on information in various forms. Tinio (2002) defined ICT-Based as a diverse set of technological tools and resources such as computers, Internet, broadcasting technologies (radio and television) that communicate, create, disseminate, store and manage information while ICT-based resources encompass any medium for recording information (magnetic disk, tape, optical disks (CD/DVD), flash and using communication through voice and sound or images, microphones, cameras, loudspeakers, telephone to cellular phones. It includes the wide variety of computing hardware (Desktop computers, laptops, server, mainframes, network storage). Information and communication technology-based resources are the electronic gadgets or appliances that process data (Ormes and Dempsey 2007). Library users can only achieve this success when the awareness of ICT-based resources is made known to them.

Awareness of ICT-based resources for library user education programmes, is the ability for library users to have the knowledge of ICT-based resources in the library due to the potentials of ICT-based resources in the library, potentials like easy use of library resources, easy retrieval of information, among others. Awareness can be done through such methods as lectures, orientation, seminars, conferences, bill boards, demonstrations and guided tours, e.t.c. In the context of this study, therefore, awareness of ICT-based resources for library user education programme is the ability for an individual to have the knowledge of existing ICT opportunity and make use of this opportunity which

will enhance effective and efficient retrieval services in the library. This could be achieved with the user education programme.

User education refers to a well-planned programme of training and education of patrons on the skills and techniques of locating, retrieving and utilizing of library materials. User education is organized to increase users' ability to locate the materials they need, extend their knowledge of useful library tools in searching for materials, encourage them to make effective use of library resources and knowledge of the various rules and regulations of the library. Feather and Sturges (2005) opined that user education in libraries consists of a comprehensive service and process of making the user selfreliant in the act of locating, sorting and repackaging in formation. Akinbode (2006), Adeniyi (2000) and Onalapo-Akinbode (2002) are worried over the inability of users to conveniently make use of libraries. The authors express the fear that this may become worse with the introduction of information and communication technology in library operations. Two levels of user education programmes have been identified to exist in Nigerian colleges of education libraries (Ajibero, 2008). They are orientation for new users of the library and a course in information retrieval for new library users. Balogun (2001) in his own contribution recognizes library instruction to be of great importance to students in several ways, especially to fresh students who are using the library for the first time and students carrying out research projects during their final year. Library skills are the outcome of user education programmes. They have to do with the possession of the ability to effectively make use of the information materials in the library with very minimal assistance from the librarian. These library skills are not inherent but acquired through a process of teaching and learning often known as user education. According to Behrens (2002), library skills tend to focus on the ways of locating information or the instrumental aspects of retrieval. In the opinion of Chanlin and Chang (2003) the Internet has significantly increased the speed of library user education activities and greater exchange of information. According to them, it is now possible to develop and implement a web-based library instruction with the aim of educating library users to become information literate. It is also important in sustaining the interest of students in library use, after acquiring the National Certificate in Education (N.C.E.).

The awareness of information and communication technology-based resources for library user education programmes of colleges of education libraries has become an important issue, by which library user education standard could be measured. It has been observed that literature on awareness of information and communication technology based resources exists in other institutions of learning, but there is no current study on the awareness of ICT-based resources for library user education in the colleges of education libraries under study. It is as a result of this problem that motivated the researcher to embark on this study, and if not addressed on time it will jeopardized the awareness of information and communication technology based resources for library user education programmes in the college of education libraries under study.

Research Objectives

The general objective of the study was to assess the extent of the awareness of information and communication technology-based resources, for user education programmes of colleges of education in South, South Nigeria.

The following research questions were formulated to guide the study:

- i. What are the ICT-based resources available for user education programmes in South-South colleges of education libraries?
- ii. What is the extent of awareness of ICT-based resources for user education programmes in South-South colleges of education libraries?
- iii. What are the methods that can be used for the awareness of ICT-based resources for user education programmes in South-South colleges of education libraries?

Hypotheses

The following hypotheses were tested for this study at 0.05 level of significance:

1. There is no significant difference between the mean responses of librarians and users on the level of awareness of ICT-based resources for user education programmes in South-South colleges of education libraries.

Literature Review

The Concept of Awareness

Awareness is the act of having basic knowledge or being conscious of something happening around an individual, an animal or any other living thing. In this level of consciousness, sense data can be confirmed by an observer, without necessarily implying understanding (Merker, 2007). More broadly, it is the state or quality of being aware of something. There are different aspects of awareness, Wyart and Tallon-Baudry (2009) defined awareness as a human or an animal's perception and cognitive reaction to a condition or event. They further said, awareness is a relative concept, an animal may be partially aware, may be subconsciously aware, or may be acutely aware of an event. Awareness may be focused on an internal state, such as a visceral feeling or on external event by way of sensory perception. Awareness provides the raw material from which animals develop equally or subjective ideas about their experience. Insects have awareness that you are trying to swat them or chase after them, but insects do not have consciousness in the usual sense, because they lack the brain capacity for thought and understanding.

Popular ideas about consciousness suggest the phenomenon of being aware of one's awareness or self-awareness. Efforts to describe consciousness in neurological terms have focused on describing networks in the brain that develop awareness of the qualia, developed by other networks (Muoglin, 2006). He went further to say that neural systems that regulate attention serve to attenuate awareness among complex animal whose central and peripheral nervous systems provide more information than cognitive areas of the brain can assimilate. With an attenuated system of awareness, a mind might be aware of much more than is being contemplated, in a focused extended consciousness. Basic awareness of one's internal and external world depends on the brain stem. An independent neuroscientist in Stockholm (Merker, 2007) argues that the brain stem supports an elementary form of conscious thought in infants with hydranencephaly. "Higher" forms of awareness including self-awareness require cortical contributions, but "primary consciousness" or "basic awareness" as an ability to integrate sensations from the environment with one's immediate goals and feelings, in order to guide behaviour, springs from the brain stem which human beings share with most of the vertebrates. A Psychologist, Izard (2007) emphasizes that this form of primary consciousness consists of the capacity to generate emotions and an awareness of one's surroundings, but not an ability to talk about what one has experienced. In the same way, people can become conscious of a feeling that they cannot label or describe a phenomenon that is especially common in pre-verbal infant. Down the brain stem, lie interconnected regions that regulate the direction of eye gaze and organize decisions about what to do next, such as reaching for a piece of food or pursuing a potential mate.

In the context of this study, awareness is the ability for librarians and library users to be conscious of ICT-based resources for user education programmes and have the knowledge of ICT-based resources. The librarians and users have to be aware of this new innovation and be able to accept it fully. This awareness of ICT-based resources for user education programmes by librarians and library users could be primary awareness or basic awareness.

Concept of User Education Programme

User education is a very difficult term to define. In line with that <u>Luwehebwa (2009</u>) pointed out the confusing nature which makes it possible to include reader instruction, reader education, library use education, user instruction, library orientation, bibliographic instruction and information literacy. Therefore, in order to have a good focus of the concept, it is pertinent to see how it has been defined by experts at the different stages of its development. According to <u>Aguolu and Aguolu (2002</u>), user education programme can be traced back to the establishment of libraries. Nevertheless, the concept

then had a narrow connotation as it merely meant orientation in the library layout, routines and simple retrieval devices. In 1883, as reported by <u>Luban (2004</u>) user education programme was seen as an addition to the orientation programme when the Colombian president suggested that a little systematic instruction would prepare the students for life by expedient library usage. Consequently, in 1909 and 1919, Colombia and Maryland universities started the course in library instruction respectively.

With this development, in addition to the routine orientation, a pedagogical dimension was added to the concept of user education. In colleges of education libraries, the sophistication in information management thus resulted in the utilization of better methods of user education practices such as the use of audiovisual resources (Kirk, 2003). He also pointed that because of the significant changes in colleges of education libraries over the past 30 years, there had been prominent works on user education, especially of Earlham College of Education between 1970 and 1995. In addition to this build up, another concept: "information literacy" was introduced. According to Aina (2004) and Kirk (2005), user education is conceived as a holistic programme that emphasizes the need of users to acquire life-long skills that will enable them search for information independently on any aspect of knowledge using both traditional and electronic methods of accessing information.

To portray the shift in the semantics and conceptual dimensions over the course of the twentieth century, Kirk (2003) explained that the terms: orientation, library instruction, bibliographic instruction and information literacy had been used in succession, each choosing to be more encompassing and better framed. In all, it should be held that whatever the change in nomenclature and the aim of the concept, user education, at any point in time refers to organized programmes to enable users make effective use of the library. On the rationale for user education programme of library skills in academic libraries, Aguolu and Aguolu (2002), Aina (2004) and Eze (2004), are in agreement that the wide range of information storage and retrieval through ICTs have increased the complexity of information access and use. Therefore, it is important that library users are educated in the process and practices of searching and mastering every information source that suits their needs.It should be observed from reliable statistics that from the unprecedented explosion in admission figures of tertiary institutions and colleges of education, the individual assistance to library users becomes difficult if not impossible. To overcome this challenge, Aguolu and Aguolu (2002) strongly recommend the need to educate the users by mounting user education programmes in order to make these users cultivate and imbibe the independent use of library resources.

Concept of Information and Communication Technology-Based Resources

Information and communication technology-based resources are the electronic appliances that process, organize and disseminate information in order to acquire a more satisfactory product (Sesan, 2001). ICT can be grouped into two categories namely traditional and new ICT. Traditional ICTs are radio, television, fixed line telephones and facsimile machines which have been ingrained in the daily habits and lives of people and communities. The new ICTs consist of computers and specific data processing applications, accessible through computers (e-mail, Internet, etc), cellular phones and wireless technologies that can be used in education, in support of services such as admissions, enrolment, registration, examinations, personnel management, teaching and learning, research, library and information services (Ebijuwa, 2005). It has been argued by some educationists that ICT is a tool

for potentially transforming relationship among students, faculty, librarian and other stake holders, and so, there is no doubt that ICT in the educational sector has been particularly revolutionary and has become an enabler of an efficient and effective learning and research environment.

ICT-based resources are the electronic appliances that process, organize and disseminate information in order to acquire a more satisfactory product. The concept of ICT revolves on how information and technologies are manipulated. <u>Sesan (2001)</u> defined ICT as the convergence of micro-electronic computing and telecommunications, which has become a global phenomenon of great importance and concern in all spheres of human endeavour, spanning across education, governance, business, market share, labour, productivity, culture, trade, commerce and others. Information plays a vital role in every form of human endeavour. Individuals and organizations such

as the college of education need information for one reason or the other. In order to facilitate access to information, people need to make effective use of Information and Communication Technology (ICT)

The need for the development of ICT is a global resolution and has been a subject of great significance to all mankind (Olaofe, 2005). These technologies have become central in contemporary societies. Whether one is talking on phone, sending an e-mail, going to the bank, using a library, listening to sports coverage on the radio, watching the news on television; working in an office or in the field, going to the doctor, driving a car or catching a plane, one is using ICT.ICT are computers, software networks, satellite links and related systems that allow people to access, analyze, create, exchange and use of data, information and knowledge. Information handling techniques, according to Okeesan (2003) are being modified with the introduction of information. Information and communication technology need not be overstressed. It is a combination of computers, storage media which provide processing, storage and retrieval capabilities and telecommunications which have the capabilities of transferring and communicating data or information from one workstation to another (Nkanu 2008).

Information and communication technology refers to systems for producing, storing, sending and retrieving digital files (Barlet, 2002). The files can contain texts, sounds and images both still and moving. Ubegbu and Igwe (2006) also see ICT as a group of technologies that handle and manage information and records as well as transmitting information to whoever is in need of it. ICT is also the processing and maintenance of information and the use of all forms of computer and communication network to obtain information. Sleight (2000) defined ICT as any technology, controlled by a microprocessor or computer chips. This means that the word ICT, which stands for information and communication technology has to do with computer and other connecting appliances, which may be required for a particular function, for example, for one to have the Internet connectivity, a computer, a modem, a digitalized telephone line and an account with an Internet service provider (ISP) should be available. This implies that the computer system cannot work alone in isolation, there must be other gadgets connected to it, for it to carry out its function effectively. ICT-based resources include the following complementary technologies: telephone, software technologies for information processing, information technology component and sub-systems, such as semi-conductors, micro-systems, peripherals, web browser and services, multimedia systems, personnel etc (Okoro 2005).

Library User Education and Information Communication Technology

Information and Communication Technology (ICT) is now a factor for effective user education programmes. <u>Beard & Harper (2002</u>) consider the present possibility of teaching without the teacher's physical presence in the classroom to provide direct instruction as a modern day miracle of 21st century education. In their considered opinion, computerization makes for greater efficiency as it saves librarian's time, provides more accurate and accessible records as well as facilitates user education.

The first author of a published description of how librarians teach patrons to use an online catalogue was <u>Blackburn (2009)</u>. In the published article, he describes how patrons can make the best out of the online system. <u>McDonald & Searing (2013</u>) describe how librarians could help orientate patrons to online systems. They argue that librarians in charge of user education programmes should be involved in designing online systems. This is because they have got the skills, knowledge and experience needed for teaching and designing instructional aids. In a paper titled "The Internet," <u>Doran (2015)</u> highlights the misconceptions library users have about the potentials of the web. Many users mistakenly believe that the web is the equivalent of and the equal of a library. However, most materials in libraries do not appear on the web for a variety of reasons, the biggest being copyright. He therefore advocates the teaching about the web in a balanced way that encourages its use but still made patrons aware of its huge limitations.

The convergence and constant change in the electronic world is challenging to academic instructional librarians (Loomis & Fink, 2013). They therefore suggest that the principles of good instruction should apply regardless of what people are teaching. Graubart (2007) on his part discusses the development of online instruction programmes in different countries and highlighted the differences between Isreal and American academic libraries. She also describes library instruction programmes of seven Israeli academic libraries and discusses how students are taught to use online catalogue both in the classroom and at the reference desk. There is also a special centre developed for scholars and librarians where classes are taught on how to find information on the Internet. Burrow (2015) reveals how librarians at the University of Australia deliver instruction on Internet use. According to Suarez (2002), many instruction librarians are presently using the web in addition to their regular teaching tools. This was against the practice in no-too-distant past when the only tools at one's disposal were overheads, whiteboards or blackboards and similar display items. In the opinion of the author, by mounting library instruction material directly onto a web page, it is possible to reach a potentially wider audience and to update the material more quickly whenever necessary. Fiallbrant (2010) discusses the impact of information technology with particular emphasis on the Nordic academic library instruction programmes. She examines online databases; optical storage devices, electronic publishing and e-mail in regards to how these technologies were impacting on library user education. Her view is echoed by Gertich and Perrier (2003) who argue that instructional methods are becoming increasingly technological to the extent that library educators are no longer asking themselves whether to use technology but how and what type to use. For instance, faculty members who teach with audio want to utilize technology to deliver listening assignments via web at Carnegie Mellon University among others. ICT-based resources have helped in various library activities since it came into existence. According to Islam and Islam (2006), ICT is used in various library activities which include acquisition, serials management, cataloguing and classification, circulation, audiovisual management, information storage, retrieval, reference and information services. Libraries have the following software - TINLIB, Alice for Window, CDS/ISIS, e-granary e.t.c.

Methodology

The design of this study is descriptive survey. The population of the study comprised of 62 librarians and 19,200 registered library-users. The sample size for this study was 62 librarians and 960 registered users, from the various libraries sampled for the study. The researcher used all the librarians because they were few and 5% of the registered library users were used. The multiple stage sampling techniques was used to draw a sample of the registered users. One thousand and twenty-two (1022) copies of the questionnaire were distributed by hand to the respondents and were retrieved instantly on completion by the researcher and research assistants. The instrument for data collection for this research was the structured questionnaire, and observation checklist. The data collected was analyzed using mean scores, percentages and frequency tables. The responses were

based on a 4 - point rating scale, a midpoint of 2.5 which is the criterion mean. The observation checklist was analyzed with percentage. The hypotheses formulated to verify research question two and four were analyzed with t-test, with a result at 0.05 level of significance.

Data Analysis and Discussion of Findings

Research Question 1: What are the Information and Communication Technology-based resources available for user education programmes in South-South colleges of education libraries?

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Table 1:

Observation Checklist of Available ICT -Based Resources for User Education Programmes in South-South Colleges of Education Libraries.

	ICT-based	NAME	OF INS	ΤΙΤUΤΙΟΙ	N															OVERAL			R
	resources	ASCOE			BFHC			CRSCO	E		DSCOE			ESCOE			FCOEO						
		AU	ANU	NA	AU	ANU	NA	AU	ANU	NA	AU	ANU	NA	AU	ANU	NA	AU	ANU	NA	AU	ANU	NA	
1	Smart Boards			\checkmark					\checkmark										\checkmark	0(0%)	2(33.3%)	4(66.7%)	NA
2	CD-ROM	\checkmark									\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
3	Internet facilities	\checkmark			\checkmark						\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
4	Databases	\checkmark			\checkmark						\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
5	Projectors	\checkmark				\checkmark					\checkmark			\checkmark			\checkmark			5(83.3%)	1(16.7%)	0(0%)	AU
6	OPAC			\checkmark									\checkmark			\checkmark			\checkmark	4(66.7%)	1(16.7%)	1(16.7%)	AU
7	MAR			\checkmark			\checkmark						\checkmark			\checkmark			\checkmark	0(0%)	0(0%)	6(100%)	NA
8	Facsimile (Telex)			\checkmark			\checkmark									\checkmark			\checkmark	0(0%)	0(0%)	6(100%)	NA
9	Telephone	\checkmark			\checkmark						\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
10	LAN	\checkmark									\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
11	WAN			\checkmark									\checkmark						\checkmark	1(16.7%)	0(0%)	5(83.3%)	NA
12	Video-conferenci			\checkmark									\checkmark						\checkmark	0(0%)	0(0%)	6(100%)	NA
	technology																						
13	E-mail				\checkmark									\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
14	Radio			\checkmark	\checkmark								\checkmark						\checkmark	1(16.7%)	0(0%)	5(83.3%)	NA
15	Electro-coping			\checkmark			\checkmark						\checkmark						\checkmark	0(0%)	0(0%)	6(100%)	AU
16	Cellular phone			\checkmark															\checkmark	0(0%)	0(0%)	6(100%)	NA
17	Modem				\checkmark									\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
18	Printers				\checkmark									\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
19	Television	\checkmark			\checkmark						\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
20	Flash Drives	\checkmark			\checkmark						\checkmark			\checkmark			\checkmark			6(100%)	0(0%)	0(0%)	AU
	Total%	11(55%	0(0%)	9(45%)	12(60%	2(10%	6(30%)	12(60%	1(5% 7	7(35%	11(55%	1(5%) 8(40%)	11(55%	0(0%	9(45%	11(55%	0	9(45%				

NOTE: NA= Not Available: ANU =Available and not Utilize; AU =Available and Utilize: R= Remark; ASCOE= Akwa-Ibom State COE, AfahaNsit=ASCOE; BSCOE=Bayelsa State COE, Okpoama-Brass;CRSCOE= CrossRiver State COE, Akamkpa;DSCOE= Delta State COE, Agbor,ESCOE= Edo State COE, Ekiadolor;FCOEO= Federal COE, (Technical) Omoku

The data presented in Table 1 shows that out of twenty ICT-based resources for user education programmes in South-South colleges of education libraries sampled,13(65%) resources were available and utilized,7(35%)were not available while none was available and not utilized. The researchers also observed that at Akwa-Ibom State COE, AfahaNsit, 11(55%) ICT-based resources were available and utilized, while 9(45%) were not available. In Bayelsa State COE, Okpoama-Brass, 12(60%) were available and utilized, 2(10%) were available and not utilized, while 6(30%) were not available. At Cross River State COE, Akamkpa, 12(60%) were available and utilized, 1(5%) were available and not utilized, while 7(35%) were not available. At Delta State COE, Agbor, 11(55%) were available and utilized, 1(5%) were available and not utilized, while 8(40%) were not available. At Edo State COE, Ekiadolor, 11(55%) are available and utilized, 0(0%) were available and not utilized, while 9(45%) were not available. At Federal COE, (Technical) Omoku, 11(55%) were available and utilized, 0(0%) were available and not utilized, 0(0%) were available. From the result of Table 1, it was revealed that more than half of the listed ICT-based resources were available in the six colleges of education libraries under study.

Research Question 2: What is the extent of awareness of ICT-based resources for user education programmes in South-South colleges of education libraries?

SN	EXTENT OF AWARENESS	Status o	f respond	lents		Overall		R	D
		Librariar	าร	Users					
		Mean	SD	Mean	SD	Mean	SD		
1	Using the Internet	3.34	.97	2.78	1.09	3.06	.39	1 ^{S⊺}	HA
2	Fundamental Knowledge of electronic library services	2.97	.94	3.06	.91	3.01	.07	2 nd	HA
3	Sending and downloading mails	3.29	.89	2.67	1.07	2.98	.44	3 rd	HA
4	Registration of library users	3.06	.87	2.87	1.03	2.97	.14	4 th	HA
5	Assessing assignments on the website	3.05	.86	2.65	1.02	2.85	.28	5 th	HA
6	Easy location of books on the shelves	2.76	1.05	2.86	1.00	2.81	.07	6 th	HA
7	Identification of reference materials	2.66	1.05	2.95	.99	2.80	.20	7 th	HA
8	Creating new documents	2.73	1.09	2.82	1.01	2.77	.07	8 th	HA
9	Bibliographic citations of print & non-	2.81	.85	2.71	1.01	2.76	.07	9 th	HA
	print sources								
10	Use of the catalogue	2.56	.88	2.54	1.01	2.55	.02	10 th	HA
	Grand mean	2.92	.45	2.79	.67	2.86	.67		

 Table 2: Mean Ratings of Respondents on Extent of Awareness of ICT-Based Resources for User

 Education Programmes in South-South Colleges of Education Libraries

Key: VHA-Very Highly Aware, HA-Highly Aware, LA-Less Aware, NA-Not Aware

The data presented in Table 2 reveals that the mean ratings of the respondents on the ten (10) identified items on extent of awareness of ICT-based resources for user education programmes in colleges of education libraries had mean values ranging from 2.55 to 3.06 on a 4-point rating scale. Using the principles of real limit of numbers, all the ten items had their mean value between 2.50-3.4 The results reveal that the respondents had high awareness on these items. Also, the overall mean rating showed that Using the Internet ($\bar{x} = 3.06$) ranked highest, while Use of the catalogue ($\bar{x}=2.55$) ranked lowest. The grand mean rating for extent of awareness of librarians in ICT-based resources for user education programmes in colleges of education libraries was ($\bar{x}=2.92$) and the standard deviation was (0.45). The grand mean for users was ($\bar{x}=2.79$) and the standard deviation was (0.67).The overall mean rating of

librarians and users in the awareness of ICT-based resources for user education programmes in colleges of education libraries was (\bar{x} =2.86) and standard deviation is (0.67).

Research Question 3: What are the methods that can be used for awareness of ICT-based resources for user education programmes in South-South colleges of education libraries?

 Table 3: Mean Ratings of Respondents on Methods of Awareness of ICT-Based Resources for User

 Education Programmes in South-South Colleges of Education Libraries

SN	METHODS	Status of	responde	nts		Overall		R	D
		Librarians		Users		-			
		Mean	SD	Mean	SD	Mean	SD		
1	Conference	3.32	.76	3.12	.88	3.22	.14	1 ^{s⊤}	HE
2	Seminars	3.31	.85	3.05	.95	3.18	.18	2 nd	HE
3	Guided Tours	3.00	1.07	2.98	.99	2.99	.02	3 rd	HE
4	Lectures	2.89	1.02	3.09	.92	2.99	.14	4 th	HE
5	Demonstrations	3.03	1.14	2.88	1.01	2.96	.10	5 th	HE
6	Independent Assignments	2.80	1.09	3.04	.95	2.92	.17	6 th	HE
7	Orientation	2.74	.96	2.90	1.03	2.82	.11	7 th	HE
8	Bill Board	2.84	1.16	2.78	1.10	2.81	.04	8 th	HE
	Grand mean	2.99	.67	2.98	.47	2.99	.78		

Key: VHE-Very Highly Employed, HE-Highly Employed, LE-Less Employed, NE-Not Employed

The data presented in Table 3 reveals that the mean ratings of respondents on the eight (8) identified items on methods that could be used for awareness of ICT-based resources for user education programmes in South-South colleges of education libraries had mean values ranging from 2.81 to 3.22 on a 4-point rating scale. Using the principles of real limit of numbers, it can be stated that all the eight items had their mean value between 2.50 to 3.49. The results reveals that the method used to a high extent for awareness of ICT-based resources for user education programmes in colleges of education libraries was conferences. The overall mean ranking showed that Conference (\bar{x} =3.22) ranked highest, while Bill Board (\bar{x} =2.81) ranked lowest as methods that can be used for the awareness of ICT-based resources for user education programmes in Gelleges of education libraries was (\bar{x} =2.99) and the standard deviation was (0.67), the grand mean rating for users in methods of awareness of ICT-based resources for user education programmes in colleges of education libraries was (\bar{x} =2.98) and the standard deviation was (0.47) while the overall mean rating for librarians and users was (\bar{x} =2.99) and standard deviation was (0.78).

Hypotheses Testing

Hypothesis 1:

Ho1: There is no significant difference between the mean responses of librarians and users on the level of awareness of ICT-based resources for user education programmes in South South colleges of education libraries.

The data for testing hypothesis one is presented in Table 4.

Table 4: t –Test Analysis of the Mean Ratings of Responses Respondents on the Level of Awareness of ICT-Based Resources for User Education Programmes in South-South Colleges of Education Libraries

					Std. Error		Level of	
Groups	х —	SD	Ν	DF		t- Cal	Sig.	Rmk
Librarians	3.24	0.88	82					
				988	0.176	1.69	p>0.05	S
Users	2.94	0.81	928					
	Groups Librarians Users	Groups X Librarians 3.24	GroupsXSDLibrarians3.240.88Users2.940.81	GroupsXSDNLibrarians3.240.8882Users2.940.81928	Groups X SD N DF Librarians 3.24 0.88 82 988 Users 2.94 0.81 928 988	Groups X SD N DF Std. Error Librarians 3.24 0.88 82 DF 988 0.176 Users 2.94 0.81 928 1100 1100 1100	Groups X SD N DF Std. Error t- Cal Librarians 3.24 0.88 82 988 0.176 1.69 Users 2.94 0.81 928 1 1 1	Groups X SD N DF Std. Error Level of Librarians 3.24 0.88 82 DF t- Cal Sig. S

Dependents variable = level of awareness of ICT-based information resources

The t-test analysis presented in Table 4 shows that the t-calculated (t-cal) value of 1.69, with P>0.05 indicates that there was significant difference between librarians and users. Therefore, the null hypothesis was rejected showing that there was significant difference between the mean responses of librarians and users on the level of awareness of ICT-based resources for user education programmes in South-South colleges of education libraries.

Findings

The following findings were made from the data analyzed for the study:

- 1. The ICT-based resources for user education programmes available in the six colleges of education libraries were thirteen (13) which was sixty-five percent (65%) was available and utilized for the awareness and utilization of ICT-based resources for user education programmes in the South-South colleges of education libraries, while seven (7) which was thirty five percent (35%) was not available.
- 2. Both librarians and users were moderate in the awareness of ICT-based resources for user education programmes in Akwa-Ibom State College of Education AfahaNsit, Bayelsa State College of Education Okpoama-Brass, Cross River State College of Education Akamkpa, Delta State College of Education Agbor, Edo State College of Education Ekiadolor and Federal College of Education (Technical) Omoku. Using the Internet was ranked highest while the use of catalogue was ranked lowest as factors that were responsible for the awareness of ICT-based resources for user education programmes in South-South colleges of education libraries.
- 3. On the methods that could be used for the awareness of ICT-based resources for user education programmes in Akwa-Ibom State College of Education AfahaNsit, Bayelsa State College of Education Okpoama-Brass, Cross River State College of Education Akamkpa, Delta State College of Education Agbor, Edo State College of Education Ekiadolor and Federal College of Education(Technical) Omoku, Conference was ranked highest while Bill Board was ranked lowest as methods that can be used for the awareness of ICT-based resources for user education programmes in South-South colleges of education libraries.
- 4. The result of hypothesis one tested shows that the hypothesis was rejected because there was significant difference between the mean responses of librarians and users in the level of awareness of ICT-based resources for user education programmes in South-South colleges of education libraries.

Conclusion and Recommendations

The awareness of ICT-based resources for user education programmes in South-South colleges of education occupies a central position not only in South-South colleges of education libraries, but also all modern colleges of education libraries. This could be across the globe for effective and efficient performance of librarians in ICT-based information resources for library user education programmes. This study set out to examine the utilization of information and communication technology-based resources for library user education programmes with regard to colleges of education libraries in South-South zone.

In order to improve on the awareness of ICT for library user education programmes in colleges of education libraries and other types of libraries, this study makes the following recommendations:

- 1. The colleges of education authorities should embark on capacity building programmes in terms of training and re-training of librarians on ICT awareness. Also, the colleges of education authorities should provide constant power supply through independent power providers or gas generators in colleges of education. These will in no doubt aid the effective utilization of ICT for library user education programmes in colleges of education libraries.
- 2. The colleges of education should review their recruitment/enlistment requirement and requisite qualification for librarians to include knowledge in ICT awareness.
- 3. The colleges of education authorities should make ICT-based resources available for user education programmes in South-South colleges of education libraries. This would definitely enable librarians and users have quick access to ICT-based resources.
- 4. The colleges of education libraries that have ICT-based resources should ensure proper maintenance of these ICT resources to enable the librarians and library users always have access to functioning ICT-based resources in colleges of education libraries.

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