4

Availability and Utilization of ICT Facilities for Teaching and Learning of Library and Information Science (LIS) Undergraduate Programme in Universities in South-South, Nigeria

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Abstract

Purpose: The main purpose of this study is to examine the availability ICT facilities and adequacy of use in teaching and learning LIS undergraduate in South-South Nigeria.

Design/methodology: A descriptive survey research design was used by the researchers for this study.

Findings: it was discovered that the six universities investigated, all had internet connectivity, computers, local area network (LAN), mobile phones, standby generator and uninterrupted power supply (UPS). Other ICT facilities like projectors, radio set and stylus pen were totally not available in these universities. Hiring ICT experts outside the school system to give informal lecturers to lecturers and students, allotting enough time for ICT practice, Provision of adequate number of ICT facilities for regular practice by lecturers and students among others are measures for adequate utilization of ICT facilities for teaching and learning LIS undergraduate degree programme.

Originality/value: the study will help to bring the forefront the urgency and necessity of integrating ICT facilities for teaching and learning of LIS programmes in Nigeria Universities.

Implications: LIS schools in universities should fill their curriculum by exploiting the opportunities provided by ICTs and check the digital gap and challenges posed by developments in the 21st century. Therefore, training programme and updated curricula should be organized from time to time for LIS lecturers, technologists and technicians to keep them abreast of emerging technologies

Keywords: Availability and Utilization, ICT Facilities, Teaching and Learning, Library and Information Science, Undergraduate Programme, Universities, South-South Nigeria

Introduction

Library and Information Science (LIS) education in Nigeria today cannot be relevant without adequate preparation of a new generation of librarians to effectively use the new Information and Communication Technologies (ICT) in their professional practices. LIS education is geared towards teaching and skill acquisition. However, Edegbo (2011) noted that a large number of LIS graduates do not possess the needed library ICT skills expected of them. This may make it difficult for the graduates to secure jobs in libraries and related information centres, on completion of their courses of study and thereby contributing to an increase in the unemployment rate of the society.

Hence, the LIS undergraduates must endeavour to acquaint themselves with the practical utilization of various types of related Information and Communication Technology resources. This could only be obtained within the institution of higher learning, where the provision of LIS programme is done by professionally qualified personnel. This indicates that the LIS undergraduate programme is provided in institutions of higher learning, such as the universities (American Library Association, 2011).

The university is an institution of higher learning providing facilities for teaching and research and authorized to grant academic degrees. Oyedepo (2012) viewed the university as a place where solutions to societal problems are found and value added to humanity. A university is not a monastery but a factory that produces values and drives research. The real value of a university is only established by the problems it solves. Specifically, the university is made up of an undergraduate division which confers bachelor's degrees and a graduate division which comprises a graduate school and professional schools each of which may confer master's degree and doctorates (University of Arkansas, 2003). A university differs from other institutions of higher learning in that it is usually larger and has a broader curriculum. It is a place where truth is freely sought, inquiry is encouraged, new ideas and new ways may develop and flourish at the expense of the old. It is an institution of change in an ever-changing society.

The National Policy on Education (2014) stated that university education shall make optimum

contribution to national development through: i. intensifying and diversifying its programme for the development of high level manpower within the context of the needs of the nation; ii. Making professional course content to reflect our national requirements; iii. making all students, as part of a general programme of all-round improvement in university education to offer general study courses and iv. Making entrepreneurial skills acquisition a requirement for all Nigerian universities.

From these objectives, the National Universities Commission (NUC) (2012) stipulated objectives of LIS programme as to: i. Produce library and information professionals for all types of libraries, information and documentation centres; ii. equip the products of the programme with relevant theoretical knowledge, practical skills and techniques to develop and enhance their job performance; iii. to encourage the spirit of equity and creativity among the library and information professionals so that they are capable of understanding the emerging concepts of the role of information in a complex multicultural, multiethnic and largely non-literate society like Nigeria; iv. to provide prospective library and information professional with the intellectual and professional background adequate for their assignments and to make them adaptable to any changing situation; v. to provide an understanding of the role of the new communications technology.

In the words of Okojie (2011), the NUC as a quality assurance agency responsible for the development of university education in Nigeria, recognizes the need to ensure that our educational institutions are at par excellence with standards worldwide to ensure the production of graduates that will be globally competitive. It is in this regard that the NUC has been emphasizing that technology should play a leading role in moulding our activities and those of research, teaching and learning in universities.

Universities in Nigeria as a whole and in South-South in particular were guided by these objectives to set their specific objectives of LIS education programme. A number of such specific objectives of LIS education programmes as stated in some universities LIS prospectus involved:

- To offer basic theoretical knowledge and skills required for effective performance of professional studies in libraries, information centres and related institutions;
- To provide relevant practical exposure and competence necessary to enhance job performance;
- To develop and encourage the spirit of enquiry and creativity required to meet the challenges of rapid change and the knowledge explosion, technological development; new media and new approaches in education;
- To explore means of meeting the information needs of all segments of the population and extending the library's informational, educational and cultural roles in society.

These objectives indicate that library and information science discipline provides basic professional courses such as Introduction to computers, Introduction to library resources and services, Collection development, Technical services in libraries, Introduction to bibliography, Computers and data processing, Information users, Audiovisual librarianship, Reference and Information services, Contemporary technology in libraries and Indexing and Abstracting. These courses, if properly integrated with ICT facilities, will prepare prospective librarians for professional work in all types of libraries and related documentation and information centres. That is, the LIS programme of study according to Diso (2009) provides directions for the course nomenclatures, contents and thematic profiles. The programme equally involves the course structures including course levels, course length, credit values, credit distribution and the assessment methods. It involves all the elements that are necessary for the implementation of the curriculum, i.e. staff (academic, technical and administrative), instructional facilities, Student Industrial Work Experience Scheme (SIWES), funding, and entry requirements. All these are geared towards the achievement of library educational goals and objectives.

This study therefore intends to identify the ICT facilities available in teaching and learning LIS undergraduate degree programme in universities in South- South as well as the appropriate measures to be adopted in the enhancement of ICT utilization in teaching and learning LIS undergraduate degree programme in universities in South-South, Nigeria

The statement of the problem therefore is to determine the availability of ICT facilities and extent of use in teaching and learning LIS undergraduate degree programmes in the universities in Nigeria?

Purpose of the Study

The main purpose of this study is to examine the availability ICT facilities and adequate of use in teaching and learning LIS undergraduate.

Specifically, the study intended to find out the following:

1. Identify the ICT facilities available for teaching and learning LIS undergraduate d programme in Universities in South-South, Nigeria.
2. The appropriate measures to be adopted in the enhancement of ICT utilization in teaching and learning LIS undergraduate programme in Universities in South-South, Nigeria

The following research questions guided the study:

1. What are the ICT facilities available in teaching and learning LIS undergraduate degree programme in universities in South-South Nigeria?
2. What strategies could be adopted to enhance the use of ICT facilities in teaching and learning LIS undergraduate degree programme in South-South Nigeria?

Literature review

ICT Facilities Relevant in Teaching and Learning LIS Undergraduate Degree Programmes

Information and communication technology comprises a diverse set of technological equipment, tools, facilities and services that can be used for effective teaching and learning. In motivating learners to learn, Okorieocha (2010) noted that ICTs such as videos, television and multimedia computer software: that combine text, sound, and colourful moving images can be used to provide activities that will engage the students in the learning process. Okojie (2011) positioned that, different ICTs do make some valuable contributions to various parts of educational development and effective learning through expanding access, promoting efficiency, improving the quality of learning, enhancing the quality of teaching and improving management systems. The laboratories in library schools according to Omekwu (2005) must contain the most recent ICT tools/facilities in order to keep abreast of new development. These laboratories must also serve as the production of global and network – compliant professionals.

ICT facilities according to Oladapo (2005) can be applied to a single function only or to all subsystems in the library school. But Ugwoke (2011) advised that the LIS undergraduate must endeavour to acquaint themselves with the practical utilization of various types of ICTs. The scholar further noted the varieties of ICT facilities relevant for teaching and learning in library schools which are: television, Internet, computer, radio, facsimile, tape records, video, teleconferencing, projectors, stylus pen, and phones among others. Television, popularly known as TV is a telecommunication medium that is used for transmitting and receiving moving images and sound. Television can be a very powerful and effective learning tool for LIS students if used wisely. It can be used for a broad range of programming types that educate, inform and entertain viewers. Internet television has seen the rise of television programming available in the Internet through services such as player, Hulu, Netflix (Wikipedia, 2014). Storage media such as video cassettes, laser discs, DVDs and high – definition blue – ray discs enable viewers use the television set to watch recorded materials. Finally TV needs good source of power for operation and also requires proper handling and maintenance.

Furthermore, the Internet is a global network of interconnected computers, enabling users to share information along multiple channels. By browsing the Internet, much as you would browse the shelves of a library, you access information on seemingly limitless topics (Dombro, 2013). He further noted that, with the Internet potential as a research tool, teachers must instruct and guide their students on manageable strategies for sorting through the abundance of information. The search for reliable resources can be both overwhelming and frustrating if students are left on their own in their initial search. Sending electronic mails, reading a newspaper, chatting, booking a hotel reservation, shopping, e.t.c. are several services of the internet. Internet requires good management skills and work effectively with stable power supply.

Another ICT facility that is of paramount importance in teaching and learning LIS is the computer. In addition to what has earlier been stated about the computer, the machine accepts input from a user, processes the input, stores the result if desired or produces output. According to Aina (2004), computers can basically be divided into three parts: hardware, software and human ware. He noted that all these three components are needed before a computer can perform its myriad of functions. The equipment itself and the accessories constitute the hardware, while the set of instructions that enable a computer perform many kinds of functions is called the software. It is the software that instructs the hardware on what to do. The role of human beings according to Aina is to manipulate both the hardware and software to serve the various purposes in which a computer is involved hence it is called human ware. The computers are very useful and versatile in the teaching learning process. They are regarded as the pivot, backbone or hub of all ICT facilities. It imprints

knowledge into students' brains by transmitting the lessons of experience through a variety of sensory pathways (Ugwoke, 2011). Varieties of computer accessories used in packaging and repackaging information includes: CD-ROM, flash drives, tapes, etc. These accessories can store, retrieve and disseminate information of any form to learners. Computer requires good handling, management and works effectively with stable power supply.

Radio cassettes are widely used to educate as well as to inform. This can be used for taping and teaching of LIS lectures. Students on their own can make use of the radio in the LIS department to refresh their memory with or without the lecturer in class.

Film slides: LIS lecturers can use films to communicate information to change attitude, to develop skills, to raise interest, enthusiasm, or to raise problem, to evolve moods. Films can be used in teaching factual materials and performance of skills faster than oral teaching. LIS lecturer can bring films on the use of the library to illustrate all operations within the library and exhibit it during lecture hours. This can be projected on a piece of 35mm film. Such films are accompanied with audio tape for clarity (Jegede et al., 2011).

Similarly video is another electronic machine that can present images and sound information to viewers through cassettes, tapes and discs. Video cassettes are magnetic tapes housed in a plastic container containing moving pictures with sound. Video is mostly used with small groups to demonstrate procedures that students may not be able to witness or try in person. Video disc can be used with computers to make interactive educational programme for self-instruction (Ugwoke, 2011). Video cassettes, tapes and discs are fragile and require proper management, good source of power supply, and effective maintenance.

In addition, according to Dombro (2013), mobile phones are communication technology that enables the use of network for the delivery of education and training of students through SMS, e-mail and other services. Mobile phones require good management and work effectively with stable power supply.

Furthermore, stylus pen is an electronic machine used for spine labeling of library materials. It is used for writing call numbers on library books. To write with a stylus pen it must be very heated and hot with high voltage of power supply. Stylus pens are fragile and require proper management and maintenance.

Again, Projector is a piece of equipment for projecting the image from film onto a screen and for playing back recorded sound from tracks on the film. Large volumes of teaching materials could conveniently be transferred to a film. This according to Ngwoke (2011) makes for efficient and alternative storage of information without recourse to clumsy book movement. Projectors need good source of power for good output and proper maintenance. Access to them is supervised by trained staff.

Gama (2008) enumerated a variety of ICT facilities that are used in library schools. These facilities facilitate teaching and learning, information storage and retrieval. The varieties range from simple technology such as paper cutter, staplers, perforators, stylus pen, to more advanced technologies like microform readers, projectors, telephone, radio and television sets. Others include more sophisticated technologies such as computing, telecommunication and microelectronics facilities, Gama (2008) however categorized these facilities into three: audio, visual, and audiovisual facilities as shown in appendix 1 page 106.

Assimonye (2004) also submitted that the elements of the information age are the new ICT facilities in the present environment. These ICT facilities involve computer based Instruction (CBI), projectors (overhead and slide), internet, television, E-mail, voice mail, video discs, CD discs, diskettes, world wide web, video conferencing, computer assisted instruction (CAI), etc. Nnaka (2004) revealed that, apart from CAI and the use of e-mail in the classrooms, whiteboards, an interactive computer display, which can incorporate graphics, films, sound and Internet links, are replacing the conventional blackboards and white chalks. Whiteboards now focus on technology just like the way blackboards once did with the written word. However despite the increasing prominence of whiteboards, meeting pads are gradually overtaking them. Those pads allow students to put their ideas onto white boards from their own desk.

Firpo (2001) stated that teachers need effective tools, techniques and assistance that can help them develop computer based projects and activities specifically designed to raise the level of teaching in required areas and improve students' learning. Such information technology tools according to Olelewe and Fakorede (2009) involve the use of large array of hardware and software: The hardware include scanners, digital cameras, multimedia projectors, laptops, desktop computers, modems, etc. The software include word processors, graphic packages, databases and spreadsheet packages among others. These packages do not have limited educational purpose, but they are designed to help lecturers extend their abilities to

do teaching work. Kamba (2010) advised every LIS school and department to acquire quantities of computers so that physical access by students is maximized. This is because the current LIS graduate should be capable of efficiently handling a myriad of ICT-based processes such as creating charts, importing graphics, establishing FAOs, conducting chat reference sessions, participate in collaborative conference work, creating databases, among others. This is vital in the opinion of Ngwuchuku (2010), for the fact that, the wealth of information in the world may not be adequately utilized if the traditional method of teaching is still being used, hence, there is need for LIS educators who are information disseminators to use these ICT facilities in teaching and learning so as to bring about life-long learning among the students. But, for this to happen, the educators must be competent to handle the ICT facilities.

- Uniform curriculum for undergraduate programmes in Nigerian library schools and ICT courses to be taught within library schools;
- Library schools should employ more technicians/system analysts to man computer laboratories;
- There should be well-equipped computer laboratories in library schools in Nigeria, thereby ensuring the acquisition of adequate practical IT skills;
- Stand-by generating plant should be provided in all library schools to solve the problem of erratic power supply.

Again, Kamba (2010) noted that collaborative research activities, tele-conferencing and electronic publishing of academic research results should be encouraged among LIS academics. In addition to this, LIS schools in Nigeria should fill their curriculum by exploiting the opportunities provided by ICTs and checkmate the digital gap and challenges posed by development in the 21st century. Ozioko et al (2010) advocate the student centred approach to learning, as this stimulates critical thinking, creativity, initiative and confidence building as opposed to rote teaching which kills initiative. Students must be encouraged to venture into independent learning and try out themselves. These authors further stated that training programme and updated curricula should be organized from time to time for LIS educators to keep them abreast of emerging technologies. Institutional support is crucial for the procurement of alternative energy supply and the funding of diverse training programmes. There is a need for LIS schools to be equipped with functional

Earlier on, Ugwoke (2011) advised that library schools in Nigeria should been joined to teach the students on how to use ICT and audio-visual media for the attainment of library goals and objectives. He noted that the interactive radio makes use of sound effects, songs dramatization, comic kit and other performance conventions to compel the students to listen to and become involved in the lesson being delivered. It then follows that the use of ICT facilities makes LIS teaching and learning more interactive, educative, interesting and worthwhile.

Measures to Enhance Utilization of ICT in Teaching and Learning LIS

A number of scholars have written and reflected on the availability of ICT and use in the teaching and learning of LIS in Library Schools. Katamba (2009) recommended four ways for the implementation of ICT in Library Schools in Nigeria. These include:

laboratories for staff exploitation of ICTs (Ozioko et al, 2010). Mentoring may be employed to help develop ICT skills among LIS educators. Asadu (2010) advocates the use of colleagues to re-tool, and improve the competencies of coworkers through the mentoring process. Onasanya in Shidi (2011) suggests training methods like lecture, group discussions, role playing, job instruction and programmed instructions while Dasimone and Harris (1998) recommend the use of training manuals, tutorial discs, videotapes, in house training, consultants, customized external training as well as general courses and seminars.

Amkpa and Abba (2010) suggest that government should increase stability and supply of electricity to meet the demand, and that abandoned sunlight potentials should be exploited to provide solar energy as an alternative power source. Akinde (2006) proposes public/private partnership (PPP) to promote technologies and research and development. This could be done to benefit such areas like development of hardware and software, machine translation tools and in making ICT equipment available and affordable to end users. Ekwelem, Okafor and Ukwoma (2009) enumerate some of the strategies that can be employed to curb the challenges to ICT skills acquisition in academic libraries and library schools, as user or student training and adequate infrastructure within the institutions

Some strategies suggested by Omoniyi (2005) involve the training of personnel even on distant education, purchase as well as connection of ICT gadgets to the Internet and reduction of cost of Internet connection by Federal Government. Other

suggestions proffered include extension of emphasis on computer technology to cover other less sophisticated ICT gadgets and the electrification and provision of some steady electricity supply especially in communities where the schools are located. Ochogwu (2007) recommends that the government of the federation should provide funds to libraries and information systems to enable them embrace computerized systems. Organized private sector on its part will need to participate in education and training of LIS lecturers and library science development through the provision of funds for library schools' projects, scholarship awards, and donation of ICT equipment to library schools. These will make training in ICT skills easier. Also, Ngwuchukwu (2010) noted that ICT facilities be provided in every staff office especially internet services and that there should be regular power supply as it will harness the use of those facilities. In the opinion of Muhammed (2008), LIS schools need to review their LIS curriculum to fit the contemporary age expectations. This should be in addition to the upgrading of their teaching, learning and research resources/facilities to enhance the theoretical and practical competence of their products. The scholar further advised that LIS schools in Nigeria should have an ICT competency framework that will serve as a guideline for faculty to get acquainted with and to also use it in training the students who are the practitioners of tomorrow.

Methodology

Design of the Study

A descriptive survey research design was used by the researcher for this study. Nworgu (2006) stated that descriptive survey design is a design which describes conditions as they exist naturally without manipulations. The area of the study was south-south zone of Nigeria. The total population is 86, made up of Ambrose Ali University, Ekpoma with 13; Delta State University, Abraka with 15; Benson Idahosa University, Benin City with 6; University of Benin, Benin City with 29; University of Calabar, Calabar with 12; and University of Uyo, Uyo with 11 LIS lecturers respectively. The entire population of 86 LIS lecturers was used. The instruments for data collection in this study were observation checklist (OC) and a structured questionnaire. The checklist was used by the researcher to collect data on ICT facilities available for teaching and learning LIS in the different universities. The researcher visited the six universities in order to find out the ICT facilities available in each university. This lasted for two weeks. However, while checking for ICT facilities available, 86 copies of questionnaire were distributed to the lecturers by the researcher and two research assistants in the different universities. The lecturers were given one week to complete each copy of the questionnaire. At the end of the one week the researcher and the research assistants went back to the universities for retrieval of the questionnaires. All the 86 copies were retrieved but at different periods of visits after the first visit of retrieval. However, prior to the administration of the research instrument, the research assistants were drilled by the researcher on the topic so as to assist as research assistants. Data obtained were analyzed using frequency and percentages, mean and standard deviation. Research question one was analyzed using frequency and percentage and presented in a table. Mean and standard deviation was used to answer research questions 2, 3, which were presented in tables.

Table 1: Frequencies and Percentages of available ICT facilities for Teaching and learning LIS undergraduate degree programmes in universities in South – South, Nigeria.

S/No	ICT Facilities	Available Functional		Available Not Functional		Not Available	
		F	%	F	%	F	%
1.	Internet Connectivity	6	100	-	-	-	-
2.	Projectors	-	0	-	-	6	100
3.	Computers	6	100	-	-	-	-
4.	Scanners	3	50	-	-	3	50
5.	Photocopiers	4	66.7	1	16.7	1	16.7
6.	Printers	4	66.7	-	-	2	33.3
7.	Digital Camera	3	50	-	-	3	50
8.	Public Address System	5	83.3	1	16.7	-	-
9.	Magnetic Board	2	33.3	2	33.3	2	33.3
10.	Television/Video	2	33.3	2	33.3	2	33.3
11.	Radio Set	-	0	-	-	6	100
12.	Fax Machines	1	16.7	1	16.7	4	66.7
13.	Mobile Phones	6	100	-	-	-	-
14.	Flash Drive	5	83.3	-	-	1	16.7
15.	LAN (Local Area Network)	6	100	-	-	-	-

16.	WAN (Wide Area Network)	3	50	-	-	3	50
17.	Standby Generator	6	100	-	-	-	-
18.	Diskette	-	-	3	50	3	50
19.	Modem	2	33.3	-	-	4	66.7
20.	Uninterrupted Power Supply (UPS)	6	100	-	-	-	-
21.	Stylus Pen	-	0	-	-	6	100

Key: AF – Available Functional, ANF – Available Not Functional, NA – Not Available.

In the table above, the frequency (F) shows the number of universities and the computed percentages (%) of available ICT facilities in them. The highest frequency, which was six (6), shows 100% of the universities surveyed. Any ICT facilities that show the frequency six, means that such an item is found in all the six universities surveyed. The six universities investigated, all had internet connectivity, computers, local area network (LAN), mobile phones, standby generator and uninterrupted power supply (UPS), as they scored 100% each. Other ICT facilities like projectors, radio set and stylus pen were totally not available in these universities with a score of zero (0%) availability. Five of the universities translating to 83.3% had public address system and flash drives while one (16.7%) university had no flash drive at all.

Four universities (66.7%) had photocopiers and printers available and functional, but, the photocopier in one (16.7%) of the universities was not functional but available while only one (16.7%) did not have photocopier at all to operate. Printers were not available in two (33.3%) of the universities.

Three or 50% of the universities possessed scanners, digital cameras and wide area network. The other 50% or three universities did not possess these facilities for teaching and learning in library and information science. Two (33.3%) universities had magnetic boards, television/video and modem as available and functional. And two (33.3%) universities had magnetic boards and television sets, which were not functional, while two (33.3%) universities did not possess magnetic boards and television/video sets respectively.

Also, four (66.7%) universities had no modem and fax machines in place for studies, while only one (16.7%) of the universities had a functional fax machine but the remaining one (16.7%) university had no fax machine to teach and learn with.

However, It was observed that the ICT facilities required for teaching and learning LIS were available to a certain degree and proportion. This tends to support the findings of Ugwoke (2011) that ICT resources are available in different proportions in library schools. However, in some of the universities studied, some of the available ICT facilities were not functional. This situation calls for a serious concern as different ICT facilities make some valuable contributions to various aspects of educational development as effective learning through expanding access, promoting efficient and improving quality of learning. The ICT facilities also enhance quality of teaching in LIS and improve management systems. Hence, Omekwu (2005) suggested that the library schools must contain the most recent ICT tools in order to acquaint the LIS undergraduates with new developments in the global world.

It was also observed that the ICT facilities that were not available in some of the universities studied were very essential for teaching LIS. Some of the ICT facilities not available included television/video, radio set, fax machines, wide area network, modern and stylus pen. The non – availability of these facilities may be attributed to poor funding of ICT resources in library schools (Ugwoke, 2011). If this continues, the LIS which thrives in a resource – based learning environment may be hampered thereby leading to low library skills possessed by students.

Table 3: Mean and Standard deviation of measures for Enhancing Adequate Utilization of ICT in the teaching and learning of LIS undergraduate degree programme.

N = 86

S/N	Items	$\bar{X}$	SD	Decision
1.	Employing and training new staff on ICT	3.37	.70	HR
2.	Training of lecturers in LIS education programme on ICT through in service training	3.43	.66	HR
3.	Organizing periodic seminars and workshops for lecturers and students in LIS education programme on ICT	3.34	.70	HR
4.	Hiring ICT experts outside the school system to give informal lecturers to lecturers and students	3.29	.38	HR

5.	Allotting enough time for ICT practice	3.21	.70	HR
6.	Provision of adequate number of ICT facilities for regular practice by lecturers and students	3.23	.84	HR
7.	Institutions should engage in fee based services at a minimum cost	3.12	.82	HR
8.	Government should provide more funds for ICT development in tertiary institutions	3.51	.53	HR
9.	Lecturers and students in LIS education programme should be encouraged to possess their own personal computers (PCS)	3.42	.62	HR
10.	Curriculum of LIS undergraduate degree programmes should be reviewed to include the training of students on the use of ICT	3.15	.91	HR
11.	Power supply that enhances the use of ICT should be regular	3.42	.60	HR
12.	Government should give incentive to lecturers and students in LIS education programme for using ICT	3.33	.71	HR
13.	Establishing efficient ICT systems capable of being used for teaching large number of students	3.26	.72	HR
14.	Creating proper awareness on the role of ICT in development among lecturers and students of LIS education programme	3.27	.68	HR
15.	Involving lecturers in LIS education in decision on planning and curriculum use of ICT	3.36	.57	HR
16.	Institutionalization of ICT as a vital development policy in Nigeria	3.26	.71	HR
	Cluster Mean	**3.31**	**.37**	**HR**

Criterion Mean = 2.50, HR – Highly Required.

Table 2 above shows data on measures for enhancing adequate utilization of ICT facilities in teaching and learning LIS undergraduate degree programme with overall mean cluster of 3.31 and standard deviation of .37.

The data indicates that all the 16 listed items are rated by the respondents as agreed measures for adequate utilization of ICT facilities for teaching and learning LIS undergraduate degree programme. It is deduced from the table that LIS lecturers perceived that the measures when adequately adopted would enhance the utilization of ICT facilities in teaching and learning. This supports the findings of Katamba (2009) who recommended that for the implementation of ICT in Library Schools in the universities, there should be uniform curriculum for LIS undergraduate programme, well – equipped computer laboratories and stand by generators.

In addition to this, LIS schools in universities should fill their curriculum by exploiting the opportunities provided by ICTs and check the digital gap and challenges posed by developments in the 21st century. Therefore, training programme and updated curricula should be organized from time to time for LIS lecturers, technologists and technicians to keep them abreast of emerging technologies. Institutional support is crucial for procurement of alternative energy supply and funding of diverse training programmes.

Conclusion

The study focused on availability and use of ICTs facilities in teaching and learning library and information science undergraduate degree programme in universities in South-South, Nigeria. The study reveals that ICT facilities required for teaching and learning LIS were available to a certain degree and proportion. Also, in some of the universities studied, some of the available ICT facilities were not functional. The results equally revealed that, ICT facilities had not been fully made available to lecturers for teaching and learning LIS undergraduate programme.

This may be due to lack of proper awareness on the role of ICT in instructional delivery among lecturers and students of LIS undergraduate degree programme. This lack of proper awareness also created imbalance in the provision of ICT facilities in different universities.

The results revealed that adequate enhancement could also be achieved through training of lecturers in LIS education programmes such as ICT workshops or in-service training. In addition, allotting enough time for ICT practice in classroom by lecturers and students, and provision of funds for ICT development in tertiary institutions will facilitate the skills which if properly applied would improve students' achievement in LIS.

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