USE OF INSTRUCTIONAL TECHNOLOGIES IN LIBRARY AND INFORMATION SCIENCE SCHOOLS IN NIGERIAN UNIVERSITIES: RAISING THE BAR IN PEDAGOGICAL CONTENT DELIVERY

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ABSTRACT: *Instructional technologies (ITs) promote pedagogical resourcefulness and effectiveness. However, in Nigerian universities, paucity of information resources for teaching is a major concern for stakeholders, particularly in Library and Information Science (LIS) education where the use of instructional technologies is low. Literature has focused on the adoption of ICTs and their use by teachers and students with little consideration for the level of use of instructional technologies in LIS schools in Nigerian universities. This study, therefore, attempted a study on the use of instructional technologies in university-based LIS schools in Nigeria. Descriptive survey design was adopted. Twenty-seven universities that offer LIS as programme were totally enumerated with the unit of analysis being by university. In most of the LIS schools, ITs were perceived easy to use and there was a generally positive feeling towards the use of ITs. However, contrary to expectations, the level of use of ITs was found to be low, the perception of usefulness, negative and institutional support, low. Nonetheless, Babcock University, Ilishan Remo; University of Ilorin, Ilorin; University of Uyo, Uyo; University of Calabar, Calabar and Benue State University, Markurdi, could be said to be leading in the use of instructional technology innovations among the university-based LIS schools in Nigeria based on the parameters set by the study. It was therefore recommended that adequate and state-of-the-art instructional technologies should be acquired while training and support programmes designed and implemented to encourage a positive perception of usefulness, a wider acceptance and an extensive use of ITs for quality LIS university education in Nigeria.*

KEYWORDS: instructional technologies, attitude to instructional technology use, ease-of-use, perceived usefulness, institutional support, university-based LIS schools in Nigeria.

INTRODUCTION

Global trends in the use of instructional technologies in tertiary education
Instructional technologies (ITs) are information, communication and telecommunication equipment, devices and hardware deployed for teaching. They work with the aid of software and peripherals that are installed either at the factory or at the point of sale or use. Use of instructional technologies as conceptualise in this study is the Library and Information Science (LIS) educators' application of technologies to prepare (for), develop, produce or reproduce lessons and to teach, update, deliver, store, and manage lectures (content).

Instructional technologies are used in institutions of higher learning all over the world as tools to support the educational objectives of teaching and learning. They provide and help in developing skills for educational activities such as searching and assessing information; communication, cooperation, problem solving and lifelong learning which are important for the preparation of students for the knowledge society. The use of instructional technologies is one of the new learning trends that challenge the banking concept of education (that is, the assumption that the teacher owns the knowledge and deposits it into the students who attend the class) (Drent & Meelissen, 2008; Afshari, Abu Bakar, Su Luan, Abu Samah & Say Fooi, 2009).

The change from teacher-centered education system to learner-centered education the world over in the past few years also contributed to the use of technology in tertiary education. This use enables equal access, quality education and equips new generations of learners with enhanced skills to operate in the 21st century where technology is construed as a resource to help students in developing higher order thinking, creativity and research skills (Ringstaff & Kelley, 2002; Tella, Tella, Toyobo, Adika & Adeyinka, 2007). Technology integration in tertiary education, according to Dias and Atkinson (2001), has covered the continuum from instruction on programming skills, self-directed drill and practice, interactive learning software, online training, testing, instructional delivery augmentation, and Internet-based accessibility to information, communication and publication. This integration is driven primarily by hardware and software evolution, accessibility to computers in educational settings and popular instructional technology trends.

Instructional technologies promote conducive teaching and learning environments in tertiary education and have been shown to have positive impact on the learning environment and students generally. With instructional technologies, educators in tertiary institutions can use multimedia to teach interactively and work on class projects. They can communicate and do research with the use of the Internet. ITs allow educators to have more control over their teaching, to analyse problem critically and to collaborate. They have great potential to increase access to knowledge. This is because access to ITs such as computers and the Internet has increased the ability of educators to carry out more research which has led to improved quality of teaching and instruction. Technologies have also provided opportunities to establish contact, cooperate, and maintain beneficial relationships with other educators of similar interests across the world. It has broadened the course of analysis and research and improved the quality of work with the opportunity for diverse views (from experts and other colleagues) acquired over increasingly short periods of time. Kumar, Che Rose and D'Silva (2008) opined that the use of technology in the classroom will, no doubt, inspire the teachers to approach their tasks with a greater sense of purpose and, more importantly, a sense of play, to make the learning process fun for students. According to them, the Internet provides far more up-to-date information than textbooks. They averred that, searching for books only to discover at the end of the day that they do not have the required information can be time consuming and frustrating. The Net, they argued, is readily available and precise once you use the right keyword or search term. Textbook, according to them, can present obsolete information that could misguide students into believing that there is no further development after a particular discovery while information on the Net are constantly updated and current.

As technology tends to accord more closely with the way students think, it has changed the way different subjects are taught (Kumar et al., 2008). Tella et al. (2007) revealed that vast amounts of up-to-date information in the teaching and learning of different subjects are found on the World Wide Web and that almost all subjects ranging from mathematics (the most structured) to music (the least structured) can be learnt with the help of computers. Computer is perceived as an instructional tool that motivates and caters for different teaching and learning abilities (and/or disabilities).

Angers and Machtmes (2005) insisted that the recent advancement in information technology innovations and computer usage is rapidly transforming work culture and educators cannot escape the fact that today's classrooms must provide technology-supported learning. Therefore, they advised that being prepared to adopt and use technology and knowing how that technology can support student learning must become integral skills in every educator's professional repertoire. Instructional technologies also provide avenue to improve educational standards and outreach across institutions of higher learning and continents by: supporting and expanding existing curricula; increasing the accuracy, presentation, user-friendliness, and attractiveness of courses; serving as a medium for lecture delivery and extension services to correspondence or distance learners and students who are home-bound or who prefer learning at or from home and enabling telework (that is, educators preferring to work remotely from home and/or abroad). Strategic linkages between educators in Africa and those in other continent and the wider global community could also be forged with technologies (Onyebinama, 2007; Adedoja, Adelore, Egbokhare & Oluleye, 2013).

Studies on the use of technology in education consistently found that students in technology rich environments experienced positive effects on performance in all subject areas. It was found that technology provides fast and accurate feedback to students, and speed up computations and graphing, thus freeing students to focus on strategies and interpretation (Look, 2005; Bee Theng & Chia Hua, 2008). Use of interactive multimedia software may motivate students, lead to improved performance, allow many people (sometimes at once) to generate and disseminate information, thus playing an active role in the process of gainful interaction and brain-picking between academia, professionals, learners, peers and policy makers.

According to Volman and Van Eck (2001), the use of technology creates a powerful learning environment and transforms the teaching and learning environment to where students deal with knowledge in an active, self-directed and constructive way. Instructional technologies offer the potential of meeting the learning needs of individual students, promoting equal opportunity, offering learning materials, and also promoting interdependence of learning (cooperative or collaborative learning) among learners (Leach, Ahmed, Makalima & Power, 2005). Where instructional technologies are used, students are encouraged to think and be creative, find alternate solutions to problems and engage in higher order learning objectives.

Thus, technology is not just regarded as a tool, which can be added to or used as a replacement of existing teaching methods but is seen as an important instrument to support new ways of teaching and learning. Technology integration in teaching provides access to a vast wealth of information

sources and learning experiences; new channels of communication and interaction between educators and their peers and opportunity for learning for those who may normally not have access to opportunity for tertiary education. The afore-listed benefits of instructional technologies, therefore, should encourage their extensive integration in university education in Nigeria but presently, the reverse is the case.

Statement of the problem

The slow integration and low use of instructional technologies observed in Library and Information Science (LIS) schools in Nigerian universities has denied their faculty and students timely and easy access to a world of information resources that could have been beneficial for teaching and learning. In many of the LIS schools established in public universities, it was observed that adequate attention is not given to improving teaching and learning with technology and often investment are done in latest technologies without considering the educators' belief and feelings. This has resulted into less desirable ad-hoc implementations. Similarly, in some of the LIS schools in private universities where ICTs are procured, it was observed that they are not being used optimally by the educators for teaching but to secure pass marks during accreditation exercises.

Though literature revealed that much has been written on the general use of ICTs and multimedia resources, the researcher has not encounter a study that investigates the use of instructional technologies in all the university-based LIS schools in Nigeria. It was on this premise that the study sought to probe the use of instructional technologies in all the LIS schools in Nigerian universities with the aim of identifying patterns and/or trends in the use of ITs in these schools in order to make generalisation and a proposal for the way forward.

Objectives of the study

The main objective of this study was to investigate the use of instructional technologies in library and information science schools in Nigerian universities.

The specific objectives were to:

1. determine the level of use of instructional technologies in LIS schools in Nigerian universities;
2. find out the general feeling towards the use of instructional technologies in the LIS schools;
3. ascertain how easy to use instructional technologies are perceived in the LIS schools;
4. determine how useful instructional technologies are in teaching LIS courses in Nigerian universities;
5. examine the level of support Nigerian universities give for the use of instructional technologies in LIS schools and
6. identify university-based LIS schools which can be said to be at the forefront of instructional technologies' use in Nigeria.

Research questions

The study has the following research questions:

i. What is the level of use of instructional technologies in university-based LIS schools in Nigeria?
ii. What is the general feeling towards the use of instructional technologies in LIS schools in Nigerian universities?

iii.   How easy for teaching is the use of instructional technologies perceived in LIS schools in Nigerian universities?

iv.   How useful for teaching LIS courses is the use of instructional technologies perceived in Nigerian universities?

v.   What is the level of support Nigerian universities give for the use of instructional technologies in LIS schools?

vi.   Which university-based LIS school(s) can be said to be at the forefront of instructional technologies' use in Nigeria.

Scope and Significance of the Study

The study sought to explore the use of instructional technologies in all the library and information science schools in Nigerian universities. The population of the study consists of all the twenty-seven (27) university-based LIS schools in Nigeria. Levels of use and institutional support for use, general feeling towards use and perceived ease of use and usefulness of instructional technologies are factors that were considered in the study with the use of descriptive statistics and relevant literature. The unit of analysis is university.

The findings of this research could provide insight to university authorities in deploying better, acceptable and usable instructional technologies. This is because understanding the factors that influence technology-assisted instruction could help academic managers in creating appropriate support mechanisms for a seamless paradigm shift. An evaluation of the general feeling and perceptions of the easiness and usefulness of instructional technologies and the measure of management's support for the use of technology for teaching in the university-based LIS schools may reveal the schools' preparedness for change with regard to instructional technology innovations.

The up to-date information on the current practices in the use of technology for teaching in Nigerian university-based LIS schools provided by this study may also inform systems and software developers and learned societies in creating products and services that may attract more universities to adopt this technology-driven teaching and learning environment. The study is expected to contribute to knowledge through its logical review of relevant literature; its findings and recommendations and will be an addition to the body of literature in LIS that will be available to future students, researchers and educational policy makers for consultation.

LITERATURE REVIEW

The evolution and status of technology integration in Nigerian universities

The integration of technology in Nigerian universities, according to Onyebinama (2007) cited in Akinde (2016), has evolved in basically four directions. First, it has evolved via individual university initiatives through the establishment of academic computer science departments and/or computer/computing/ICT centres, the latter as academic support units. Secondly, it has evolved by the introduction of administrative computing through computerised Management Information System (MIS) units. Thirdly, this development has taken place via three initiatives: the NuNet, a project for the networking of the university system in Nigeria and its connection to the Internet;

The Information Navigator Library Management Software (TINLIB) supplied with some computer hardware to all federal university libraries in Nigeria in 1994 and the National Virtual Library Project established in 2001, which seek to collect and connect all the e-resources in Nigerian libraries. These three initiatives were spearheaded by the National Universities Commission (NUC), a national body, set up by the Federal Government to co-ordinate and monitor Nigerian universities. Fourthly, technology integration in Nigerian universities has evolved through the library and information services set up by individual university library initiatives. These four directions have not been convergent and therefore resulted in unnecessary competition for limited resources as well as duplication of efforts and facilities.

The integration of technology in teaching and learning has also evolved in universities in Nigeria through cheap and easy personal access to the Internet and e-resources provided to educators and their students by telecommunication companies (for example, MTN, GLO, Airtel, 9Mobile, and others) and/or Independent Service Providers (such as Spectranet, Smile and Swift, for instance) via personal modems and customised mobile technologies (Wi-Fi and Mi-Fi routers) loaded with pre/postpaid airtime. Access to communicate with peers, browse a whole library and download the latest idea needed for teaching and research, are granted with the loading of a little token on these devices' accounts. With this easy personal access, there is increased visibility of African local content posted or uploaded to the Internet.

The emerging university (off/online) repositories for the collection, storage and management of a university's intellectual output (for example, in the University of Jos, University of Ibadan and a few other Nigerian universities), which can be consulted for research and instructional purposes, is another example of technology integration in university. Furthermore, universities in Nigeria are now creating or entering into different forms of consortia for the purpose of collaboration and resource sharing in face of limited technology infrastructure, human capacity and resources.

Specifically, few Nigerian universities have made giant or notable strides in campus wide area networking. For instance, University of Nigeria, Nsukka (UNN) boast of its best-developed ICT systems with Very Small Aperture Technology (VSAT) access to the Internet and a campus wide intranet services. Worthy of note is the UNN i-transcript service borne out of the on-going work on digitizing academic records in the institution (Archibong, 2013; Ajegbelen, 2016). University of Jos (UNIJOS) is also blazing the trail for content development and e-learning in addition to the campus networking (Liverpool et al, 2009 cited in Ajegbelen, 2016). The University is reported by Iloanusi and Osuagwu (2009) to have an online library (eGranary) and selected infrastructure on campus to support basic forms of technology integration in education. On its part, University of Calabar in 2004 entered into a partnership with Socket Works to process students' records in the aspects of registration and school charges (Archibong, 2013).

On the issue of technology integration policy, Agyeman (2007) informed that the NUC has prescribed that there should be at least one Personal Computer (PC) to every four students and one PC to every two lecturers below the grade of lecturer I, one PC per lecturer I / senior lecturer and one notebook per reader/ professor. Majority of the Nigerian universities have not been able to achieve this recommended system ratio for their faculties, though, it is reported by Atsumbe,

Raymond, Enoch and Duhu (2012) that Nnamdi Azikwe University, Awka has met the 'computer to lecturer' ratio. The researcher believed that there would have been a quicker penetration if the NUC has acquired and distribute the PCs to the universities instead of mere policy draft whose implementation may be constrained by finance, bureaucracies and other logistics.

However, it has been found that most of the technology integrations in Nigerian universities were for administrative purposes rather than classroom teaching and learning. A study conducted by Atsumbe et al. (2012) discovered that in Nigerian universities e-learning infrastructure are not adequate in the teaching and learning and management's efforts towards the development of technology is mainly for administrative purposes. Similarly, the Obahiagbon and Osahon (2014) survey of the use of technology by 150 students and 50 lecturers from both University of Benin and Benson Idahosa University revealed that the technologies are used more for administrative purposes (such as hostel allocation, course registration, among others) than for teaching and learning. Though there is significant investment in technology infrastructure in both institutions, technology tools useful for teaching and learning are yet to receive the attention it deserves.

An effort in the promotion of the use of technology for teaching and learning made by NUC is in the establishment of e-learning platforms fitted with twenty smart boards in twelve (12) Federal universities in Nigeria (Ajegbelen, 2016). Though, this effort is commendable, it is far from the norm and akin to a drop in the ocean considering that there are more than 112 public and private universities in the country as at 2012 (NUC, 2012). The number of sub-graduate, undergraduate and postgraduate programmes requiring urgent overhauling of standard via technological intervention in teaching and learning should be another consideration in any technology teaching and learning intervention. Iloanusi and Osuagwu (2009) informed that, though, some university websites in Nigeria have online-learning portals with downloadable tutorials and provisions for online chatting; none support virtual or electronic classrooms, tele-conferencing and other synchronous forms of online-learning. However, this information being a decade old may no longer be true of some of the universities. Nonetheless, much is still left to be desired in this regard because of the present limited institutional capability and capacity for the installation and management of ICT infrastructures occasioned by financial constraint.

Recently, Carnegie, MacArthur Foundations, CARTA and TETFUND have come to the rescue but some universities have not been able to benefit from the exchange programmes and grant opportunities offered because of their not meeting up with the stringent conditions attached. University of Ibadan, Nigeria is one of the few Nigerian universities which has benefited from the MacArthur Foundation, CARTA and TETFUND ICT and research grants.

However, the problem of underdevelopment of technology infrastructure and its non-deployment in teaching and learning in Africa took its root, according to Sife, Lwoga and Sang (2007) from the lapses of the Association of African Universities (AAU) who they insisted should be in the forefront of ensuring African's participation in the ICT revolution, but were not able and ill-prepared to play such a leadership role. Consequently, they concluded that the technology infrastructure in most African universities are poorly developed and inequitably distributed. The

question then is: has the AAU been awakened to its leadership role since more than a decade ago this challenge was thrown?

Notwithstanding, in few of the developing countries in Africa and especially in few Nigerian universities where ICT infrastructure are available, poor attitude and perception of both the administrators and educators and low level of institutional and governmental support seems to explain their limited application and use for teaching, learning and research. This calls for a research of this kind to unravel the level of use (or otherwise) of technology infrastructure for teaching across university-based LIS schools in Nigeria and the facilitating and/or limiting factors.

METHODOLOGY

Research Design
Descriptive survey design was adopted for the study. This enables the researcher to explore the current status of phenomena and does not involve the manipulation of variables. In other words, descriptive survey design was used to find out the feeling towards use, perceptions of use and the institutional supports for the use of instructional technology in LIS schools in Nigerian universities.

Population of study
The population of the study comprised of the twenty-seven (27) universities offering LIS as a course of study at undergraduate level in Nigeria. All the two hundred and ninety-three (293) educators engaged in the twenty-seven (27) universities offering LIS programme in Nigeria were totally enumerated.

The Instrument
A questionnaire tagged "LIS Schools Instructional Support Survey (LSISS)" was used to collect data for the study. The questionnaire contained scales that measured the various variables. Questionnaire was chosen as an instrument of data collection because it was appropriate considering the nature of the data, the research design and analyses required, number of respondents, their dispersion and time.

The questionnaire consists of five sections as follows:
Section A was on the Use of Instructional Technologies in LIS Schools (UIT). Mean scores above the average mean were taken as high levels of use and vice versa. Section B collected data on the Feeling towards the Use of Technology for Teaching in LIS Schools (FUT). Mean scores above the average mean were taken as positive feelings and vice versa. Section C was on Perceived Ease of Use of Instructional Technologies in LIS Schools (PEUIT). Mean scores below and above the grand mean were taken as 'difficult' and 'easy' respectively. Section D, however, focused on Perceived Usefulness of Instructional Technology (PUIT). Mean scores above the average mean were taken as 'useful' with the inverse taken for scores below the average mean. Section E was on Institutional Support for the Use of Instructional Technologies in LIS Schools (ISUIT). The average mean remains the standard for measurement, analysis and interpretation. In other words, mean scores below the average were taken as low levels of support and vice-versa.

Procedure for data collection
The questionnaire was administered on all the LIS educators engaged in the twenty seven (27) universities in their respective schools on a hand–to-hand basis. A return visit after one week interval was made to some schools to collect copies of the questionnaire outstanding. The researcher resorted to postal and courier services and/or phone call to retrieve some copies of the questionnaire that were still outstanding. The data collection exercise took four months (February to May, 2015) in all.

Method of data analysis
The data collected from the respondents were analysed with descriptive statistics. The six research questions were answered using frequency distribution, percentages, means and standard deviation (S.D.). These statistical methods were used because they were sufficient and can provide adequate and appropriate answers to the questions. The unit of analysis for the study was university. Out of the 293 copies of the questionnaire distributed, 211 copies were returned out of which only 208 copies were found useful giving a response rate of 72%.

Analysis of research questions

Six research questions were answered in the study. The results are as follows:

Research question 1: **What is the level of use of instructional technologies in LIS schools in Nigerian universities?**

The result of the descriptive statistical analysis of the use of instructional technologies in LIS schools in Nigerian universities is shown in Table 1.

Table 1. Level of Use of Instructional Technologies in University-based LIS Schools in Nigeria

*mean scores greater than or equal to the grand mean and therefore significant.

From the result in Table 1, adding the highest limit on the Scale (57.5) to the lowest limit (32.38) and dividing the result by two will give us the average mean (44.94). The result shows an average mean which is greater than the grand mean score of the ITs Use Scale (that is, 44.94 > 44.37). The level of use of ITs across LIS schools in Nigerian universities can therefore be said to be low and below average.

Research question 2: **What is the general feeling towards the use of instructional technologies in LIS schools in Nigerian universities?**

	Universities	N	ITs Use for Teaching	
		(No of Lecturers)	Mean	S.D.
1	Abia State University, Uturu	4	42.75	14.93
2	Abubakar Tafawa Balewa, Bauchi	7	*52.71	16.46
3	Adeleke University, Ede	3	*47.00	12.53
4	Ahmadu Bello University, Zaria	6	*48.67	20.24
5	Ambrose Ali University, Ekpoma	8	**32.38**	5.63
6	Babcock University, Ilishan, Remo	11	*48.00	12.65
7	Bayero University, Kano	8	44.00	12.21
8	Benson Idahosa University, Benin	7	39.14	7.78
9	Benue State University, Makurdi	9	*49.38	6.23
10	Delta State University, Abraka	14	40.93	13.99
11	Federal University of Tech., Minna	14	37.55	8.54
12	Imo State University, Owerri	9	*51.44	18.66
13	Kwara State University, Malete	6	42.83	12.61
14	Lead City University, Ibadan	2	*57.00	32.53
15	Madonna University, Okija	8	39.00	12.01
16	Michael Okpara University, Umudike	6	37.17	16.20
17	Modibbo Adama University, Yola	8	42.25	9.65
18	Nnamidi Azikwe University, Awka	6	35.67	14.54
19	Tai Solarin University, Ijebu-Ode	6	43.50	7.71
20	Umaru Musa Ya'adua Univ., Katsina	4	***57.50**	17.71
21	University of Calabar, Calabar	10	*48.90	13.66
22	University of Ibadan, Ibadan	16	40.75	12.24
23	University of Ilorin, Ilorin	8	*44.88	18.93
24	University of Jos, Jos	7	*46.29	14.03
25	University of Maiduguri, Maiduguri	4	35.00	11.14
26	University of Nigeria, Nsukka	8	41.88	12.74
27	University of Uyo, Uyo	9	*51.33	15.38
(Average Mean > ITs Use Mean, i. e. 44.94 > 44.37) **ITs Use Mean**			**44.3667**	

Table 2 shows the result of the descriptive statistical analysis of the general feeling towards the use of technology for teaching in university-based LIS schools in Nigeria.

Table 2. General feeling towards the Use of Instructional Technology in LIS Schools in Nigerian Universities

	Universities	N	Attitude	
		(No of Lecturers)	Mean	S.D.
1	Abia State University, Uturu	4	***48.25**	6.08
2	Abubakar Tafawa Balewa, Bauchi	7	*46.00	9.40
3	Adeleke University, Ede	3	40.00	11.27
4	Ahmadu Bello University, Zaria	6	37.67	10.93
5	Ambrose Ali University, Ekpoma	8	40.50	9.26
6	Babcock University, Ilishan, Remo	11	*45.55	12.18
7	Bayero University, Kano	8	*47.00	9.17
8	Benson Idahosa University, Benin	7	*43.86	7.99
9	Benue State University, Makurdi	9	*43.13	6.56
10	Delta State University, Abraka	14	*44.00	8.66
11	Federal University of Tech., Minna	14	*45.91	3.56
12	Imo State University, Owerri	9	41.11	7.03
13	Kwara State University, Malete	6	41.33	5.01
14	Lead City University, Ibadan	2	*48.00	1.41
15	Madonna University, Okija	8	*45.38	7.23
16	Michael Okpara University, Umudike	6	*46.00	3.03
17	Modibbo Adama University, Yola	8	42.38	6.74
18	Nnamidi Azikwe University, Awka	6	*43.67	5.35
19	Tai Solarin University, Ijebu-Ode	6	41.83	7.25
20	Umaru Musa Ya'adua Univ., Katsina	4	41.25	25.99
21	University of Calabar, Calabar	10	*45.00	6.25
22	University of Ibadan, Ibadan	16	38.38	10.10
23	University of Ilorin, Ilorin	8	41.13	13.57
24	University of Jos, Jos	7	*43.14	7.47
25	University of Maiduguri, Maiduguri	4	**36.50**	11.56
26	University of Nigeria, Nsukka	8	37.88	10.88
27	University of Uyo, Uyo	9	*46.56	8.35
	(Average Mean < Feeling Mean i.e. 42.96 < 43.02) Feeling Mean		**43.0152**	

*mean scores greater than or equal to the grand mean and therefore significant.

The result in Table 2 revealed the average mean (calculated as the sum of 48.25 and 36.5 divided by 2) having a lesser value than the grand mean score of the Feeling Scale (that is, 42.38 < 43.02). Consequently, the general feeling towards the use of instructional technology in LIS schools in Nigerian universities can be said to be positive.

Research question 3: How easy for teaching is the use of instructional technology perceived in LIS schools in Nigerian universities?

Table 3 shows the perceived ease of using instructional technologies in LIS schools in Nigerian universities.

Table 3: Perceived Ease of Using instructional technologies in LIS Schools in Nigerian Universities

	Universities	N	Ease of Use	
		(No of Lecturers)	Mean	S.D.
1	Abia State University, Uturu	4	*58.50	7.42
2	Abubakar Tafawa Balewa, Bauchi	7	*57.00	5.11
3	Adeleke University, Ede	3	*55.33	9.91
4	Ahmadu Bello University, Zaria	6	50.00	5.86
5	Ambrose Ali University, Ekpoma	8	**39.25**	3.49
6	Babcock University, Ilishan, Remo	11	*56.36	3.44
7	Bayero University, Kano	8	51.63	2.45
8	Benson Idahosa University, Benin	7	51.14	4.11
9	Benue State University, Makurdi	9	*54.75	3.02
10	Delta State University, Abraka	14	50.71	4.46
11	Federal University of Tech., Minna	14	47.82	3.63
12	Imo State University, Owerri	9	50.56	5.53
13	Kwara State University, Malete	6	*63.67	3.77
14	Lead City University, Ibadan	2	***64.00**	31.00
15	Madonna University, Okija	8	44.00	5.05
16	Michael Okpara University, Umudike	6	51.67	3.91
17	Modibbo Adama University, Yola	8	*56.13	5.63
18	Nnamidi Azikwe University, Awka	6	*54.50	4.02
19	Tai Solarin University, Ijebu-Ode	6	*56.33	4.88
20	Umaru Musa Ya'adua Univ., Katsina	4	*58.75	14.75
21	University of Calabar, Calabar	10	*54.90	5.24
22	University of Ibadan, Ibadan	16	51.63	3.88
23	University of Ilorin, Ilorin	8	*58.75	3.28
24	University of Jos, Jos	7	*54.86	7.10
25	University of Maiduguri, Maiduguri	4	48.00	11.84
26	University of Nigeria, Nsukka	8	50.00	14.83
27	University of Uyo, Uyo	9	52.89	14.02
(Average Mean < Perceived Ease of Use Mean i.e. 51.63 < 53.45) **Perceived Ease of Use Mean**			**53.4493**	

*mean scores greater than or equal to the grand mean and therefore significant.

From Table 3, the average mean is calculated as the result of 64+39.25/2. The use of instructional technologies was therefore perceived easy in university-based LIS schools in Nigeria. This is because the grand mean value of the Perceived Ease of Use Scale is higher than the average mean value (that is, 53.45 > 51.63).

Research question 4: How useful for teaching LIS courses is the use of instructional technologies perceived in Nigerian universities?

The result of the descriptive statistical analysis of the perceived usefulness of technology for teaching in LIS courses in Nigerian universities is presented in Table 4.

Table 4: Perceived Usefulness of technologies for teaching LIS courses in Nigerian Universities

	Universities	N	Perceived	Usefulness
		(No of Lecturers)	Mean	S.D.
1	Abia State University, Uturu	4	*48.75	32.82
2	Abubakar Tafawa Balewa, Bauchi	7	*50.86	9.26
3	Adeleke University, Ede	3	*49.67	17.10
4	Ahmadu Bello University, Zaria	6	37.67	8.85
5	Ambrose Ali University, Ekpoma	8	35.13	8.98
6	Babcock University, Ilishan, Remo	11	*48.73	12.94
7	Bayero University, Kano	8	44.00	7.11
8	Benson Idahosa University, Benin	7	*47.71	7.13
9	Benue State University, Makurdi	9	*47.38	4.27
10	Delta State University, Abraka	14	39.93	17.07
11	Federal University of Tech., Minna	14	35.91	6.20
12	Imo State University, Owerri	9	41.56	10.19
13	Kwara State University, Malete	6	43.67	7.26
14	Lead City University, Ibadan	2	35.50	17.68
15	Madonna University, Okija	8	**33.00**	8.77
16	Michael Okpara University, Umudike	6	*45.50	13.50
17	Modibbo Adama University, Yola	8	41.63	8.40
18	Nnamidi Azikwe University, Awka	6	35.17	9.85
19	Tai Solarin University, Ijebu-Ode	6	*45.00	5.93
20	Umaru Musa Ya'adua Univ., Katsina	4	***59.50**	29.80
21	University of Calabar, Calabar	10	*46.20	13.45
22	University of Ibadan, Ibadan	16	*47.25	11.51
23	University of Ilorin, Ilorin	8	*50.88	14.99
24	University of Jos, Jos	7	41.00	9.42
25	University of Maiduguri, Maiduguri	4	*45.00	16.79
26	University of Nigeria, Nsukka	8	*45.75	10.00
27	University of Uyo, Uyo	9	*49.56	12.10
	(Average Mean > Perceived Usefulness Mean i.e. 46.25 > 44.15) **Perceived Usefulness Mean**			**44.1448**

*mean scores greater than or equal to the grand mean and therefore significant

The average mean, calculated as the sum of the highest and lowest limits (as shown in Table 4) divided by 2, is greater than the grand mean score of the Perceived Usefulness Scale (that is, 46.25 > 44.15). Hence, it can de deduced that instructional technologies are perceived not useful for teaching LIS courses in Nigerian universities.

Research question 5: What is the level of support Nigerian universities give for the use of instructional technologies in LIS schools?

Findings from the descriptive analysis of the level of institutional support for the use of instructional technologies in LIS schools in Nigerian universities are presented in Table 5.

Table 5. Level of Support of Nigerian Universities towards the use of instructional technologies in LIS Schools

	Universities	N	Institutional Support	
		(No of Lecturers)	Mean	S.D.
1	Abia State University, Uturu	4	*48.50	15.15
2	Abubakar Tafawa Balewa, Bauchi	7	*46.43	10.00
3	Adeleke University, Ede	3	42.33	16.80
4	Ahmadu Bello University, Zaria	6	37.00	7.27
5	Ambrose Ali University, Ekpoma	8	41.88	9.73
6	Babcock University, Ilishan, Remo	11	**55.64**	9.01
7	Bayero University, Kano	8	40.38	8.09
8	Benson Idahosa University, Benin	7	37.43	4.72
9	Benue State University, Makurdi	9	*43.13	6.03
10	Delta State University, Abraka	14	36.71	13.18
11	Federal University of Technology, Minna	14	39.00	9.75
12	Imo State University, Owerri	9	*46.11	4.73
13	Kwara State University, Malete	6	39.67	6.83
14	Lead City University, Ibadan	2	*47.50	14.85
15	Madonna University, Okija	8	36.13	7.66
16	Michael Okpara University, Umudike	6	36.83	11.77
17	Modibbo Adama University, Yola	8	*47.88	11.47
18	Nnamidi Azikwe University, Awka	6	*42.83	14.92
19	Tai Solarin University, Ijebu-Ode	6	*43.33	12.42
20	Umaru Musa Ya'adua University, Katsina	4	*50.75	23.57
21	University of Calabar, Calabar	10	*49.30	13.70
22	University of Ibadan, Ibadan	16	36.81	9.52
23	University of Ilorin, Ilorin	8	*43.13	17.65
24	University of Jos, Jos	7	*47.00	13.58
25	University of Maiduguri, Maiduguri	4	**32.75**	9.54
26	University of Nigeria, Nsukka	8	35.25	8.61
27	University of Uyo, Uyo	9	*50.22	9.68
(Average Mean > Institutional Support Mean i.e. 44.20 > 42.74) **Institutional Support Mean**			**42.7378**	

*mean scores greater than or equal to the grand mean and therefore significant.

The statistical analysis result in Table 5 shows an average mean score greater than the grand mean score of the Institutional Support Scale (that is, 44.20 > 42.74). Consequently, it can be inferred that the level of support given by the Nigerian universities towards the use of instructional technologies in LIS schools is low and below average.

Research question 6: **Which university-based LIS school(s) can be said to be at the forefront of instructional technology use in Nigeria?**

The university-based LIS school(s) which will be taken to be at the forefront of technology integration in teaching in Nigeria will have to present a faculty with the highest level of use, the most positive feeling and perception of easiness and usefulness and the highest level of institutional support for the use of instructional technologies.
Table 6 shows the descriptive statistical analysis of the means and standard deviations of all the study variables by university (with their grand means scores).

Table 6. Analysis of all the Study Variables by University

	Universities	N	Feeling towards use		Ease of Use		Perceived Usefulness		Institutional Support		Use of Instructional Technologies	
			Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
1	Abia State University, Uturu	4	*48.25	6.08	*58.50	7.42	*48.75	32.82	*48.50	15.15	42.75	14.93
2	Abubakar Tafawa Balewa, Bauchi	7	*46.00	9.40	*57.00	5.11	*50.86	9.26	*46.43	10.00	*52.71	16.46
3	Adeleke University, Ede	3	40.00	11.27	*55.33	9.91	*49.67	17.10	42.33	16.80	*47.00	12.53
4	Ahmadu Bello University, Zaria	6	37.67	10.93	50.00	5.86	37.67	8.85	37.00	7.27	*48.67	20.24
5	Ambrose Ali University, Ekpoma	8	40.50	9.26	39.25	3.49	35.13	8.98	41.88	9.73	32.38	5.63
6	Babcock University, Ilishan, Remo	11	*45.55	12.18	*56.36	3.44	*48.73	12.94	*55.64	9.01	*48.00	12.65
7	Bayero University, Kano	8	*47.00	9.17	51.63	2.45	44.00	7.11	40.38	8.09	44.00	12.21
8	Benson Idahosa University, Benin	7	*43.86	7.99	51.14	4.11	*47.71	7.13	37.43	4.72	39.14	7.78
9	Benue State University, Makurdi	9	*43.13	6.56	*54.75	3.02	*47.38	4.27	*43.13	6.03	*49.38	6.23
10	Delta State University, Abraka	14	*44.00	8.66	50.71	4.46	39.93	17.07	36.71	13.18	40.93	13.99
11	Federal University of Tech., Minna	14	*45.91	3.56	47.82	3.63	35.91	6.20	39.00	9.75	37.55	8.54
12	Imo State University, Owerri	9	41.11	7.03	50.56	5.53	41.56	10.19	*46.11	4.73	*51.44	18.66
13	Kwara State University, Malete	6	41.33	5.01	*63.67	3.77	43.67	7.26	39.67	6.83	42.83	12.61
14	Lead City University, Ibadan	2	*48.00	1.41	*64.00	31.00	35.50	17.68	*47.50	14.85	*57.00	32.53
15	Madonna University, Okija	8	*45.38	7.23	44.00	5.05	33.00	8.77	36.13	7.66	39.00	12.01
16	Michael Okpara University, Umudike	6	*46.00	3.03	51.67	3.91	*45.50	13.50	36.83	11.77	37.17	16.20
17	Modibbo Adama University, Yola	8	42.38	6.74	*56.13	5.63	41.63	8.40	*47.88	11.47	42.25	9.65
18	Nnamidi Azikwe University, Awka	6	*43.67	5.35	*54.50	4.02	35.17	9.85	*42.83	14.92	35.67	14.54
19	Tai Solarin University, Ijebu-Ode	6	41.83	7.25	*56.33	4.88	*45.00	5.93	*43.33	12.42	43.50	7.71
20	Umaru Musa Ya'adua Univ., Katsina	4	41.25	25.99	*58.75	14.75	*59.50	29.80	*50.75	23.57	*57.50	17.71
21	University of Calabar, Calabar	10	*45.00	6.25	*54.90	5.24	*46.20	13.45	*49.30	13.70	*48.90	13.66
22	University of Ibadan, Ibadan	16	38.38	10.10	51.63	3.88	*47.25	11.51	36.81	9.52	40.75	12.24
23	University of Ilorin, Ilorin	8	41.13	13.57	*58.75	3.28	*50.88	14.99	*43.13	17.65	*44.88	18.93
24	University of Jos, Jos	7	*43.14	7.47	*54.86	7.10	41.00	9.42	*47.00	13.58	*46.29	14.03
25	University of Maiduguri, Maiduguri	4	36.50	11.56	48.00	11.84	*45.00	16.79	32.75	9.54	35.00	11.14
26	University of Nigeria, Nsukka	8	37.88	10.88	50.00	14.83	*45.75	10.00	35.25	8.61	41.88	12.74
27	University of Uyo, Uyo	9	*46.56	8.35	52.89	14.02	*49.56	12.10	*50.22	9.68	*51.33	15.38
	GRAND MEANS		**43.0152**		**53.4493**		**44.1448**		**42.7378**		**44.3667**	

*mean scores greater than or equal to the grand mean and therefore significant.

By ranking and comparison of the mean scores with the grand means, two extremes were revealed from the distributions in Table 6. In the first extreme are LIS Schools of Abubakar Tafawa Balewa, Babcock, Benue State and Calabar which indicated positive feeling and perception of easiness and usefulness. Institutional support and consequently level of use is high in these universities. In the other extreme is the LIS School of Ambrose Ali which revealed a general negative feeling and perception; poor institutional support and low use.

In-between the two extremes explained are the use behaviour of other LIS schools. For instance, results from Abia State and Nnamdi Azikwe indicated good feeling and perception of easiness; a reasonable level of support, but low level of use. Though, Nnamdi Azikwe returned negative perceived usefulness while Abia State had a positive perception of usefulness. The LIS Schools of Tai Solarin, Umaru Musa Ya'adua and Ilorin perceived the use of instructional technologies easy and useful, believed that they were well supported by their institutions but did not feel good towards the use of ITs for teaching LIS courses. While it was revealed that Tai Solarin indicated low use, Umaru Musa Ya'adua and Ilorin had moderate use.

The LIS Schools in Ibadan, Maiduguri and Nsukka were not using instructional technologies. Though, they believed that they are useful for teaching, they "saw" them as not easy to use for teaching, had poor feeling towards their use for teaching and perceived themselves not well supported by their institutions in the use of ITs. Similarly, Benson Idahosa and Michael Okpara returned low use of instructional technologies. They were found to perceive ITs difficult to use and lacked institutional supports, though, they had positive feeling and perceived ITs useful for teaching. LIS School of Uyo indicated positive feeling towards use, positive perceived usefulness of but a negative perceived ease of use despite good institutional support.

Only Babcock "stood out" in its instructional technology' use behaviour among four other private universities offering LIS in Nigeria while the reverse is the case with Madonna. Adeleke, Benson Idahosa and Madonna believed that they were not well supported by their universities against the general/public perception of private universities in Nigeria. Lead City may be pardoned for "seeing" ITs as not useful for teaching LIS courses since the University being new in the comity of universities offering LIS in Nigeria may still be struggling to find its feet and might have not been able to expose its library educators to best practices in ICTs integration in teaching.

Imo State and Ahmadu Bello, among other public universities, returned negative feeling and perception of ease and usefulness of ITs as teaching innovation. It was also found that LIS Schools from federal universities (for instance, Bayero and FUTMinna) did not fare better than their state counterparts (for example, Delta and Kwara), since they all believed that they were not well supported by their institutions and hence, not using ITs.

In all, educators from Calabar, Benue, Babcock, Ilorin and Uyo have higher instructional technology use behaviour and can be said to be at the forefront of ICTs integration in teaching and learning in university-based LIS schools in Nigeria based on their higher mean scores in the parameters set by this study (that is, the variables measured).

DISCUSSION OF THE FINDINGS

Level of use of instructional technologies in university-based LIS schools in Nigeria

It was found that the level of use of instructional technologies in LIS schools in Nigerian universities is low and below average. The reason could be that these systems were neither available nor accessible to their educators or that they may not have the requisite skill or expertise to use the ITs. It could also be that the use of these technologies for teaching LIS courses is not required or mandated by the management of these LIS schools.

This result support that of past Nigerian studies, for instance, the survey of Oshinaike and Adekunmisi (2012) on the use of multimedia for teaching found that majority of the respondents did not make use of the multimedia resources in practical teaching but rather in forming lecture notes, paper presentations, research and publication activities/outlets. Gombe (2016) researched on the use of ICTs by lecturers in North-western Nigeria and found low use of ICTs in the classroom by the lecturers, but a significant use for research, accessing mails and word-processing. Findings from Ajegbelen (2016) survey which examined the gap facing the use of ICT in university education with 120 lecturers from five South-south State universities in Nigeria, also revealed that there is a gap between the lecturers and ICT usage in the classrooms.

This finding is also in agreement with some international studies. For example, Obiri-Yeboah, Fosu and Kyere-Djan (2013) examined the nature and extent of ICT adoption and use, trend and effect on teaching, research and learning in Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana. Data were collected (from 190 respondents: 30 lecturers, 150 students and 10 ICT personnel of different colleges) on the trend of ICT infrastructure for a period of ten years. It was found that, although, there were many technology infrastructures available but they were not fully integrated in teaching, research and learning and that ICTs integration in educational and research processes seems very slow in KNUST. Similarly, Peeraer and Petegem (2011) in Vietnam found some educators who feel they are competent in using educational technology available in the school but are not integrating it into the classroom or using it for teaching. Though, it was found that these educators used a range of ICT applications and computer for lesson preparation, but much less use in classroom teaching.

However, contrary to this finding, research studies for instance by Hennessy, Harrison and Wamakote (2010) of Sub-saharan Africa found significant use of technology for teaching and emphasised the importance of technology use, especially in exposing educators and their students to a world of information resources. A Nigerian survey of Bamigboye, Bankole, Ajiboye and George (2013) on the attitude and competency towards the use of ICT resources by 211 lecturers from nine colleges of the Federal University of Agriculture, Abeokuta, also found that the majority of the respondents have integrated ICT resources into their lectures. It is of note that this is a case study and the University in question has no LIS school as at the time of study. This success story should, nevertheless, be emulated and/or replicated in all other Nigerian universities. Hence, LIS educators who wish to deliver a current, cutting-edge and quality instruction and "stand-out"

among colleagues to impart knowledge to the now 'tech-savvy' students are advised to accept, acquire the skill and use technologies extensively in their teaching practices.

Feeling towards the use of instructional technologies in LIS schools in Nigerian universities
The general feeling towards the use of instructional technologies in LIS schools in Nigerian universities was found to be positive. This means that the educators in these LIS schools were favourably disposed towards the use of ITs. This may be as a result of their acceptance and positive attitude to the general use of ICTs in other area of life endeavours including personal research, administration and recreation. Thus, the library educators' positive feeling towards use may indicate acceptance of the use of instructional technologies as teaching innovation.

This finding is in line with the findings of the survey of Lee, Cerreto and Lee (2010), which examined Korean educators' intention to integrate technology in their teaching and found that attitude was a much greater indicator of an educator actually using technology. Moreover, Afshari, Abu Bakar, Su Luan and Afshari (2010) while looking into contributing factors to Iranian principals' level of computer use, submitted that the attitude of participants towards an educational innovation is an important factor in determining to what degree and with what speed change will be effected since any successful transformation in educational practice requires the development of positive user attitude towards new technology.

From the foregoing, it can be said that the general positive feeling to the use of instructional technology in LIS schools in this study is a good signal and a welcome development. This is because the development of educators' positive attitude toward ITs is a very significant factor not only for implementing and increasing integration but also for avoiding educators' resistance to technology use.

Perception of easiness and usefulness of instructional technologies in LIS schools in Nigerian universities
The perception of the ease of use of instructional technologies in LIS schools in Nigerian universities is positive while their perceived usefulness is found to be negative in this study. This means that the educators see themselves as having the ability to use ITs but are not seeing them as useful for teaching LIS courses; hence, their low use and integration in teaching. This may be due to the educators' lack of opportunity for collegial demonstration and apprenticeship of observation in the usefulness of ITs for teaching LIS courses or the need for exposure to a wider range of ITs. Seeing how ITs are used, that is, "how it is being done" and what can be achieved with the use of a range of ITs can convince the educators of the possibilities inherent in their use and usefulness for teaching LIS courses.

Notwithstanding, this finding is in agreement with the studies of Hennessy, et al. (2010) which revealed that some teachers in Sub-Saharan Africa did not believe that technology has a useful educational objective and that they are supplemental and not essential to their teaching and classrooms. However, many research studies (Ataran and Nami, 2011; Aypay, Çelik, Aypay and Sever, 2012; Ke, Sun and Yang, 2012, among others), developments, and global practices in education daily point to the increasing use and usefulness of technology for teaching. It therefore,

follows that if educational policy in Nigeria is to successfully integrate instructional technologies, the university managers need to find ways of support that will help in adjusting positively educators' feelings, belief and perception of the place of technology in teaching and provide necessary encouragement for educators' easy and seamless acceptance, adoption and use of this instructional innovation for quality education and all-round educational development.

Level of support of Nigerian universities towards the use of instructional technologies in LIS schools
This study found that the level of institutional support for the use of instructional technologies in LIS schools in Nigerian universities is low. In other words, the educators were not given any meaningful support to teach with technology. This lack of institutional support may explain the low use of instructional technologies among them. For in any institution where necessary infrastructure, technology leadership, mentoring and expertise are lacking, no successful and gainful use of instructional technology can be made. Meaning that, nothing much can be done with regards to technology use for teaching by educators in an environment where, for instance, there is no electrical and system backups and timely response to system breakdown and where the administrators see the much talk about the use of instructional technology as "much ado about nothing".

This finding validated the earlier study of Nwokike and Chiemeka (2011). Their survey of the Faculty of Education, University of Ibadan, Nigeria revealed lack of a positive organisational facilitation (that is, adequate support from the university authority and technical assistance) as factor affecting teachers' use of online education platform. The study advised institutions to support their academic staff with necessary infrastructure if they are to successfully exploit online instructional opportunities.
In line with the finding of minimal and/or no institutional support is the report of the World Link Programme, a School ICT Project of the World Bank cited by Hennessy et al. (2010) which found that though, teachers enthusiastically engage in collaborative projects and often portray constructivist pedagogy; school administrators offer very little structural support and few incentives to use the technology effectively in the classroom. Similarly, Adeosun (2010) in Nigeria found that educators will use technology in teaching if they can pass the hardware/software, Internet connectivity and electrical power supply thresholds. Hence, the importance of institutional support in achieving a sustainable use of instructional technologies can never be overemphasised.

DISCUSSION OF THE FINDINGS OF THE ANALYSIS OF STUDY VARIABLES BY UNIVERSITY

The results from the analyses revealed LIS schools with positive feeling and perception of usefulness (for example, Benson Idahosa and Michael Okpara) which were not actually making use of instructional technology because of lack of institutional support. This showed that positive feeling and perception though important, may not be enough guarantee for the use of technology for teaching if: the resources are not on ground, there is no technical support and/or the technical support staff are not pedagogically competent.

This finding was in support of the findings of Askar, Usluel and Mumcu (2006) and Hsu, Wu and Hwang (2007) which established that educators' positive attitude and perception of easiness and usefulness may not lead to the use or appreciable use of technology if they are not given adequate supports by their institutions to teach with technology. In addition, YuLi (2008) in a qualitative study of twenty-two teachers from Taiwanese higher education institutions identified individual knowledge and skills of technical personnel as factors affecting the integration of ICT in teaching English in Taiwan.

Some other LIS schools (for example, Tai Solarin and Nnamdi Azikwe) were found to be well supported by their universities but were not using instructional technology. This may be due to their educators' lack of pedagogical knowledge and/or skills in the use of technology for teaching LIS courses, their negative feeling, the fact that the use of instructional technology may be optional in those universities or because the educators may lack mentoring, demonstrations and technological leadership and exposure to best practices in appropriate use of technology for teaching in their subject area. The obsolescence of ICT infrastructure and resources may also account for this non-use.

Bauer and Kenton (2005) in a qualitative study that examined the classroom practices of 30 ICT-compliant teachers who used computer technology for teaching in USA, found teachers who were not integrating technology on a consistent basis as both a teaching and learning tool because of out-dated hardware, lack of appropriate software and the technical difficulties associated with technology use.

It was found that LIS schools from the first generation federal universities in Nigeria such as Ibadan, Maiduguri and Nsukka were not using instructional technologies; though they believed that the technologies are useful for teaching but had poor feeling towards their use for teaching LIS courses; "saw" instructional technologies as not easy to use and perceived themselves not well supported by their institutions in the use of ITs. The argument for this, according to the researcher, is that these are the universities where veteran LIS educators (whose education and training may not have ICT teaching and learning components) were engaged and hence, the feeling and perception (informed by ICT-use skills) of these senior citizens may impact on the result from their universities.

In support of this argument is Mathipa and Mukhari (2014) qualitative study of teachers who use ICTs for the enhancement of teaching and learning in the urban schools of Gauteng Province in South Africa. The study identified teacher generation gap and beliefs as impediments to the instructional use of technology. According to Makgato (2012:109), who studied the status of teachers' use of educational technology in some others schools in South African semi-urban locations, "old teachers who are comfortable with the traditional way of teaching do not want new and innovative methods of teaching. They are stuck with the face-to-face teaching and teacher-centered methods which gives them the sense of power in front of their learners". Kpolovie and Awusaku (2016), in an investigation of the attitude of 400 lecturers towards the adoption of ICTs in teaching in one federal and state-owned universities in Rivers State, Nigeria and Onasanya, Shehu, Oduwaiye and Shehu (2010) in a study of the ICT teaching integration attitude of 150

lecturers sampled from three tertiary education in Kwara State, Nigeria, revealed, among others, that younger and less experienced lecturers have an incomparably better attitude towards ICT adoption than older and more experienced lecturers.

On the use of instructional technologies by LIS schools in private universities, it was found that only Babcock "stood out" among four others offering LIS in Nigeria. This finding has refuted the general belief in Nigeria that private universities have all it takes (for instance, firm financial backups as a result of huge tuition and other accrued fees) to use technology for teaching and are not bugged by the usual bureaucracy and protocols (that may slow-down, delay and/or hinder acquisition and implementation of ICT infrastructures) prevalent in public universities. However, this evidence negates the finding of Abdulkai (2004) in a study that examined the connection between educators' attitude towards ICT use and proprietorship or school ownership.

Nonetheless, findings from the public universities' instructional technology use revealed that, out of the eight state universities offering LIS, only two (Benue and Umaru Musa Ya'dua) were at the fore while only four (ATBU, Calabar, Ilorin and Uyo) were making considerable efforts at using instructional technologies out of the fourteen federal universities offering LIS in Nigeria as at the time of study. This could be as a result of the now dwindling government allocation to public universities occasioned by the recent economic recession in Nigeria which has crippled efforts at acquiring the capital-intensive ICT tools and infrastructure which may require a lot of foreign currency exchange.

In the light of the above, the Nigerian studies of Nwokike and Chiemeka (2011); Nwana (2012); Idowu and Esere (2013) and Ofuyatan, Opaluwa and Adeola (2014) suggested that if government allocations are not forthcoming, an alternative funding of ICT-driven instructional initiatives could be sought by individual institutions via revenue generation drives geared towards international bodies, the private sector, civil society, alumni and Non-Governmental Organisations (NGOs) to ensure affordable and sustainable access to ICT infrastructure and courseware for quality and effective teaching practices.

SUMMARY OF THE FINDINGS

The findings of the study are hereby summarised as follows:

1.   The level of use of instructional technologies in university-based LIS schools in Nigeria is low and below average.
2.   The general feeling towards the use of instructional technologies in LIS schools in Nigerian universities is positive.
3.   Instructional technologies are perceived easy to use in LIS schools in Nigerian universities.
4.   Instructional technologies are perceived not useful for teaching LIS courses in Nigerian universities.
5.   The level of support of Nigerian universities towards the use of instructional technologies in LIS schools is low and below average.

6.   Babcock University, Ilishan Remo; University of Ilorin, Ilorin; University of Uyo, Uyo; University of Calabar, Calabar and Benue State University, Markurdi, could be said to be at the forefront of the use of instructional technology innovations among the university-based LIS schools in Nigeria.

CONCLUSION

From the findings of this study, it can be concluded that:
➢   the reason why the level of use of ITs across university-based LIS schools in Nigeria is low could be either because of the low institutional support or that their use was optional and not mandatory;
➢   the positive disposition towards the use of ITs may be a split-over effect from a favourable attitude to the general use of ICTs and a welcome signal indicating readiness to use ITs;
➢   the management of the LIS schools need to take up the challenge of fully integrating ITs, since the educators perceived them easy to use and were showing willingness;
➢   the educators' negative perception of usefulness of ITs in teaching LIS courses may indicate the 'hands-on-tools' and practical nature of some LIS subjects, the personal touch and the physical interaction demands of librarianship as a people-oriented discipline;
➢   most of the Nigerian universities are not doing enough in supporting their LIS schools in the gainful use of a wider range of ITs and
➢   few university-based LIS schools in Nigeria presently have what it takes to use and sustain the use of ITs.

Recommendations

In line with the conclusion of this study, the following recommendations were proffered:

i.   To encourage the extensive use of ITs for teaching, LIS schools across Nigerian universities should expose their educators to a wider range of modern and relevant systems which are becoming more useful in today's educational world. For there is virtually no discipline or field of study which has not found the use of ITs profitable.
ii.   Since a change in feeling is possible, the LIS educators should be assisted in acquiring personal ICTs, which they can use at will. The self-teaching and development made possible by own resources and flexible time of use may help in sustaining the present positive feeling.
iii.   To enhance the ease of use and prevent resistance, the educators should be trained in the best pedagogical practices of relevant instructional technologies and be made part of the decision making process with respect to the implementation of any instructional technology innovations in the LIS schools.
iv.   To encourage a positive perceived usefulness of instructional technologies in teaching LIS courses, there is need to search for and ensure training in relevant ITs that could take care of the social peculiarities of LIS, for instance, the social networking media technologies which could be deployed for cooperative learning and group projects, peer coaching and brain-picking, tutor-students interactions and after-class instructions. Furthermore, some officially-acquired portable ITs may also be sometimes released for the educators to take home for practice. This will improve

their troubleshooting skills, enhance their familiarity with the tools and, hence perception of usefulness.

v. The Managements of all the universities with LIS schools should actively support and possibly sponsor the educators' study visits or secondments to other departments of LIS in and out of the country where instructional technologies have been fully integrated to 'see how things are being done'; encourage knowledge transfer and the immediate and effective integration of relevant technologies to teaching practices without any official bottlenecks.

vi. To raise the bar in ITs' use to deliver good content in all the university-based LIS schools in Nigeria, regular on-the-job training for LIS educators on the use of instructional technologies should be brought to the regular classrooms and/or departmental ICT laboratories; they should be taught with the same hard/software they will use in teaching students while their feedbacks from the trainings undergone should be considered for retraining

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