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# Identifying Contextual Challenges and Modifying Traditional Methods of Library Instruction in Private University in Nigeria

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## Identifying Contextual Challenges and Modifying Traditional Methods of Library Instruction in Private University in Nigeria

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### ABSTRACT

*The pilot study investigated the integration of information communication and technology (ICT) with library instruction in Clifford University Owerrinta, Abia State, Nigeria. The emergence of ICT as a tool for teaching and learning and its acceptance in all human endeavours has increased the need for the modification of the methods that are currently been used in the delivery of library instruction in most universities in Nigeria. The study was a pre and post type using a total enumeration method with a population of 124 first year students of 2016/2017 academic session. Two instruments were developed and validated by two professors in the field of Library and Information Science from the Imo State University, Owerri with a reliability result of 0.82 and 0.84 respectively using Cronbach alpha procedure. The instruments were administered face-to-face on the same respondents who registered for Library Instruction course in the first and second semesters with 100% participation. The finding revealed that a modification on the current traditional methods of library instruction adopted in some Nigeria universities for an inclusive method adjoining ICTs would have a positive effect on the students' academic career. It showed a significant improvement in the use of ICT tools and facilities in research among the respondents. Findings showed a major improvement by integrating ICT with library instruction among the respondents in searching for information on the Internet, e-databases and OPAC; retrieving and downloading of information from the Internet, and preparation of presentations using MS Power-point. Findings further revealed inadequate ICT facilities in the library and lack of personal ICT tools for students such as laptops as major setbacks for integrating ICT with library instruction. The study recommended a full integration of ICT-based courses with library instruction and provision of ICT tools such as projector, interactive board, computers, laptops and good Internet connection as a means of achieving result-oriented approach of library instruction programme in Nigerian universities.*

**Keywords:** Library instruction, ICT integration, Private universities, Clifford University, Nigeria

## INTRODUCTION

The developments in the use of information and communication technology (ICT) as a tool for learning, teaching and research in universities and libraries have increased the need for a modification of the contents and methods of library instruction in universities. All academic libraries undergo episodes of strategic change, reflecting the constant need to adjust direction and momentum to best meet the needs of those they serve (Mossop, 2003). Montiel-Overall (2005) noted that students' learning, understanding and application of learned objects are the basis of education. Advancements in technology in the handling, processing, accessing, storing, retrieving and dissemination of information in libraries require a holistic and pedagogical approach of instructing library patrons, especially new students, through a combination of conventional and contemporary methods to improve their knowledge and skill. Instruction in the use of ICT tools in accessing information sources and services would go a long way in making the library users ICT literate and enable them to access the library information resources with ease. Igbena in 1990 defined library instruction also known as *user education* as a process of making library patrons understand how to effectively and efficiently use the library resources in identifying, locating, searching, retrieving and exploiting information in the library. The merit of Igbena's definition is only for the traditional libraries of 80s and 90s and does not include 21<sup>st</sup> century libraries, which is inclusive of instructing the users in the use of ICT tools in research and learning.

The old fashioned methods of delivering library instruction is no longer impacting the library users of the 21<sup>st</sup> century which necessitate a change. Change has been described as one of the most difficult thing to apply in any organization, but a vital element for any business that wants to survive and thrive in an increasingly competitive and fast-paced world (Madsen, 2018). Modification of the traditional methods of instruction and integrating ICT will support the research ability of the library users and would help them in the development of new research skills in the use of ICT-based library services. Omeluzor, Alarape, Dika and Ukangwa (2017) noted that users of academic libraries including students, staff and faculty may not have any basic skill or knowledge in using ICT-library based information resources and therefore the need for ICT-based library instruction.

Clifford University (CLU) Owerri having identified the need and adopted a change in the delivery of library instruction in line with the National Universities Commission (NUC) 2018 Bench mark academic standard was selected as a pilot private university in Nigeria. The library instruction programme at CLU was structured with ICT fully integrated for all first year students. The programme encompasses a two-unit course taught by the librarians during every first and second semester of the first academic year. The course is titled: "Use of Library, Study Skill and ICT I & II, with course codes: General Studies (GST) 112 & 122" respectively. It is a requirement for graduation. During the first semester, the students are introduced to the library information and services, specifically to identify, access and retrieve information materials in the library. In addition, students are instructed on the rules and regulations guiding the use of library resources and services which is obtainable in most universities in Nigeria (Okoye. 2017). Other methods adopted are one-on-one mentoring, orientation, library guide and guided tour (Omeluzor, at al, 2017, p.9).

In the second semester, the instruction is focused on practical with the aim of introducing new students to multimedia and other ICTs tools as well inculcate ICT skills in them. This involve live demonstration on how to access and use available electronic information resources and databases for research, and application of classroom teaching into practice. It is a 'hands-on-deck' training to ensure that students are impacted with relevant research skills in handling ICT tools in their chosen careers. The approach has been identified in some studies as a feasible option in making students independent researchers and sophisticated learners (Ojasaa, 2003, Suleiman, 2012, Igwebuike & Agbo, 2014). The approach also justifies the Association of College Research Libraries recommendations of 2017 which stated that computer lab with instructor and student workstations, projector, printer, access to the Internet should be made available for library instruction, while instructional modes may include reference interview, digital or print

instruction resources, web tutorials or web-based instruction, asynchronous modes of instruction (email, social media), and synchronous modes of instruction (chat, audio/video/web conferencing), among others. It also exemplifies a practice adopted by the Multimedia Educational Resource Learning Online Teaching (MERLOT) in 1995 which was broadened in 2015 (MERLOT, 2017).

## **BRIEF BACKGROUND TO CLIFFORD UNIVERSITY**

Clifford University, Owerri is located in Abia State, one of the South-East zone states of Nigeria. CLU is among the eight private universities that were granted charter to operate as a privately owned institution with approval by the Federal Ministry of Education and NUC on November 22, 2016. After receiving the charter, on March 3, 2017, the University began academic activities at its Ihie Campus in three faculties namely: (1) Faculty of Humanities, (2) Faculty of Management and Social Sciences and (3) Faculty of Science with 124 students admitted into the three faculties and programmes of the University. The University is located in a serene environment devoid of noise and other environmental hazards. CLU library is very conducive for learning and research with air-conditioner and state-of-the-art ICT facilities such as projector, computers connected to the Internet and subscription to over 20,000 electronic books and journals that are accessible on stand-alone computer systems and external databases on the Internet. This allow the students and staff to have access to a variety of information sources that are helpful in their learning and research.

## **LITERATURE REVIEW**

Instruction in the use of information sources and services in the library cannot be over emphasized. Esse (2014) advocated that the library should intensify its efforts in educating the library users by setting up some additional methods of user education in order to achieve excellence in educational pursuit. He further emphasized the need to educate the library users in the use of online resources and databases for their research work. According to Okoye (2013), hands-on demonstration using workstations, online resources and online databases were not being used. He argued that students were not exposed to the current ICT technologies of accessing and retrieving information resources. Several scholars have advocated the use of ICT in the delivery of library services to the library patrons. For instance, Haliso (2011), Ayiah and Kumah (2011) are of the opinion that university libraries should embrace information technologies as a tool for service delivery, particularly as traditional library processes and structuring are proving unsatisfactory to respond quickly to library patrons in this technology-driven era. Hence, the need for the library to accept modification through integration of ICT with library instruction. Studies have shown that integration of ICT in learning increase the skill, learning and academic performance of students and staff (Ololube, Eke, Uzorka & Ekpenyong, 2009; Miima, 2014). According to Madukoma, Onuoha, Omeluzor and Ogbuiyi (2013), integration of ICT helps students' intellectual ability and skill for accessing and retrieving information as well as constructing a framework for learning. Similarly, Lucas (2017) stated that library instruction teaches students how to use the library resources and to evaluate the research materials they find.

In some advanced countries like the USA, UK and Canada among others, ICT is imbedded in their library instruction programmes. For instance, the MERLOT developed an ICT literacy project which is intended to provide a systematic approach which incorporates ICT literacy into education to ensure that students are ICT literate (MERLOT, 2017). Similarly, the instructional method adopted by the Cornell University Library enables students to use the library resources, research methods and advanced tools (Cornell University Library, 2017). At CLU, the library instruction programme is designed to serve as a template for universities in Nigeria, modelled after the Association of College Research Libraries (2017) recommendations, and is exclusively for the first year students. Ali and Katz (2010) suggested in their study that faculty should work closely with library staff, who traditionally have been the primary instructors of information

literacy and ICT literacy skills, to develop course activities and assignments that provide critical ICT literacy training.

Integration of ICT with library instruction is critical hence, it increases awareness, skill and knowledge of the library users in using electronic information resources effectively (Maduako, 2013; Omeluzor, Akibu & Akinwoye, 2016), thereby boosting students' academic performance (Mbugua, Kiboss & Tanui, 2015). In America, the development of 21<sup>st</sup> century skills was identified as a critical factor for students' success in the digital age and was recommended for inclusion in educational standards, curriculum and assessment (The CEO Forum on Education & Technology, 2001). Similarly, integration of ICT in teaching helps students to recall information and use it to solve problems as well enhance students' knowledge, investigation and inquiry skills and creates curiosity and interest (Apple Computer, n.d.; The CEO Forum on Education & Technology, 2001). MERLOT (2017) stressed that students need a broad ICT literacy base, and deeper knowledge in a discipline. Bhatti (2010) submitted that the changing nature of higher education worldwide, along with ever increasing growth of library collections, technological developments in handling and retrieving of information and fundamental changes in the nature of reference services justifies the need for integration of ICT with library instruction in academic institutions. A study on library instruction and academic performance of undergraduates at Babcock University, Nigeria showed that ICT-based library instruction impacted students' ability to be familiar with various information retrieval tools as well as to access and download information without depending on the library staff (Madukoma, Onuoha, Omeluzor & Ogbuiyi, 2013).

The integration of ICT with library instruction in universities in Nigeria is faced with several challenges. According to Laleye (2015), successful integration of educational technology in the school system depends largely on the attitude of teachers towards the role played by modern technologies in teaching and learning. While attitude of teachers remain a critical factor, other factors are chronic absence of ICT instructional materials, ineffective policy implementation and a lack of other resources (infrastructure) to aid teaching and learning. These challenges were foresighted by the Commonwealth of Learning International in 2001 as serious challenges facing higher education in Nigeria on ICT literacy knowledge integration into academic courses and programmes (Ololube, et al, 2009). Be that as it may, integrating ICT into library instruction is important for better library user education and enhanced user understanding of the library. How ICT integration in library instruction is done at the Clifford University is the focal point of this research.

## **RESEARCH OBJECTIVES**

Five objectives that guide this study are, to:

- \* Know the areas that ICT is integrated with library instruction in Clifford University,
- \* Identify the methods used for library instruction,
- \* Ascertain the level of students' ICT skill before receiving library instruction,
- \* Ascertain the level of students' ICT skill after receiving library instruction, and
- \* Identify the challenges of integrating ICT with library instruction.

## **METHODOLOGY**

The pilot study adopted a survey research design using descriptive statistics. The study is a pre and post held at different times. The pre-test was held in the first week of the second semester, while post-test was held at the last week. Total enumeration was used since the population cover all the year one students of 2016/2017 academic session with a total number of 124 as shown in Table 1. Two sets of questionnaire entitled: 'Integration of Library Instruction with ICT Questionnaire' (ILITQ) were developed. It was subjected to both face and content validity. Two professors in the field of Library and Information Science from the Imo State University, Owerri were used, while 20 copies of the questionnaire was administered on 20 students in year one at Imo State University, Owerri. The result of the analysis showed a reliability result of 0.82 and 0.84 respectively using Cronbach alpha procedure. The first instrument is tagged 'Appendix A'

with three sections and 19 questions that are relevant to ascertain the level of ICT knowledge and skill acquired by the respondents in research at the library prior to receiving library instruction. It was administered at the beginning of the course. The second instrument tagged ‘Appendix B’ has six sections with 43 questions including demographic information of the respondents. The questions are relevant to ascertain the level of ICT knowledge and skill acquired by the respondents, methods applied in the delivery of library instruction, areas of ICT integration, and perceived challenges of integrating ICT with library instruction. The instrument measured the level and extent to which the course had impacted the students. This was administered at the end of the course. The two instruments were administered face-to-face to the same respondents who registered for the course in the second semester. The respondents were given orientation on how to answer the questionnaire. The response rate was 100% hence all registered students participated and the sets of questionnaire were retrieved. The retrieved copies of the questionnaire were found usable and therefore used for the analysis using Statistical Packages for Social Sciences (SPSS, version 24.0). Results are presented in tables, frequency and percentage.

## RESULT AND ANALYSIS

**Table 1: Demographic Information of Respondents**

<b>Variables</b>	<b>Frequency</b>	<b>%</b>
<b>Faculty</b>		
Humanities	42	33.8
Management and Social Sciences	27	21.8
Science	55	44.4
	<b>124</b>	<b>100.0</b>
<b>Department</b>		
Accounting	4	3.2
Biochemistry	18	14.5
Business Administration	7	5.6
Religious Studies	34	27.4
Computer Science	17	13.7
Economics	8	6.5
English	3	2.4
History & Diplomatic Studies	5	4.0
Mathematics/Statistics	1	0.8
Microbiology	17	13.7
Physics	2	1.6
Political Science	8	6.5
	<b>124</b>	<b>100.0</b>
<b>Gender</b>		
Male	52	41.9
Female	72	58.1
Total	<b>124</b>	<b>100.0</b>

Result on Table 1 shows that majority 55 or 44.4% of the respondents are in the Faculty of Science, 33.8% of the respondents are in the Faculty of Humanities while a lower percentage of 21.8% are in the Faculty of Management and Social Sciences. Results by Department reveals that 27.4% of the respondents are in the Department of Religious Studies, 14.5% of the respondents are in the Biochemistry, 13.7% of the respondents are in the Department of Computer Science and Microbiology respectively while the Department of Mathematics/Statistic has the least number of respondents with 0.8%. On the gender of the respondents, result shows that there are more female with 58.1% over their male counterpart with 41.9%. This result shows

an increase in the number of female against the male who participated in the study which may be the effect of the on-going sensitization on ‘*training of the girl child*’ and constant campaign on women education across the world (Unicef, 2007; Early Action, 2017).

**Research Objective 1:** Know the areas of ICT integration with library instruction in Clifford University.

**Table 2. Areas of ICT integration with library instruction**

SN	ICT Integrated Areas	1st Semester		2 <sup>nd</sup> Semester	
		Yes	No	Yes	No
		F (%)	F (%)	F (%)	F (%)
1	Learning and Teaching (practical)	120(96.8)	4(3.2)	124 (100)	-
2	Searching the Online Public Access Catalogue (OPAC)	107(86.3)	17(13.7)	103(83.1)	21(16.9)
3	Designing of power-point for presentation	-	-	112(90.3)	12(9.7)
4	Class presentation using projector	-	-	105(84.7)	19(15.3)
5	Searching the Internet and electronic database using different search techniques	-	-	100(80.6)	24(19.4)
6	Using the Internet for online demonstration/instruction	-	-	116(93.5)	8(6.5)
7	Retrieving and downloading of information and e-resources from the Internet and online database	-	-	107(86.3)	17(13.7)
8	Designing of online form for questionnaire administration	-	-	100(80.6)	24(19.4)

Result on Table 2 reveals that ICT is integrated in learning and teaching with 96.8% and 100% respectively who responded in the affirmative. Also, 86.3% and 83.1% of the respondents affirmed that searching the OPAC is integrated in library instruction in the first and second semesters. Result shows that in the second semester, majority 112 or 90.3% of the respondents said designing of power-point is integrated in library instruction. It further shows 84.7% agreeing that use of projector for presentation is integrated in second semester while 83.1% of the respondents also said that searching the Internet and e-databases are part of the instruction given to them. Result also indicates that 86.3% and 80.6% of the respondents said lecture on retrieving and downloading of information with designing of online form are fully integrated into library instruction. The result in Table 2 indicates that the course content of the course “Use of Library, Study Skill and ICT I & II” is robust and holistic, covering major areas that can boost the research skill of students. This result agrees with the instructional method adopted by the Cornell University Library which enable university students to use the library resources and ICT tools effectively.

**Research objective 2:** Identify the methods used for library instruction.

**Table 3. Methods used for library instruction**

SN	Mode of Delivery	Yes	No
		F (%)	F (%)
1	Teaching with ICT tools	113(91.1)	11(8.9)
2	Guided library tour	103(83.1)	21(16.9)
3	Practical training (hands on desk) on the use ICT tools	114(91.9)	10(8.1)
4	One-on-one mentoring	81(65.3)	43(34.7)

5	Orientation	103(83.1)	21(16.9)
6	Class presentation using ICT tools	110(88.7)	14(11.3)
7	Live demonstration and instruction	111(89.5)	13(10.5)
8	Online instruction	109(87.9)	15(12.1)
9	Interactive class discussion	117(94.4)	7(5.6)

On Table 3 the respondents were asked to identify the methods that are used in the delivery of library instruction at to them. Result shows that 91.1% of the respondents agrees that teaching with ICT tools is used. Another 83.1% also agrees that guided library tour and orientation respectively are used. Result also reveals that 91.9% indicates that practical training (hands on desk) on the use ICT tools is used while 65.3% agrees that one-on-one mentoring is part of the instruction. Class presentation is confirmed by 88.7% of the respondents as part of the instruction programme, while 89.5% of the respondents confirms being engaged on live demonstration. Another majority or 87.9% and 94.4% of the respondents agrees that online instruction and interactive class are part of the instruction programmes respectively. The result in Table 3 shows that most of the acceptable methods are used for library instruction.

**Research objective 3:** Ascertain the level of ICT skill of respondents before receiving library instruction.

Table 4. Level of ICT and research skills of respondents before attending the library instruction programme

SN	Level of ICT skill	Very high extent	High Extent	Low extent	Very low extent	I can not	Mean	SD
		F (%)	F (%)	F (%)	F (%)	F (%)		
1	I can use a computer system for research	17(13.7)	46(37.1)	40(32.3)	9(7.3)	12(9.7)	3.38	1.116
2	I can search information on the Online Public Access Catalogue (OPAC)	3(2.4)	19(15.3)	34(27.4)	28(22.6)	40(32.3)	2.33	1.153
3	I can design presentation using Microsoft Power-point	6(4.8)	26(21)	31(25)	18(14.5)	43(34.7)	2.47	1.291
4	I can set up (connect) and use a projector	2(1.6)	8(6.5)	27(21.8)	16(12.9)	71(57.3)	1.82	1.082
5	I can search for information on the Internet and electronic database using different search techniques	6(4.8)	20(16.1)	36(29)	15(12.1)	47(37.9)	2.38	1.273
6	I can retrieve and download information from the Internet and online database.	29(23.4)	31(25)	27(21.8)	25(20.2)	12(9.6)	2.81	1.298

7	I can design online form using Google for questionnaire administration	27(21.8)	35(28.2)	30(24.2)	21(16.9)	11(8.9)	3.29	1.360
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**Key: SD** = Standard deviation

Results on Table 4 shows the level of ICT and research skills of the respondent prior to attending the library instruction programme. Result reveals that the respondents are able to use the computer system for research ( $\bar{X} = 3.38$ ) before attending the library instruction class. It further reveals that searching for information on the OPAC is at a lower and very lower extent ( $\bar{X} = 2.33$ ). The same applies to designing of presentation using Microsoft Power-Point ( $\bar{X} = 2.47$ ) and searching for information on the Internet and electronic database using different search techniques ( $\bar{X} = 2.38$ ). Results also shows that before attending the library instruction course, 57.3% of the respondents cannot set up and use a projector ( $\bar{X} = 1.82$ ), while only 34.7% can use a project at a lower and very lower extent. Result on Table 4 further indicates that at a high and very high extent, 48.4% of the respondents can retrieve and download information on the Internet and online database as well design online form using Google form respectively, while the remaining 51.6% can only do that at a lower and very lower extent. This means that before attending the class, some of the respondents had already acquired some skill in the use of the Internet for download of files, while most of them did not have relevant ICT and research skill to cope in a university environment. The implication of this result is that non-integration of ICT with library instruction will negatively affect the development of ICT and research skills among students in using ICT tools and relevant e-resources in their research work.

**Research objective 4:** Ascertain the level of ICT and research skills of respondents after receiving library instruction.

**Table 5.** Level of ICT skill of respondents after attending library instruction programme

SN	Level of ICT skill	Very high extent	High Extent	Low extent	Very low extent	I can not	Mean	SD
		F (%)	F (%)	F (%)	F (%)	F (%)		
1	I can use a computer system in research	27(21.8)	49(39.5)	23(18.5)	20(16.1)	5(0.4)	3.40	1.294
2	I can search information on the Online Public Access Catalogue (OPAC)	35(28.2)	34(27.4)	29(23.4)	13(10.5)	13(10.5)	2.79	1.351
3	I can design presentation using Microsoft Power-point	39(31.5)	30(24.2)	27(21.8)	25(20.2)	3(2.4)	3.26	1.402
4	I can set up (connect) and use a projector	45(36.3)	32(25.8)	13(10.5)	13(10.5)	8(6.5)	2.63	1.423
5	I can search for information on the Internet and electronic database using	39(31.5)	25(20.2)	29(23.4)	19(15.3)	12(9.7)	3.12	1.353

	different search techniques							
6	I can retrieve and download information from the Internet and online database.	35(28.2)	27(21.8)	25(20.2)	11(8.9)	26(21)	3.21	1.433
7	I can design online form using Google for questionnaire administration	37(29.8)	28(22.6)	28(22.6)	26(21)	5(4.0)	2.50	1.246

**Key:** SD = Standard deviation

Table 5 shows the level of ICT and research skills of the respondents after attending the library instruction programme. The result indicates that, there is a significant improvement on the ICT and research skills of the students after the instructional programme. For instance, the results shows an increase in the number of respondents that could use a computer system in research ( $\bar{X} = 3.40$ ); designing of presentation slides using Microsoft Power-point ( $\bar{X} = 3.26$ ), and searching for information on the Internet and electronic database using different search techniques ( $\bar{X} = 3.12$ ). It also reveals that the respondents could search for information on the OPAC ( $\bar{X} = 2.79$ ), set up and use a projector ( $\bar{X} = 2.63$ ), retrieve and download information from the Internet and online database ( $\bar{X} = 3.21$ ), as well design online form using Google for questionnaire administration ( $\bar{X} = 2.50$ ).

**Research objective 5.** Identify the challenges of integrating ICT with library instruction.

**Table 6.** Challenges of integrating ICT with library instruction

SN	Challenges	Strongly agree	Agree	Disagree	Strongly Disagree	Mean	SD
		F (%)	F (%)	F (%)	F (%)		
1	The time duration is not enough (short time)	21(16.9)	42(33.9)	10(8.1)	51(41.1)	2.27	1.169
2	The course is difficult for students	36(29)	22(17.7)	30(24.2)	36(29)	2.47	1.192
3	Inadequate ICT facilities in the library to accomplish task on schedule	17(13.7)	32(25.8)	40(32.3)	35(28.2)	2.62	1.207
4	Inadequate ICT skill among librarians	27(21.8)	27(21.8)	32(25.8)	38(30.6)	2.35	1.134
5	Lack of personal ICT tools (laptops) for students	58(46.8)	30(24.2)	19(15.3)	17(13.7)	3.04	1.085
6	The course is time consuming and boring	6(4.8)	15(12.1)	46(37.1)	57(46)	1.76	.849
7	The learning environment is uncomfortable	12(9.7)	10(8.1)	62(50)	40(32.3)	1.95	.891

**Key:** SD = Standard deviation

Table 6 shows that one of the challenges facing integration of ICT with library instruction is time factor for the course ( $\bar{X} = 2.27$ ). Result also reveals that majority of the respondents agrees that lack of personal ICT tools such as laptop ( $\bar{X} = 3.04$ ) is a challenge. This means that inadequate time for the course and lack of personal computer for students are the major setbacks for the integration of ICT with library instruction in private universities in Nigeria. It implies that integration of ICT with library instruction would require enough time on the curriculum for teaching and learning in order to give students the best. Also, it would require providing relevant ICT facilities especially laptops for the students. Interestingly, results on Table 6 reveals that inadequate ICT facilities in the library is not a challenge ( $\bar{X} = 2.62$ ). Another majority or 53.2% of the respondents disagree that the course is difficult for students ( $\bar{X} = 2.47$ ). Also, majority or 56.4% strongly disagree that inadequate ICT skill among librarians is a challenge ( $\bar{X} = 2.35$ ). Result on Table 6 further shows that the respondents disagree that the course is time consuming and boring ( $\bar{X} = 1.75$ ). This means that despite the scrutiny, assignments, quizzes and practical training that characterized the instructional programme, it is not a problem for the respondents. In addition, the respondents indicates that the learning environment is conducive ( $\bar{X} = 1.95$ ), which may have contributed to their level of improvement as shown in Table 5.

## DISCUSSIONS

A typical representation as shown on Table 4 is a clear depiction of the situation facing most undergraduate students in Nigerian universities and in some developing countries of the world. Such situation would need a pedagogical and systematic approach, and of course redesigning of the library instruction curricula in order for the affected students in those countries to acquire ICT skill that is necessary for learning and research in facing real life situations. There are indications on Table 2 that ICT was fully integrated in the library instruction programme at Clifford University where students are been taught how to search, design power-point presentations, online form and set up of projector among others. Furthermore, findings on Table 3 reveals that most of the already known and adopted methods for library instruction are also been used to instruct the respondents, such as teaching, guided library tour, practical, one-on-one mentoring, orientation, live demonstrations and online instruction. Some studies have shown the use of some of the methods for library instruction (Aina & Omeluzor, 2008; Okoye, 2013; Omeluzor, Akibu, Dika & Ukangwa, 2017).

The level of ICT skill that is acquired by the respondents before attending the library instruction programme as shown on Table 4 is lower on average. The mean score on each of the items shows that only a lower percentage of the respondents have ICT skill to a high extent before their admission into the programme. This might be those who went for a few months training in computer appreciation before their admission into the University, while a higher percentage do not have ICT skill. This means that most of the respondents do not have any formal ICT training at their secondary school level, and would require training in IT in their first year in a university to enhance their research skill. This finding corroborates with the submission of Bhatti (n.d.) who advocated the integration of ICT with library instruction in academic institutions, and Anarki and Babalhavaeji (2013) who insisted that libraries should organise orientation classes and training programmes for students in accessing, searching and downloading of e-resources.

In order to ascertain the level of ICT skill of the respondents at the beginning and ending of the programme, the researcher drew a comparative analysis of the findings in Tables 4 and 5. This is to know the effect of ICT integration with library instruction. Result on Table 4 shows the level of ICT skill that the respondents acquired before their admission into the library instruction programme, while on Table 5, it shows the respondents' level of ICT skill at the end of the programme. There is a significant improvement in the level of ICT and research skills that the respondents acquired as shown in Table 5 compared to their admittance into the programme (see Table 4). The result in Table 4 reveals that before their admission into the library instruction programme, 50.8% of the respondents to a very high extent have skill in using the computer, whereas in Table 5, it shows that those that could use the computer at the end of the instructional

programme rose to 61.3%. There is also a significant improvement in the area of searching, downloading and retrieving of information from the Internet and databases among the respondents. This finding is supported by Madukoma, Onuoha, Omeluzo and Ogbuiyi (2013) who found out that ICT-based library instruction impacted students' ability to access and retrieve information without depending on the library staff.

The finding on Table 5 also shows some significant improvement among those who are able to search for information on the OPAC. On preparation of Microsoft power-point presentation, finding on Table 5 shows that the number of respondents that can prepare MS power-point increased after attending the library instruction programme. There is also evidence of positive effect of integration of ICT with library instruction in the number of those who could not set up and use projector before attending the programme as shown in Table 4 which rose from 8.1% to an overwhelming percentage of 62.1% on Table 5. Finding also reveals on Table 4 that only 20.8% of the respondents could search for information on the Internet and electronic databases at the beginning of the library instruction programme (see Table 4), which later increased to 51.7% on Table 5 after attending library instruction programme. In the area of designing online form using Google application, it is clear that a majority of the respondents to a very high extent are able to handle it effectively indicating an improvement at the end of the library instruction programme as shown on Table 5. Findings on Table 6 reveals the major challenges facing integration of ICT with library instruction. Prominent among them is lack of personal ICT tools, such as laptop for students and the time allotted for the programme. Findings shows that inadequate ICT facilities in the library is not a challenge, the course is not found to be difficult, nor time consuming and boring. Interestingly, inadequate computer skill among librarians is not a major challenge. This finding is against Nok (2006) who observed that many staff of university libraries are not computer literate as such found it difficult to cope with the requirements of the electronic age.

## **CONCLUSION**

The results from this study have clearly shown that integration of ICT with library instruction programme has strong impact on the academic and career development of university students. Integration of ICT with library instruction is also a boost in learning and understanding search techniques and the use of various ICT tools that are necessary for students to function effectively in an ICT-driven environment. It will ensure the development of ICT and research skills that are necessary in searching the Internet and databases which may positively affect their academic performance. A number of universities uses traditional methods of instruction in the use of library resources. It is evident that such methods are no longer helpful to students in the 21<sup>st</sup> century with advancement in ICT. Therefore, integration of ICT with library instruction will help the library users especially students to become independent researchers in using ICT tools such as computer in accessing electronic information resources on the Internet. Furthermore, integration of ICT with library instruction will increase the chance of students becoming efficient in research activities thereby help in reducing stress on their teachers and librarians. Although, the results in this study appeared encouraging, yet, effort is required on the part of the students to apply every learned objects.

## **RECOMMENDATIONS**

From the result of this study, it is important to make the following recommendations:

1. Universities in Nigeria and other developing countries should endeavour to redesign their curriculum in order to accommodate ICT-based library instruction programmes for the benefit of students.
2. Relevant ICT equipment, such as Internet facilities, projector, interactive board and computers, among others should be made available in classrooms and at the e-library to make teaching and learning of ICT-enabled courses easier.
3. Universities in Nigeria should endeavour to provide personal laptop computers for students through a subsidized means in order to enhance their ICT skill, learning and research.

4. Librarians and other instructors should create time to support students outside the time allotted for library instruction programme in order to help students who needs further assistance. This could also be done by creating an online platform for interactions.

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