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Colleges Of Education Lecturers' Self-Efficacy On The Integration Of Ict For Instruction In Oyo State, Nigeria

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Abstract, *This study examined the lecturers' self-efficacy on the integration of Information and Communication Technology (ICT) for instruction. A descriptive research design of the survey type was adopted for this study, the population for this study were all colleges of education lecturers' in Oyo State, three colleges of education were purposively selected, the target population were colleges of education lecturers' in the selected colleges, a researcher designed questionnaire was used to collect data from the respondents, data gathered was analyzed using descriptive and inferential statistics; frequency count and percentage was used to organized the demographic information and provide answers to the research question, hypotheses 1 was tested using t-test while hypotheses 2 and 3 were tested using ANOVA at 0.05 level of significance. The findings were: College of Education (COE) lecturers can integrate ICT for instruction; COE lecturers faced challenges while integrating ICT for instruction; there was a significant difference in male and female lecturers' self-efficacy on the integration of ICT for instruction; level of experience had no significant impact on the integration of ICT for instruction and qualifications had significant impact on the integration of ICT for instruction among the sampled lecturers. The study concluded that majority of lecturers in colleges of education in Oyo State were not ready to integrate ICT into instruction. Nevertheless, lack of technology integration know-how still hinders the integration of ICT for instruction. This implied that lecturers integrating of ICT for instruction would improve their teaching and learning process. The study recommended that; COE lecturers should encourage on the further benefits of using ICT for instruction*

Keywords *: Colleges of Education, Integration, ICT, Instruction and Lecturers' Self-Efficacy.*

I. INTRODUCTION

The proliferation of digital technology, particularly Information and Communication Technology (ICT), in the twenty-first century has challenged the status quo of educational setting and led to a paradigm shift in teaching and learning processes. ICT integration in teaching then becomes an essential component of

pedagogical processes to have an effective lecturer–student interaction and to optimize learning Boggs (2019). However, it is difficult and may be even impossible to imagine future learning environments that are not supported, in one way or another, by Information and Communication Technologies (ICTs). Looking at the current widespread diffusion and use of ICT in modern societies, especially by the youth, the so-called digital generation then it should be clear that ICT will affect the complete learning process. ICT is a short form, which means Information and Communication Technology and is also a paragliding term, which incorporates all innovations for control and communication of all digital data. ICT is described as information collection and communications using all kinds of technologies to create, communicate, manage, disseminate, and store information (Suleiman, Yahya, & Tukur, 2020).

However, this has necessitated the intensive use of ICT in teaching and learning Nigeria in order to broaden the understanding of lecturers and students. Introduction of ICT in education plays a role in shifting responsibility for learning from lecturer to student and does not however remove the need for classroom leadership nor does it invalidate related traditional teacher skills and practices. ICT is a tool that higher institutions like the College of Education can use to facilitate training of pre-service teachers and enhance student learning. Lecturers training pre-service teachers train them in relation to existing ICT infrastructure (Twining, Davis, Charania, Chowfin, Henry, Nordin & Woodward, 2015). Lecturers in colleges of education anticipate a directly proportional relationship between ICT infrastructure available in the school and lecturer training whereby as there is more and new infrastructure, training should increase.

The introduction of ICT resources in tertiary institutions was one of the most significant developments. This is because technology does not have an educational value in itself (Singh, & Chan, 2014). There has been a large investment in ICT resources, yet it seems to have had relatively little effect on the ways that teachers make use of these resources for teaching and learning purposes (Adegbenro, Gumbo, & Olakanmi, 2017). There has been much pressure on teachers in the 21st century schools to improve their instruction. Suleiman, Yahya, and Tukur (2020), lecturers have very important roles. The roles they play in the education process are central to basic education, in particularly more in Third World countries. A daunting challenge facing the education system is lack of competent lecturers who are literate or proficient in the use of information technology. Information and Communication Technology (ICT) proficiency is the ability to use technology tools and networks to define an information need, to access, to manage, integrate and evaluate information. The ability to access, evaluate, organize and use information from variety of sources is known as Information literacy (Shikha, 2014). As agent of change, it is important that lecturers are ICT literate as this could bring about a lot of positive attitude towards the use of computer and information technologies.

The integration of ICT for instruction in education is salient; as the integration of ICT for instruction provide more opportunities for lecturers. However, there are various factors and challenges towards the integration of ICT for instructional purposes. The process of integrating ICT for instruction in education is very complicated and the opportunities provided by ICT to support instruction are not problem-free (Osakwe, 2012). There are several factors militating against the integration of ICT for instructional delivery which prevent the lecturers from exploring much about technologies. Yeboah, Kwarteng, and Kyere-Djan (2013) identified several factors as hindrance to the adoption of ICT in tertiary institution such

as lack of teaching experience with ICT, on-site support for lecturers using technology, lack of computer availability, lack of time required to successfully integrate technology into the curriculum and lack of financial support.

Lecturers' age, experience, competent, knowledge and gender are some factors that affect ICT integration for instrution. The Federal Republic of Nigeria also is not ignorant of this modern trend and seriously recognizes the role of ICT in the improvement of knowledge at the tertiary level of education (FRN, 2013). The launching in 2004 through the Federal Ministry of Education for All (EFA) and the millennium Development Goal (MDG) was a practical demonstration of this fact. ICTs were mearnt to be used as the mode for instructional delivery. A lecturer with a low self-efficacy tends to avoid tasks, always complain when given additional tasks and dislike innovation (Bandura 1997). Different researchers perceived self-efficacy in different ways. Adewale, Saheed, Ghavifekr, and Daud, (2017) defined self-efficacy as people's decision about their capability to carry out a specific duty or task. Similarly, Lunenburg, (2011) argued that self-efficacy is the task-specific characteristic of self-esteem which augments people's capacity to motivate, acquire and increase performance. Self-efficacy is the belief about your proficiency and susceptibility to do a task or cope with environmental needs. In this research context, self-efficacy means a person's self-evaluation of his or her ability to come over the demands of work conditions. From the perspective of social cognitive theory, it refers to human agency mediated by an individual's level of self-efficacy. Self-efficacy belief impacts the person's emotional state, choices, efforts and resilience when the person faces any challenging situation (Taştan, Davoudi, Masalimova, & Bersanov, 2017).

However, Lemon and Garvis (2016) stated that self-efficacy plays a vital role in psychological and physical health outcomes. People with high self-efficacy reported lower levels of perceived work stress and strain and reported less physiological stress response. Within the occupational literature, low self-efficacy had a significant relation with high levels of stress, anxiety and depression. Moreover, high self-efficacy influenced job satisfaction and well-being positively but had a negative influence on turnover rates. Teacher's self-efficacy has been defined as a teacher's evaluation of his or her abilities to enable desired outcomes of student engagement learning and performance. Self-efficacy creates collective efficacy, which influences the whole school system; teacher having high self-efficacy would be more efficient in providing a climate for learning.

Gender issues have been in forefront of public discussion in education. Gender is one of the factors that need to be considered in the integration of ICT by lecturers' in colleges of education. Daramola (2013) defined gender as a socially constructed relation between male and female and should be central in development programs. Gender, education and social class will definitely have a significant role in explaining the use of ICT resources. Lecturers' qualification and teaching experience are factors that could influence the integration of ICT for instruction in education. This is because education is a shared responsibility that requires a competent hand; it is not a stand-alone sector, it requires experiences and its success and failure is reflects on the whole society (Alassaf, 2014).

Statement of the Problem

Promoting quality education in the Nigerian education system especially at the college level through effective integration and use of ICTs has become a matter of serious concern for education stakeholders. Researchers shows that teaching and learning in some of colleges still depend so much on the conventional method without

consideration for adopting new means of teaching, which can be through the information and communication technology system as pointed out by (Tella, 2011). However, the emergence of instructional technologies has placed a demand on the need for technology knowledge. Amosun, Falade, and Falade, (2015) posited that the teacher training in Nigeria is currently facing numerous challenges of which the problem of technology integration is major amongst many. The gap still exists that lecturers are not trained to think about teaching and learning as an interactive process that encourages the use of technology, thereby lacking the technology integration know-how which agrees with Amosun (2015) observation about south-west teachers' ICT belief, skills and attitudes. Since there is no clear understanding of what constitutes the readiness and self-efficacy required for technology integration thereby hindering the ICT integration in Nigeria through poor development training programme.

It is imperative for colleges of education lecturers to understand, acquire skill, have positive attitude assess, and ready so as to effectively think, improve and apply technology for instruction. Contrary to this position, most of the lecturers in colleges of education in Nigeria are still struggling to meet up with the present trend of technology. This gap could be the reason why Eseyin, Igoni, and Uchendu, (2014) establisehd that the integration of ICT for instruction in colleges of education by lecturers' is low and unappealing. Hence, there is need to investigate colleges of education lecturers' self-efficacy on integration of ICT for instruction in Oyo State, Nigeria.

II. RESEARCH METHODS

TThe research was a descriptive research of the survey type. This is because descriptive research design of the survey type involves the collection of data from a large population at once or several points in time in order to describe the characteristics of the members of the population based on the phenomenon under consideration for the study without involving any external manipulations. Therefore, the survey type enabled the researcher to generate relevant information from the respondents on colleges of education lecturers' self-efficacy and readiness on integration of information and communication technology for instruction. The questionnaire was used to obtain relevant information from the sample.

The populations for this study were all colleges of education lecturers' in Oyo State. Three (3) colleges of education were purposively selected based on federal, state and private. The target population consisted of all the colleges of education lecturers in the selected colleges. A proportional sampling technique was used to allocate the number of respondents in each school base on their estimated population using Research Advisor sample size table at 0.05 margin errors. Simple random sampling was used to select 306 out of 500 lecturers from sampled colleges of education to serve as the respondents in this study.

Table1: List of Colleges of Education in Oyo State, Lecturers' Population and Sample Size

S/N	Colleges of Education Lecturers	Population	Sample Size
1	College A	320	196
2	College B	130	80

3	College C	50
		30
	Total	**500**
		306

Registrars' Office of Respective Institutions, (2020)

Data was collected using a researcher-designed questionnaire titled "Colleges of Education Lecturers' Self-Efficacy on the Integration of ICT for Instruction in Oyo State Nigeria". It was divided into three parts, section A elicited demographic information from the respondents while section B contained items to investigate the lecturers' self-efficacy on the use of ICT, the items in section B was rated on the options scale of Strongly Agree, Agree, Disagree, Strongly Disagree while Section D contained items to determine the challenges faced by colleges of education lecturers in Oyo State. The items in section D was rated on the options scale of Often, Sometimes, Never.

Data Analysis

Table 2: Distribution of the Respondents according to Gender

Gender	Frequency	Percentage
Male	190	62.1
Female	116	37.9
Total	**306**	**100**

Table 2, showed that 190 respondents representing 62.1 percent were male while 116 respondents representing 37.9 percent were female. It implies that the majority of the respondents were male.

Table 3: Distribution of the Respondents according to School Type

School Type	Frequency	Percentage
Public	276	90.2
Private	30	9.8
Total	**306**	**100.0**

Table 3, revealed that 276 respondents representing 90.2 percent were public college lecturers while 30 respondents representing 9.8 percent were private college lecturers. It implies that the majority of the respondents were public college lecturers.

Table 4: Distribution of the Respondents according to Level of Experience

Level of Experience	Frequency	Percentage
0-5	110	35.9
6-10	129	42.2
11-above	61	19.9

Table 4, revealed that 110 respondents representing 35.9 percent were within 0-5 years of experience, 129 respondents representing 42.2 percent were within 6-10 years while 61 respondents representing 19.9 percent were within 11 years and above. It implies that the majority of the respondents were within 6-10 years of experience.

Table 5: Distribution of the Respondents according to Qualification

Qualification	Frequency	Percentage
Ph. D	49	16.0
M. Sc	78	25.5
M. Ed	85	27.8
B. Sc. Ed	56	18.3
B. Sc	38	12.4
Total	**306**	**100.0**

Table 5, indicated that 49 respondents representing 16.0 percent were Ph.D., 78 respondents representing 25.5 percent were M. Sc while 85 respondents representing 27.8 percent were M. Ed. 56 respondents representing 18.3 percent were B. Sc. Ed while 38 respondents representing 12.4 percent were B. Sc. It implies that the

majority of the respondents were M. Ed. holders

III. RESEARCH RESULTS AND DISCUSSION

Research Question One: What is the Lecturers' Self-Efficacy on Integration of ICT for Instruction?

Table 6: Frequency and Percentage Distribution of Colleges of Education Lecturers' Self-Efficacy on Integration of ICT for Instruction

S/No.	Statement	SA		A		DF		SD	
		F	%	F	%	%		F	%
1	I can engage students in using the computer to do assignment	166	54.2	122	39.9			18	5.9
2	I can use LCD projector to present lessons	103	33.7	167	54.6	18	5.9	18	5.9
3	I find the use of PowerPoint presentations for classroom delivery easier	179	58.5	115	37.6			12	3.9
4	I can use available ICTs in collaborative activities	75	24.5	213	69.6			18	5.9
5	I encourage students to think critically using ICTs	114	37.3	162	52.9			30	9.8
6	I can portray ICTs as learning aids and not objects of instruction	50	16.3	214	69.9	30	9.8	12	3.9
7	I can retain students' attention using ICTs	99	32.4	177	57.8	12	3.9	18	5.9
8	I can implement teaching methods using ICTs	74	24.2	208	68.0	18	5.9	6	2.0
9	I can evaluate lessons using ICTs	118	38.6	164	53.6	12	3.9	12	3.9
10	I can use Personal Digital Assistants (PDAs) as an alternative to ICTs	88	28.8	206	67.3	12	3.9		

Table 6, showed the results of the opinions of the respondents on the colleges of education lecturers' self-efficacy on integration of ICT for instruction in Oyo State. 288 respondents representing 94.1 percent agreed that they can use computer for instruction while 18 respondents representing 5.9 percent disagreed. It implies that the lecturers can use computer for instruction in colleges of education in Oyo State. 270 respondents representing 88.3 percent agreed that they can use LCD

projector to present lesson while 36 respondents representing 11.8 percent disagreed. It indicated that the lecturers can use LCD projector to present lesson. A total number of 294 respondents representing 96.1 percent agreed that the use of PowerPoint for instruction is easier while 12 respondents representing 3.9 percent disagreed. It means that lecturers find the use of PowerPoint easier for instruction.

288 respondents representing 94.1 percent agreed that they can use ICTs in collaborative activities while 18 respondents representing 5.9 percent disagreed. It indicated that lecturers can use available ICTs for instruction in colleges of education in Oyo State. A total number of 276 respondents representing 90.2 percent agreed that they can encourage students to think of using ICTs for learning while 30 respondents representing 9.8 percent disagreed. It means that lecturers can encourage students to think of using ICTs for learning in colleges of education in Oyo State. 264 respondents representing 86.2 percent agreed that they can portray ICTs as a learning support while 42 respondents representing 13.7 percent disagreed. It means that ICTs can provide a learning support for lecturers. 276 respondents representing 90.2 percent agreed that they can use ICTs to retain student's attention while 30 respondents representing 9.8 percent disagreed. It implies that the use of ICTs for instruction can retain student's attention.

282 respondents representing 92.2 percent agreed that they can implement teaching methods using ICTs while 24 respondents representing 7.8 percent disagreed. It implies that the lecturers can use teaching methods using ICTs for instruction in colleges of education in Oyo State. A total number of 282 respondents representing 92.2 percent agreed that they can evaluate lessons using ICTs while 24 respondents representing 7.8 percent disagreed. It indicated that lecturers can evaluate lessons using ICTs for instruction in colleges of education in Oyo State. 294 respondents representing 96.1 percent agreed that they can use Personal Digital Assistants (PDAs) while 12 respondents representing 3.9 percent disagreed. It implies that the lecturers can use PDAs as an alternative to ICTs for instruction in colleges of education in Oyo State.

Research Question Two: Challenges Associated with Colleges of Education Lecturers on Integration of ICT for Instruction?

Table 7: Frequency and Percentage Distribution of Colleges of Education Lecturers' Readiness on Integration of ICT for Instruction

S/No.	Statement	Often		Sometimes		Never	
		F	%	F	%	F	%
1	Lack of technical support	93	30.4	153	50.0	60	19.6
2	Limited knowledge on how to make full use of ICT	75	24.5	79	25.8	152	49.7
3	Lack of time in school	37	12.1	197	64.4	72	23.5
4	Lack of software or websites that support teaching and learning	105	34.3	159	52.0	42	13.7
5	Limited understanding on how to integrate ICTs into instruction	68	22.2	99	32.4	139	45.4
6	Lack of technologies in school	73	23.9	161	52.6	72	23.5
7	Lack of power supply	197	64.4	96	31.4	13	4.2

Table 7, revealed the opinions of the respondents on challenges faced by colleges of education lecturers on integration of ICT for instruction in Oyo State. 93 percent of respondents representing 30.4 agreed that they often lack technical support, 153 respondents representing 50.0 percent sometimes lack technical support while 60 respondents representing 19.6 never lack technical support on integration of ICT for instruction in colleges of education in Oyo State. 75 respondents representing 24.5 percent often have limited knowledge on how to make full use of ICT, 79 respondents representing 25.8 percent sometimes have limited knowledge on the use of ICT while 152 respondents representing 49.7 percent never have knowledge on the use of ICT.

A total number of 37 respondents representing 12.1 percent often lack time for ICT integration, 197 respondents representing 64.4 sometimes lack time in school while 72 respondents representing 23.5 percent never lack time in school on integration of ICT for instruction in colleges of education in Oyo State. A total number of 105 respondents representing 34.3 often lack software or websites that support teaching and learning, 159 respondents representing 52.0 percent sometimes lack software or websites that support teaching and learning while 42 respondents representing 13.7 percent never lack software or websites that support teaching and learning.

68 respondents representing 22.2 percent often have limited understanding on how to make full use of ICT, 99 respondents representing 32.4 percent sometimes have limited understanding on to make use of ICT while 139 respondents representing 45.4 percent never have understanding on how to make full use of ICT. A total number of 73 respondents representing 23.9 percent

often lack technologies in school, 161 respondents representing 52.6 percent sometimes lack technologies in school while 72 respondents representing 23.5 percent never lack technologies in school. 197 respondents representing 64.4 percent often lack power supply, 96 respondents representing 31.4 percent sometimes lack power supply while 13 respondents representing 4.2 percent never lack power supply on integration of ICT for instruction in colleges of education in Oyo State.

Hypotheses Testing

H_{01}. There is no Significance Difference in Male and Female Lecturers' Self-Efficacy on Integration of ICT for Instruction

Table 8: Influence of Gender on Colleges of Education Lecturers Self-Efficacy on Integration of ICT for Instruction in Oyo State

Variable	N	X	SD	Df	T Calculated	t- Critical	Sig
Male	190	1.96	0.59	304	4.09	3.32	0.000
Female	116	1.68	0.57				

Table 8, indicated that t calculated value of 4.09 is greater that the t critical value of 3.32. This implies that there was a significant difference between male and female lecturers' self-efficacy on integration of ICT for instruction in colleges of education in Oyo State. The mean score for male lecturers of (1.96) and the mean score of female lecturers of (1.68). The hypothesis which states that there is no significant difference between male and female lecturers' self-efficacy on integration of ICT for instruction in colleges of education in Oyo State is hereby rejected. This implied that there was a significant difference between male and female lecturers' self-efficacy on integration of ICT for instruction in colleges of education in Oyo State.

H_{02}: There is no Significant Difference between Lecturer's Self-Efficacy and Level of Experience on Integration of ICT for Instruction

Table 9: Influence of Years of Experience on Colleges of Education Lecturers Self-Efficacy on Integration of ICT for Instruction in Oyo State

Model	Sum of Squares	Df	Mean Square	F	Sig.
Between	1.778	3	0.593	2.256	.082
Residual	79.346	302	0.263		

Total	**81.124**	**305**

The result of ANOVA presented in Table 9, revealed that the f-value of 2.256 is not significant at .082 and also not significant at 0.05 level of probability (f= 2.256; p>.082). This implies that the influential variables years of experience and self-efficacy does not influenced the integration of ICT for instruction among lecturers in colleges of education in Oyo State. This suggests that years of experience and self-efficacy had no significant impact on the integration of ICT for instruction among lecturers in colleges of education in Oyo State. The null hypothesis 2 is therefore retained.

H_{03}: There is no Significant Difference between Colleges of Education Lecturer's Qualification and their Self-Efficacy on Integration of ICT for Instruction

Table 10: Influence of Qualifications on Colleges of Education Lecturers Self-Efficacy on Integration of ICT for Instruction in Oyo State

Model	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between	6.275	4	1.569	3.320	.011
Residual	142.212	301	.472		
Total	**148.487**	**305**			

The result of ANOVA presented in Table 10, revealed that the f-value of 3.320 is significant at 0.01 and also significant at 0.05 level of probability (f= .891; p<0.01). This implies that the influential variables qualification and self-efficacy influenced the integration of ICT for instruction among lecturers in colleges of education in Oyo State. This suggests that qualifications and readiness had significant impact on the integration of ICT for instruction among lecturers in colleges of education in Oyo State. The null hypothesis 3 is therefore rejected.

DISCUSSIONS

This study investigated colleges of education lecturers' self-efficacy on the integration of ICT for instruction in Oyo State, Nigeria. Research question 1 seeks to check the lecturer's self-efficacy on integration of ICT for instruction in colleges of education in Oyo State, such self-efficacy includes; engagement students in using computer to do assignment, find the use of PowerPoint presentation easier for delivery of instruction, the lecturers can use ICT to evaluate lessons. The findings of this study are similar to that of Oskay (2017)

indicated that college lecturers' can increase their self-efficacy with technology adoption and integrating by having positive experiences, skills, knowledge with computers and classroom technologies. If educators can attest to how technology promotes students' success and engage college lecturers in the technologies, then college lecturers' confidence and self-efficacy will increase.

The gender difference on the college of education lecturer's self-efficacy on ICT integration for instruction in colleges of education in Oyo State was research question 3 and hypothesis 1. From the analyzed data, it was deduced that there was a significant difference between male and female lecturers' self-efficacy on integration of ICT for instruction in colleges of education in Oyo State. The findings of this study disagreed with that of Gardner, Sheridan, and Tian (2014) which shows that male lecturers set to have higher levels of skill and experience in integrating ICT and are more positive about using them for instruction than their female counterparts.

The study further revealed that there was no significant difference between lecturers' years of experience and their self-efficacy and also, there was no significant difference between lecturers' years of experience and their readiness on integration of ICT for instruction in colleges of education in Oyo State. However, the study also revealed that there was a significant difference between colleges of education lecturers' qualifications and self-efficacy on integration of ICT for instruction and there was also a significant difference between colleges of education lecturers' qualifications and their readiness on integration of ICT for instruction in Oyo State.

IV. CONCLUSION

This study examined colleges of education lecturers' self-efficacy on the integration of ICT for instruction in Oyo State, Nigeria. The findings revealed that majority of the lecturers in colleges of education can use ICT for instruction, which is inspiring. It was also revealed in the study that there was a significant difference between male and female lecturers' self-efficacy on integration of ICT for instruction in Oyo State. The study revealed that there was no significant difference between lecturers' years of experience and their self-efficacy. Conclusively, the study revealed that there was a significant difference between colleges of education lecturers' qualifications and their self-efficacy on integration of ICT for instruction

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