

# Utilization Of Information Communication Technology In Teaching Profession: Synergy For Advancing Educational Development In Ogun State, Nigeria

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## Abstract

*This study was carried out to look at the utilization of Information Communication Technology (ICT) for advancing teaching profession in Ogun State, Nigeria. Simple random sampling technique was used to select 180 teachers in Colleges of Education in Ogun State, Nigeria. Questionnaire were used for data collection, descriptive statistics and Pearson Product Moment Correlation (PPMC) were used for data analysis. Result of the study showed that 56.1% of the respondents were females, 70% were married and 61% had BSc. But, all the respondents did not use ICT for teaching (100%) and writing lesson note (100%). Factors responsible for poor utilization of ICT are irregular power supply (81.9%), inadequate training and seminar on ICT (85.6%), and poor network service (80.2%). Chi square revealed a significant relationship between challenges and utilization of ICT in teaching profession ( $\chi^2 = 8.52$ ,  $df = 2$ ) at  $p < 0.05$  level. The study concludes that utilization of ICT facilities was very poor in the study area. It is hereby recommended that awareness creation on the importance of ICT for effective teaching and learning in Colleges of Education should be put in place while training and capacity building should be regularly organized for the teachers in Colleges of Education.*

## 1. Introduction

In Nigeria, a lot of resources have been invested in educational sector by the government and private sector without significant improvement due to poor methods of transmitting knowledge to the students. This necessitates the need for qualified teachers with the sound academic background and ICT knowledge to be able to effectively carry out teaching jobs and contribute to educational growth. Effective teaching could be enhanced through advances in computer and telecommunication technology, in addition to the

ever-evolving worldwide web, which has become a major force to reckon with in searching for and dissemination of information. Information and Communication Technologies (ICTs) have a revolutionary impact on educational methodology globally. Conversely, advantages of this technology have not been adequately tapped to make a paradigm shift from the traditional system of teaching and learning to modern methods in Nigeria. Apart from inadequate fund to purchase ICT facilities and train personnel the teachers' attitude when it comes to technological change is appalling. Many Nigerian teachers have not been able to find effective ways to use technology in the classroom. Maclkenjima [5] calls for interdisciplinary and integrated approach to ensure the successful development of teacher education programmes. There are specifications for training on technology in the National Policy of Education by the Federal Government of Nigeria [2]. Yet, Nigeria ranked 86th out of the 104 countries surveyed for the use of ICT in promoting education [4]. This indicates that the country is far behind in ICT development. Therefore, this study found it necessary to examine the utilization of information communication technology (ICT) for advancing teaching profession in Ogun State, Nigeria.

## 2. Research questions for this study are

- i. What are the socio-economic characteristics of the teachers in the Colleges of Education?
- ii. What is level of access to ICTs facilities in the study area?
- iii. Are the respondents utilizing ICT for teaching-learning process in the study area?
- iv. What are the major challenges affecting the utilization of ICT in in the study area?

### 3. The specific objectives of this study are to

- i. identify the socio-economic characteristics of the teachers in the study area
- ii. assess the level of access to ICTs facilities in the study area
- iii. examine the utilization of ICT in teaching-learning process in the study area
- iv. identify the major challenges inhibiting the utilization of ICT in in the study area

### 4. Hypothesis

H<sub>01</sub>: There is no significant relationship between challenges and utilization of ICT in teaching profession.

### 5. Methodology

#### 5.1. Sampling Procedure and sample size

The target population for this study was teachers in the Colleges of Education, Ogun State, Nigeria. Two Colleges of Education in Ogun State were selected. One hundred and eighty (180) respondents were randomly selected from the list of over 1,239 teachers to make the sample size for this study.

#### 5.2. Data collection

Questionnaire was used for data collection. Prior to data collection, the instrument was subjected to both face and content validity by the experts in Teaching Education and ICT. Ambiguous items were expunged. Split-half method was used for reliability test; the coefficient obtained was 0.78 which indicates that the instrument was reliable.

#### 5.3. Measurement of Variables and Data Analysis

Age and teaching experience were measured as actual number of years.

Gender and marital status were nominally measured. Educational Qualification was measured at ordinal level. Accessibility to ICT facilities was conceptualized as Yes (1) or No (0). Major challenges to the utilization of ICT was presented in frequency distribution, and then ranked based on their severity. Percentage, mean and charts were used for objectives while Pearson Product Moment Correlation (PPMC) was used for the hypothesis of this study.

### 6. Results And Discussion

#### 6.1. Personal characteristics of the respondents

Results in Table 1 showed that the mean age of the respondents was 34.2 years. About 62.2% of the respondents were between 41 - 50 years of age, 26.6% were less than 40 years and 10.6% were above 51 years. It implies that the respondents are in their active age. These results corroborate findings of Oyediran and Omoare [7] that people within this age bracket are energetic and have zeal to teach. More than half (56.1%) of the respondents were females while the remaining (43.9%) were males. This shows that female predominant in the Colleges of Education. Oyediran *et al.* [8] reported similar findings that female predominant in Colleges of Education. The implication is that high population of the female can enhance teaching profession and boost knowledge and skill transfer to the students. Majority (71.1%) of the respondents were married while 28.9% were not married. This implies that the respondents are responsible up keep of their homes and it will go a long way in better teaching and caring for the students. Also, 51.1% of the respondents have spent more than 16 years in teaching, 27.8% have spent 11 – 15 years and 21.1% have spent less than 10 years. Average year of teaching experience was 16.8 years. It is an indication that the respondents have stayed long in teaching profession in the study area. The years of experience of the respondents can facilitate rapid use of ICT through adequate training.

Table 1. Distribution based on the socio-economic characteristics of the respondents (n=180)

Socio-economic characteristics	Frequency	Percentage	Mean
<b>Age (yrs.)</b>			
≥ 40	48	26.6	34.2
41 – 50	113	62.8	
Above 51	19	10.6	
<b>Gender</b>			
Male	79	43.9	

Female	101	56.1	
<b>Marital status</b>			
Married	128	71.1	
Not married	52	28.9	
<b>Teaching Experience (yrs.)</b>			
≤ 10	38	21.1	16.8
11 – 15	50	27.8	
Above 16	92	51.1	
<b>Monthly Income (₦)</b>			
50,000 – 100,000	89	49.4	103,586
101,000 – 150,000	66	36.7	
Above 151,000	25	13.9	

Source: Field Survey, 2018

## 6.2. Educational qualification of the respondents

Results in Figure 1, all the respondents were graduates and had acceptable qualifications from various Nigerian Institutions; 61% had BSc, 33% had MSc and 6.0% had PhD. This reveals that the respondents are well educated and this will facilitate rapid adoption of new innovations and use of ICT in teaching profession.

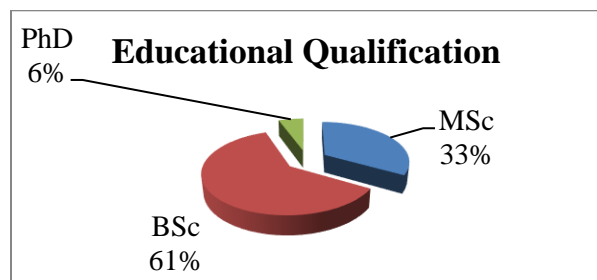


Figure 1. Distribution based on educational qualification of the respondents

## 6.3. Membership of Association

Results in Figure 2 showed that all the respondents (100%) belonged to teachers' association, 93.9% were member of cooperative societies and 21.1% joined political parties. Association provides platform for sharing of useful information and socialization among members.

## 7. Accessibility to ICT facilities

The results in Table 2 showed that 82.2% of the respondents did not have access to Internet service, 93.2% did not have access to screen projector and 90%

did not have access to I-pads. It implies that respondents did not have access to some basic ICT facilities. On the other hand, 87.2%, 60.6% and 100% had access to Laptop, Desktop and Android phone respectively.

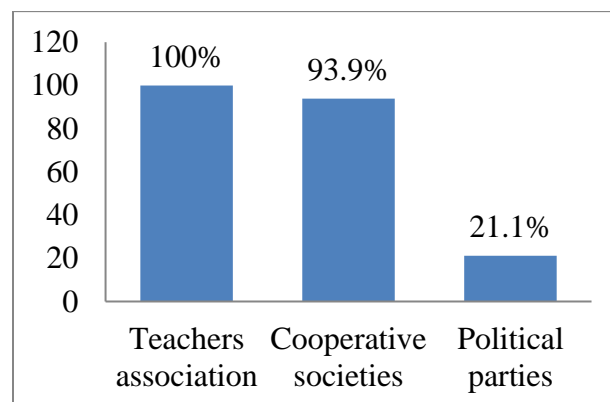


Figure 2. Distribution based on membership of association

## 7.1. Utilization of ICT facilities by the respondents

The results on ICT utilization presented in Table 3 showed that almost all the respondents did not use ICT for teaching (100%), writing lesson note (100%), and personal business (100%). But, 33.3% used ICT for browsing academic materials. Similarly, 86.7% used ICT facilities to browse social network and chatting. These findings agreed with report of Boyd and Ellisor [1] that teenagers and adults have especially embraced Social Network Tools (SNTs) as a way to connect with peers and share information.

Table 2. Distribution based on the accessibility to ICT facilities by respondents (n = 180)

ICT Facilities	Accessible	Inaccessible
Internet service	32(17.8)	148(82.2)
Laptop	157(87.2)	23(12.8)
Desktop	109(60.6)	71(39.4)
Screen projector	12(6.7)	168(93.2)
i-pads	18(10.0)	162(90.0)
Personal mobile (Android)	180(100.0)	0(0.0)

Source: Field Survey, 2018. All values in parenthesis are percentages

Table 3. Distribution according to the utilization of ICT by respondents (n = 180)

Utilization of ICT facilities	Very often	Often	Not at all
Use for teaching	0(0.0)	0(0.0)	180(100.0)
Use for browsing academic materials	48(26.7)	60(33.3)	72(40.0)
Use for preparing lesson note	0(0.0)	0(0.0)	180(100.0)
Use for social networking and chatting	156(86.7)	14(7.8)	10(5.5)
Use for news and sports	06(3.3)	20(11.1)	154(85.6)
Use for personal business	0(0.0)	0(0.0)	180(100.0)

Source: Field Survey, 2018. All values in parenthesis are percentages

Table 4, Challenges inhibiting the utilization of ICT facilities for teaching (n = 180)

Challenges	Serious (%)	Not serious (%)	Rank
ICT is too expensive for teachers to purchase	91.0	9.0	1 <sup>st</sup>
Inadequate training/seminar on ICT	85.6	14.4	2 <sup>nd</sup>
Poor power supply	81.9	18.1	3 <sup>rd</sup>
Poor connectivity and network service	80.2	19.8	4 <sup>th</sup>
High cost of maintenance and technical support	77.3	22.7	5 <sup>th</sup>
Technophobia	61.7	38.3	6 <sup>th</sup>

Source: Field Survey, 2018

Table 5. Relationship between challenges and utilization of ICT in teaching profession

Challenges	$\chi^2$	df	p-value	Decision
ICT is too expensive for teachers to purchase	8.54	2	0.02	S
Inadequate training/seminar on ICT	15.31	2	0.01	S
Poor power supply	24.26	2	0.00	S
Poor connectivity and network service	10.05	2	0.01	S
High cost of maintenance and technical support	3.14	2	0.05	NS
Technophobia	0.96	2	0.09	NS

Source: Field Survey, 2018. S – Significant at  $p < 0.05$  level of significance; NS – Not significant at  $p < 0.05$  level of significance. df – degree of freedom

## 7.2. Challenges inhibiting the utilization of ICT facilities for teaching

From the results in Table 4 it was revealed that ICT is too expensive to purchase for ninety-one percent of the respondents. Similarly, 85.6% reported inadequate training/seminar on ICT, 81.9% pointed to epileptic power supply, and 80.2% stated poor connectivity and network service as serious challenges. In addition, 77.3% and 61.7% indicated high cost of maintenance and technical support and technophobia respectively as major challenges to utilization of ICT in teaching profession. Ololube [6] and Hedjazi *et al.* [3] reported that technophobia and poor Internet connectivity affect ICT development.

## 8. Hypothesis testing

### 8.1. Association between challenges and utilization of ICT in teaching profession

Chi-square results presented in Table 5 showed that significant association existed for ICT is too expensive for teachers to purchase ( $\chi^2 = 8.52$ ,  $df = 2$ ,  $p = 0.02$ ), inadequate training/seminar on ICT ( $\chi^2 = 15.31$ ,  $df = 2$ ,  $p = 0.01$ ), poor power supply ( $\chi^2 = 24.26$ ,  $df = 2$ ,  $p = 0.00$ ), and poor connectivity and network service ( $\chi^2 = 10.05$ ,  $df = 2$ ,  $p = 0.01$ ) and utilization of ICT in teaching profession at  $p < 0.05$  level of significance. This implies challenges affected utilization of ICT in teaching profession. But, high cost of maintenance and technical support ( $\chi^2 = 3.14$ ,  $df = 2$ ,  $p = 0.05$ ) and technophobia ( $\chi^2 = 0.96$ ,  $df = 2$ ,  $p = 0.09$ ) had no significant association with utilization of ICT in teaching profession at  $p < 0.05$  level of significance. Since there is evidence of significant in the tested variables, the null hypothesis that “*there is no significant association between challenges and utilization of ICT in teaching profession*” is rejected.

## 9. Conclusion

ICT has become an integral component of modern teaching in advanced countries and as such Nigeria must be left out in this technological transformation for all round educational development. This study found out that access to ICT facilities was very low. Consequently, ICT compliance of the respondents was very poor. Though the respondents have great educational potential to use ICT in teaching profession, there are too many challenges limiting their efforts to incorporate ICT in the study area. From the findings in this study, it is recommended that awareness creation on the importance of ICT for

effective teaching and learning in Colleges of Education should be put in place; training and capacity building should be regularly organized for the teachers in Colleges of Education; government and school authorities should endeavour to provide basic ICT facilities to enhance electronic transmission of teaching and academic materials; and teachers should be encouraged to comply with technological trend and use ICT to prepare lesson notes and other educational instructional packages.

## 10. References

- [1] Boyd, O. M. and Ellisor, N. B. (2007) Social Network sites: Definitions, History and Scholarship. *Journal of Computer-mediated Communication*, 13 (1), article 11.
- [2] Federal Government of Nigeria (2004). *National Policy on Education*. Lagos: NERDC Press.
- [3] Hedjazi, Y., Rezaee, R., and Zamani, N. (2006). Factor Affecting the Use of ICTs by Iranian Agricultural Extension Specialists. *Journal of Extension System*, 22(1): 1-5.
- [4] Global Information Technology Report (2005). The Networked Readiness Index Rankings 2005. Retrieved 12<sup>th</sup> May, 2016 from [http://www.weforum.org/pdf/Global\\_Competitiveness\\_Reports/Reports/gitr\\_2006/rankings.pdf](http://www.weforum.org/pdf/Global_Competitiveness_Reports/Reports/gitr_2006/rankings.pdf)
- [5] Maclakemenjima, D. (2005). E-Education in Nigeria: Challenges and prospects. *Proceedings of the 8th UN ICT Task Force Meeting April 13-15*, Dublin, Ireland.
- [6] Ololube, N. P. (2005a). School Effectiveness and Quality Improvement: Quality Teaching in Nigerian Secondary Schools. *African Symposium Journal of Africa Educational Research Network*, 5:17-31.
- [7] Oyediran, W. O. and Omoare, A. M. (2014). Information and Communication Technologies (ICTs) Application in Agriculture: A Tool towards Rural Youths Empowerment in Ogun State, Nigeria. *International Journal of Applied Research and Technology*. 3(3): 33 – 38.
- [8] Oyediran, W. O., Omoare, A. M., Eruaga, H., Oko-Obob, E. and Omisore, O. A. (2014) Contributions of High Quality Cassava Processing Plant to Students’ skill acquisition in cassava processing in Federal College of Education, Abeokuta, Ogun State, Nigeria. *Annals of Youth and Child Studies*, 5(1): 139 – 152.