Information Communication Technology as Pedagogy for Teaching in Some Selected Secondary Schools in Edo State, Nigeria

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ABSTRACT

This study attempts to asses**s** information communication technology as pedagogy for teaching in some selected secondary schools in Edo State, Nigeria. The study employed a descriptive survey method and questionnaire was the instrument used for data collection. The total population for the study is one hundred and twenty nine (129) secondary school teachers in four selected secondary schools in Etsako west local government area of Edo state. The population of this study is not too large and as such the entire population was taken as representative sample using purposeful sampling technique. It was revealed from the study that ICT is not employed as pedagogy for teaching by majority of the teachers in the secondary schools studied, most teachers have negative attitude towards the use of ICT, a majority of the secondary school teachers studied have positive perception of perceived ease of teaching and learning with ICT and Lack of ICT facilities in secondary schools, lack of commitment from government and school management, lack of motivation and training, lack of ICT policies in secondary schools, lack of technical support from government and private sector, lack of qualified teachers to teach ICT and Teachers' anxiety over being replaced by technology are the major factors militating against teachers readiness and effective use of ICT in secondary schools in Etsako West Local Government Area of Edo state. The study recommends that Government should be committed to full implementation of ICT in secondary schools by way of formulating policies and implementing the existing one if any with all sincerity.

Key words: Etsako, ICT, Pedagogy, Secondary schools, Teachers, Teaching, Edo state, Nigeria.

INTRODUCTION

The use of technology and how technology can support teaching and learning in secondary schools in Nigeria have become essential in today's world. The functions of teachers in education process is of paramount interest especially when considering teaching and learning process as the acquisition of knowledge and skills by individuals to enable him become useful member of the society (Adebayo, 2008). The effective implementation of ICT in Schools is a multifaceted complex process that does not involve only providing the technology to schools but also involves teacher's competences, school readiness, long term financing and curriculum

restructuring (Zaman, Shamim & Clement, 2011). Teachers are primary agents of educational innovation; therefore, ICT skill among secondary school teachers should be seen as an invaluable prerequisite that would facilitate the rapid teaching and learning procedure in this modern age of information explosion. Abolade and Yusuf (2005) describes ICT as essential tools in any educational system ICT have potentials of being used to meet the learning needs of individual students, promote equality of educational opportunities, offer high quality learning material, increase self-efficacy and independence and improve teachers professional development. Mselle (2012) noted that, teachers are however not aware of the potentials that ICT offers in pedagogy. Satharasinghe (2003) posited that, the use of ICT can revolutionize teaching and learning and could bring advancement that would improve education dramatically. While Jegede (2008) opined that ICT is now recognized as an essential ingredient for creating 21st century learning environment.

The use of modern technological tools and devices such as computer and internet is still in its infancy stage in most developing and emerging nations in Africa, Nigeria inclusive. However, across Africa, many countries have started investing considerable amount of resources and designing new policies aimed at influencing teachers to embrace the use of ICT in schools; notwithstanding that some challenges like poor proficiency in the use of ICT was a factor (Zaman, Shamim & Clement, 2011). The above situation is underscored by Lau and Sim (2008) that reported that despite the benefits accrue to the use of ICT for educational purpose, many teachers are still not fully ICT compliance. Studies have also revealed that secondary school teachers lack proficiency skill in use of ICT as a pedagogy tools in teaching and learning (Nihuka & Voogt, 2011). The use of ICT in secondary schools can improve students' conceptual

understanding, problems solving and team working skills. Realizing its importance, policy maker and government have device many reforms and strategies to effectively implementation of ICT in secondary schools in Nigeria and other Africa countries (Manduku, Kosgey & Sang, 2012). Despite all their effort, the implementation of ICT in schools is still not effectively adopted to support learning and teaching as intended. Jimoyiannis and Komis (2007) observed that most of the reforms and strategies in schools fail due to their top down approach that fails to take into consideration teachers' interest and skills as well as existing knowledge. Goshit (2006) observed that, most schools both private and government, do not offer ICT training Victoria (2013) who emphasizes that Teachers' anxiety over being replaced by technology is a major hindrance affecting teachers' readiness in the use of ICT in secondary schools. Martin (2013) argues that, the demand for ICT learning has been tremendous and the number of teachers who are trained to teach ICT cannot meet the demand. Olulube (2006) posits that slow access to basic ICT equipment; low internet connectivity and computers are barriers to the effective and professional development of teachers. Oyebisi (2003) argue that the information and communication technology in Nigeria has not attained the required height which is affecting the use of information and communication technology in education system of the country. However, it was observed that some studies that have been conducted on the uses of ICT by teachers were carried out in develop countries like United Kingdom, United State of American and some Asian countries where the use of ICTs has come of age, and where there are resource and materials to maintain them. (Tella, Adeyinka, Adedeji, Adika & Toyobo, 2007). However, only few studies have been carried out by scholars on information communication technology proficiency of secondary school teachers in Edo state, Nigeria. This study will fill this gap.

STATEMENT OF THE PROBLEM

Information and communication technologies (ICTs) have become key tools and had a revolutionary impact on how we see the world and how we live in it. Etejere and Ogundele (2008) observed that electronic information system enables the teachers, researchers, school administrators and students to acquire, process, store and disseminate vocal, pictorial, textual and numerical information by electronic based system. Yelland (2001) posits that, traditional educational environments do not seem to be suitable for preparing learners to function or be productive in the work places of today's society. The scholar emphasized that educational institutions that does not incorporate the use of new technologies in schools cannot seriously claim to prepare their students for life in the twenty-first century.

It possible to bring learning beyond the boundaries of classroom by exploring the potentials ICT is offering. One of the basic requirements for education in this era of information explosion is to prepare learners for participation in a networked information society. Despite the numerous benefits ICT offers educational system, Nigeria and most other developing countries are yet to fully come to terms with the use of ICT as teaching tools in secondary schools. It is against the background that this study attempts to assess information communication technology as pedagogy for teaching in some selected secondary schools in Edo State, Nigeria.

OBJECTIVES OF THE STUDY

    a. To examine the extent of usage of ICT as pedagogy for teaching by teacher

    b. To assess teachers attitude towards the use of ICT for teaching in secondary schools.

   c. To examine teachers perception on the perceived ease of teaching and learning with ICT.

   d. To ascertain the challenges hindering teachers effective use of ICT in secondary school.

RESEARCH QUESTIONS

   a. To what extent do teachers use ICT as pedagogy for teaching in secondary schools?

   b. What are teacher's attitudes toward the use of ICT for teaching in secondary schools?

   c. What are teachers' perception on the perceived ease of teaching and learning with ICT in secondary schools?

   d. What are the factors hindering teachers' effective use of ICT in secondary school?

RESEARCH METHODOLOGY

This study employed descriptive survey research design to investigate information communication technology as pedagogy for teaching in some selected secondary schools in Edo State, Nigeria. The population of this study consists of all the teachers in four selected secondary schools in Etsako west local government area of Edo state. The total population for the study is one hundred and twenty nine (129). The population of this study is not too large and as such the entire population was taken as representative sample using purposive sampling techniques. According to Patton (2002), the entire population of a study can be chosen because of size and the particular characteristics. This study employed the questionnaire as instrument for data collection. The questionnaire was constructed by the researchers. The questionnaire entitled "Information Communication Technology as a Pedagogy for Teaching in some Selected

Secondary Schools in Edo State, Nigeria (ICTPTSSSQ) was used in this study. The data obtained from the copies of questionnaire using simple descriptive analysis of frequency counts and percentage.

RESULTS AND DISCUSSION

Table 1: Respondents Demographic Characteristics

Gender		
Male	60	47
Female	69	53
Total	**129**	**100**
Educational qualification		
N.C.E	33	1.9
BSC, B.A, B.ED	78	75.5
MSC, M.A., M.ED	16	18.8
P.HD	2	3.8
Total	**129**	**100**
Working experience		
1 – 5	9	16.9
6 – 10	8	15.1
11 – 10	12	22.7
16 – 20	13	24.5
20 AND ABOVE	11	20.8
Total	**129**	**100**

Source: Field Survey, (2017)

Table shows the gender distribution of the respondents with female 33 (62.3%) and male (37.7%). This is an indication that they are more female teachers in Auchi Polytechnic Staff

Secondary School, Auchi than male. The table also reveals the educational qualification of the respondents. The majority of the respondents with 40 (75.5%) have B.Sc, B.A, Bed. This is followed by M.Sc, M.A, M. Ed with 10 (18.5%), Ph.D. 2 (3.8%) and N.C.E 1 (1.9%). It is obvious from the study that a majority of the teachers in the Secondary Schools studied have commendable higher qualifications. The table also shows the working experience of the respondents. Thus, between 16 – 20 years 13 (24.%) was rated high. This is followed by respondents between 11- 15 with 12 (22.1%). Respondents between 20 years and above came third with 11 (20.8%), while 9 and 8 with 16.9%) and (15.1%) was rated low. It is clear from the table that a majority of the respondents have between 16 – 20, 11- 15 and 20 and above working experience. This study clearly shows that the respondents studied have appreciable working experience.

RESEARCH QUESTION ANALYSIS

Research Question one

To what extent do teachers use ICT as pedagogy for teaching in secondary schools?

Table 2: Using ICT as pedagogy for teaching in secondary school

ICT as Pedagogy	No of respondents	Percentage (%)
Yes	9	7
No	120	93
TOTAL	**129**	**100**

Table 2 indicate that respondents with 120 (93%) do not use ICT as pedagogy for teaching, while 16 (7%) use ICT as pedagogy for teaching in their respective secondary Schools. This findings show that ICT is not employed for teaching by majority of the teachers in the secondary schools

studied. This implies that the chalkboard and textbook continue to dominate classroom activities in most Nigeria secondary schools.

Research Question two

What are teacher's attitudes toward the use of ICT for teaching in secondary schools?

Table 3: Teachers' Attitudes towards the use of ICT for Teaching in   Secondary Schools

Attitude	No of respondents	Percentage (%)
Positive attitude	35	27
Negative attitude	69	54
Neutral	18	14
Undecided	7	5
TOTAL	**129**	**100**

Table 3   reveals that a majority of the respondents have negative attitude towards the use of ICT for teaching with 69 (54%), 35 (27%) have positive attitude while 18 (14%) and 7(5%) for neutral and undecided respectively. This study simply revealed that most teachers have negative attitude towards the use of ICT hence they do not use it as pedagogy for teaching in secondary schools.

Research Question three

What are teachers' perception on the perceived ease of teaching and learning with ICT in secondary schools?

Table 4: Teachers' Perception on the Perceived ease of Teaching and Learning with ICT in

Secondary Schools

Perceptions	N	A		D	
		NO	%	No	%

Using ICT makes it more easier to control the class activities	129	54	42	75	58
Using ICT will put more work off the shoulders of teachers	129	87	67	42	33
ICT is a powerful tools for teaching and learning	129	106	82	23	18
ICT will enhance the quality of education	129	115	89	14	11
ICT will improve the operations in the school	129	121	94	8	6
Using ICT tools in secondary school will be beneficial in teaching and learning all subjects	129	67	52	62	48

Average responses and percentage of agreed is 92(71%)

Table 4 reveals teachers perception of ICT. The opinion of the respondents varies with 121(94%) indicated ICT will improve the operations in the school. Other major perceptions of teachers with regards to ICT are: ICT will enhance the quality of education with 115(89%), ICT is a powerful tools for teaching and learning with 106(82%) , Using ICT will put more work off the shoulders of teachers with 87(67%) and Using ICT tools in secondary school will be beneficial in teaching and learning all subjects with 67(62%). It obvious from the study that ICT will improve the operations in the school, ICT will enhance the quality of education, ICT is a powerful tools for teaching and learning, Using ICT will put more work off the shoulders of teachers and Using ICT tools in secondary school will be beneficial in teaching and learning all subjects are Teachers' perceptions of perceived ease of teaching and learning with ICT in Secondary Schools in Etsako West Local Government Area of Edo state. The Average responses and percentage of agreed is 92(71%). This simply implies that the secondary school teachers studied have positive perception of the perceived ease of teaching and learning with ICT even though they have negative attitude towards the use ICT for teaching and learning in their schools.

The findings are in agreement with Victoria (2013) that the uses of ICT in different educational setting over the year invariably identify some hindrances to the success and the inability of teachers to understand why they should use ICT and how exactly they can use ICT to help them teach better.

Research Question four

What are the factors hindering teachers 'readiness and effective use of ICT in secondary school?

Table 4.7: Factors hindering teachers' readiness and effective use of ICT

	N	A		D	
Challenges		NO	%	No	%
Lack of commitment from government and school management	129	116	90	13	10
Lack of technical support from government and private sector	129	89	69	40	31
Teachers' anxiety over being replaced by technology	129	77	60	52	40
Limited and epileptic power supply	129	50	39	79	61
Lack of ICT facilities in secondary schools	129	119	92	10	8
Lack of motivation and training	129	105	81	24	19
Lack of ICT policies in secondary schools	129	98	76	31	24
Poor network/bandwidth	129	41	32	88	68
Most teachers see Government and school management sees ICT as additional cost in teaching profession	129	43	33	86	67
Lack of qualified teachers to teach ICT	129	86	67	43	33

Average responses and percentage of agreed is 82(64%)

Table5 reveals the factors hindering teachers' readiness and effective use of ICT in secondary schools in Etsako West Local Government Area of Edo state. The opinions of the respondents

includes Lack of ICT facilities in secondary schools with that 119 (92%), Lack of commitment from government and school management 115 (90%), Lack of motivation and training105 (81%). Others are Lack of ICT policies in secondary schools 98(76%), Lack of technical support from government and private sector 89(69%), Lack of qualified teachers to teach ICT 86 (67%) and Teachers' anxiety over being replaced by technology 77(60%). The Average responses and percentage of agreed is 82(64%).

This an indication that Lack of ICT facilities in secondary schools, Lack of commitment from government and school management, Lack of motivation and training, Lack of ICT policies in secondary schools, Lack of technical support from government and private sector, Lack of qualified teachers to teach ICT and Teachers' anxiety over being replaced by technology are the major factors militating against teachers readiness and effective use of ICT in secondary schools in Etsako West Local Government Area of Edo state. These findings are in conformity with the study of Victoria (2013) who emphasizes that Teachers' anxiety over being replaced by technology is a major hindrance affecting teachers' readiness in the use of ICT in secondary schools.

This study corroborate the study of Martin (2013) who argued that, the demand for ICT learning has been tremendous and the number of teachers who are trained to teach ICT cannot meet the demand. In a related development, Olulube (2006) avers that slow access to basic ICT equipment; low internet connectivity and computers are barriers to the effective and professional development of teachers. Goshit (2006) also observed that, most schools both private and government, do not offer ICT training.

SUMMARY OF THE FINDINGS

Based on the result arising from the data analysis the following findings were summarized in the study.

i.   The study reveals that ICT is not employed for teaching by majority of the teachers in the secondary schools studied.

ii. The study revealed that most teachers in the secondary schools studied have negative attitude towards the use of ICT

iii. ICT will improve the operations in the school, ICT will enhance the quality of education, ICT is a powerful tools for teaching and learning, Using ICT will put more work off the shoulders of teachers and Using ICT tools in secondary school will be beneficial in teaching and learning all subjects are Teachers' perceptions of perceived ease of teaching and learning with ICT in Secondary Schools in Etsako West Local Government Area of Edo state.

iv. Lack of ICT facilities in secondary schools, Lack of commitment from government and school management, Lack of motivation and training, Lack of ICT policies in secondary schools, Lack of technical support from government and private sector, Lack of qualified teachers to teach ICT and Teachers' anxiety over being replaced by technology are the major factors militating against teachers readiness and effective use of ICT in secondary schools in Etsako West Local Government Area of Edo state.

CONCLUSION

The rapid advancement of Information and Communication Technology (ICT) has brought a revolutionary change in every spheres of human endeavour including the educational sectors. Despite the revolution, teachers in secondary schools in Etsako West Local Government do not

employed ICT for teaching. Their attitude towards ICT is poor. The perceptions of Teachers about ICT is positive because they believe that ICT will improve the operations in the school, ICT will enhance the quality of education, ICT is a powerful tools for teaching and learning, using ICT will put more work off the shoulders of teachers and using ICT tools in secondary school will be beneficial in teaching and learning all subjects. However, teachers express their concern on some factors that militate against their readiness and effective use of ICT. These factors are lack of ICT facilities in secondary schools, lack of commitment from government and school management, lack of motivation and training, lack of ICT policies in secondary schools, lack of technical support from government and private sector, lack of qualified teachers to teach ICT and Teachers' anxiety over being replaced by technology. There is no gainsaying that ICT have the potential to change the template of teaching and learning in secondary schools in Edo state if only all these militating challenges are effectively address.

RECOMMENDATIONS

a. Government and school authority should ensure the provision of basic and adequate ICT facilities in secondary schools.

b. Government should be committed to full implementation of ICT in secondary schools by way formulating policies and implementing the existing one if any with all sincerity.

c. The school management should deem it necessary to always organize training and retraining programme for their teachers in order to expose them to the use of information and communication technology as tool for teaching.

d. Teachers should try as much as possible to improve on their information and communication technology usage by embarking on personal development in order to overcome the negative effect of technology

e. The school management should ensure that an ICT skill is a sine-qua-non for recruitment of teachers in secondary schools.

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