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Information Communication Technology in Education and Language Teaching: Teachers' Effectiveness Factor and Students' Achievement in English Language

Abstract

In recent times, the dynamism of information communication technology has created a complete new world of learning. Advances in Information Communication Technology (ICT) have great potentials of teaching and learning in education. Besides, the journey towards technological development and the growth of language could be traced from several decades before the independence of several African countries, including Nigeria considering the fact that language is an essential ingredient for all learning at all levels. Education also is essential for the development of individual and the growth of any dynamic society. Education and language are the backbone of any prosperous nation, and the core of the civilization of any dynamic nation. This study seeks to examine the diversities of technological devices in education towards the teaching and learning of English language in Nigeria secondary schools. The subject sampled were senior secondary school students and teachers. Simple percentage and frequency counts were used to analyse the data collected. The findings of this study indicate that technological advancement in education is a major route to enhancing teachers' effectiveness in the classroom activities and students achievement in English language; if conducive environment are ensured and teachers are trained and well – motivated. This is a very germane initiative towards the growth and development of both the teachers and learners of English language. Recommendations were given on the usefulness of various technological devices and strategies to improve students' academic achievement in English language through the judicious application of these multimedia devices.

Keywords: Education; Language; ICT; Teachers' Effectiveness; Academic Achievement; Multimedia Technology; Computer – Assisted Language Learning (CALL) and CD ROM.

1-Introduction

Information Communication Technology (ICT), education and language share a common phenomenon. These three are dynamic in the way they impact men's experience especially in the realm of teaching and learning process. Education, whether viewed as training, a learning process, the gaining of new skill and knowledge, a systematic accumulation of ideas, knowledge, or as growth and development process is catalytic to man's ability to adjust to the norms and values of his environment and society.

The world is fast changing and becoming increasingly literate and skilled in democracy, commerce, science and technology, socialization and environmental management. Nigeria would require a comprehensive education and language development to join the comity of developed industrial nations, for national unity, in order to equip the students to live effectively in our modern age of science and technology as espoused in the National Policy on Education (2004, Revised edition). Along this modest expectations, it is plausible to fathom the concept of education within the developmental context of productive citizenry and democratic society through dynamic language development and technological advancement. Education involves several processes all of which are directed towards the development of abilities, attitudes and behaviour which the society values. It is the transmission of what is worthwhile to those who are committed to it and must involve knowledge and understanding including some sort of cognitive perspective which is not inert (Dada, 1999). Education should not be regarded as the business of the teacher, school and the classroom only but should also involve the active participatory roles of the government, home and the society at large. Hence, education is regarded as a cooperative teaching-learning process of preparing an individual from birth and all through life, for happy and useful living in the society within the context of his/her culture and resources (Oyekan, 2006). The major characteristics of education from this definition and in relevance to this study are:

- (i) total development of the individual's potentials.
- (ii) preparation for happy and useful living in the society.
- (iii) life-long learning from birth and all through an individual's life.

Therefore, the development of education in any nation, especially Nigeria is regarded as a bridge between every child and his/her future and also a dynamic venture that promises economic well – being to the child and prosperity to his or her country. However, the role of English language in Nigeria is prominent it could be rightly described as the pivot on which the international and integrational lives of the people of Nigeria revolve. Unlike any of the indigenous languages, as an official language, the English language because of its neutrality does not endanger any ethnic hostility, rather, it ensures peaceful co-existence in Nigeria's diversity (Bamigbose, 2001; Farinde, 2002; Akinbode, 2006; Olayemi, 2007).

In Nigeria, English language is the language of government and administration. The National Policy on Education (NPE, 2004) section 5, 21(a) states that the broad goal of secondary school education is the preparation of individual for "useful

living within the society and higher education”. Therefore, language development, students’ endeavour in it, their achievement and teachers’ effectiveness in making use of technological resources for the teaching of English language should be taken seriously, as it cuts across all school subjects in the school curriculum (Eyengho, 2012).

Further still, the rapid breakthrough in technology is changing the way knowledge is acquired and delivered. It forces the society, schools inclusive to respond to societal trends that transform it into a “so-called” economy through technological advancement. Owoeye, (2009) posits that technology has always played a big role in teachers’ effectiveness and academic progression of students. She further explains that advanced countries of the world like USA, Britain, Japan, Germany, China, etc. are considered as super powers because of their technological advancement, which have been massive and far reaching and have helped to raise their quality of efficiency, productivity and relevance in the world at large. However, the concern of this study is to examine the influence of education, language and technological advancement on teachers’ effectiveness in teaching – learning process and students’ achievement in English language in Ondo State.

Considering education and language development through technological advancement, there are a lot of devices as there are many media of diverse range and sophistication. They are either manual or electronic and are applicable to information processing, storage and retrieval and adaptation to such instructions or information that could enhance effectiveness and positive achievement (Owoeye, 2009).

Harlow (2003), defines Information Technology as the study of or use of electronic processes for gathering of information, storage of information and making it available through the use of computers. Shorties (2000), opines that these devices have some features which enables storage and transmission of diverse information through different websites, internet and e-mail. It provides digitized information on Television, MP3, DVD, CD-ROM and mobile phones. These are seen as devices which could enhance teachers’ effectiveness and improve academic performance if well monitored and effectively used. The pertinent question however, to be answered by this study is that “does it really work in all cases?” as students most of the time make use of these electronic devices negatively to the detriment of their academic achievement and growth of education. Besides students’ factors, other variables do affect teachers’ effectiveness in making use of these technological devices. These may be school type, school environment, and parent – factors etc. (Oduolowu, 2008).

There is no need runn

ing away from the fact that, different technologies do influence effective teaching and pleasant learning. For instance, there is spelling checking tools in the application software which enables the user to eliminate non - standard form. Also, modern word – processing tools which allows a writer to use specific variety of language: British/American variety. It is apparent that a number of software in the computer is a reality in language teaching e.g. software or spelling, grammar tools, speech

recognition, reading comprehension, etc. They used established lexicography in electronic form. The mobile phone is another device used for conference call, social-interaction and for construction of a discourse. E-mails and text messages also are commonly used to send messages on the internet and mobile phones. Others are texts on language teaching which are saved in DVD, Hard Disk, iPod, and MP3. Radio programmes saved in the same way from the satellite broadcast and converted into computer data files in formats like MP3, Real audio e.g. RED – Radio English Direct by BBC are used both in language teaching and education development (Owoeye, 2009).

Also, Tswana (2005) observes that CALL (Computer Assisted Language Learning) is new and rapidly exploring the role of ICT in language learning and education development. He opines further that it is exemplified by the CD-ROM which allows a variety of media (text, graphic, sound, animation and video) to be assessed on a single machine. Domingo (2004) explains that CALL programmes have been developed and adapted for different levels of learners. They include Gap – master, Master – master, Choice – master, Vocabulary games etc. From the foregoing, it is apparent that new technologies connected so thoroughly, in conducive environment and in the wider society that using them could enhance teachers' effectiveness in teaching language and could also help in the development of education.

On the other hand, effectiveness is described by Bridle and Dunkin (1987), as those results reflecting the teacher and objective of education and they focus on the changes in students' attitude and knowledge. The profiles of effective teachers are as diverse as the students they teach. No wonder Gordon (2000) observed that it is theoretically impossible to measure a teacher's effectiveness by measuring only students' achievement, there must be other variables contributing to students' academic achievement. When personal qualities are used as a yardstick for teachers' effectiveness, effective teachers are described as enthusiastic, energetic, approachable, open, imaginative and possessing a high sense of humour. However, the concern of this study as far as teachers' effectiveness is concern, is the ability of the teacher to use the new technologies as strategies for the teaching of English language by enhancing their academic achievement. Ability of the teachers to use these electronic devices enhances teachers' effectiveness in classroom activities as well. It should be noted that a teacher may have good personal qualities, yet may be deficient in effective use of these new technological devices, this makes such a teacher ineffective in classroom interaction and activities as far as this study is concerned. In this study, teachers' effectiveness is very relevant to students achievement in English language. Students' achievement in English language as used in this study, refers to the totality of students' accomplishment determined by their performance in the classroom exercise, test, internal and external examinations.

Statement of the Problem

Teachers' effectiveness in classroom activities remains a factor contributing to students' academic achievement in English language. Research findings have ascertained that students' achievement in English language in Nigeria, especially in Ondo State falls below expectations (Tseng, 2005; Graham and Perin, 2007; Akande,

2003). This may be due, among other things to lack of teachers' effectiveness in the use of new technologies that could arouse and motivate students' interest and learning of English language. The various techniques for teaching English language have not been able to adequately improve their achievement in English and generally develop teachers' effective and adequate teaching activities. Also, it has been observed that in Nigeria, majority of the English language teachers use the conventional method which have been proving unproductive in enhancing students' achievement and teachers effective teaching in classroom activities. There is therefore, a need to examine the influence of new technology devices on both the teachers' effectiveness, hence, improvement in students' achievement in English language.

Purpose of the Study

The main purpose of this study is to investigate the influence of Information Communication Technology (ICT) on language teaching and education and how this can enhance teachers' effectiveness in the classroom activities. Specifically, the objectives of the study are to:

- a. assess the effect of ICT on teacher effectiveness in the classroom.
- b. assess the effect of new technological electronic devices on the achievement of students in English language.
- c. determine the extent to which English language teachers can effectively make use of these electronic devices to influence students achievement in English language.

Research Questions:

The following questions were formulated to guide the study:

1. Does ICT in education affect teachers' effectiveness in the classroom?
2. Does ICT in education affect student's achievement in English language?
3. Are there sufficient resources for effective use of the new technological strategies for effective teaching and learning of English language in schools?
4. Are English language teachers interested in using the ICT devices?

Research Methodology

The study adopted the survey research design, using simple percentage and frequency counts as statistical tools to analyze the data collected.

Population, Sample and Sampling Procedure

The population for the study comprised all SS III English language students and their teachers in Ondo State public secondary schools. Random sampling technique was used to select ten (10) public secondary schools. The sample size was two hundred male and female students and twenty (20) English language teachers.

Research Instrument

The instrument used for data collection was a relevant self – designed questionnaire for both students and English language teachers. The questionnaire items were designed to elicit responses from the respondents so as to answer the research questions formulated on the study.

Procedure for Data Collection

For the ten (10) randomly selected schools, the researcher at different times distributed the questionnaire to both teachers and students. The questionnaire items were responded to by the respondents and were collected by the help of the English language teachers in the different schools.

Data Analysis

The data generated were analyzed by using simple percentage and frequency counts. The results of this study are presented according to the sequence of the research questions formulated for the study. Two types of data were involved; these include data collected from the students and those collected from the teachers.

Results

Research Question 1: Does ICT in education affect teachers' effectiveness in the classroom?

Table 1: ICT and teachers' effectiveness

S/N	Items	SA	A	D	SD	X
1.	Computer assisted instructional model assist my teaching effectively.	7(35.00%)	5 (25.00%)	5 (25.00%)	3 (15.00%)	2.80
2.	There is no electricity to operate the available computers.	9(45.00%)	6(30.00%)	3(15.00%)	2(10.00%)	3.10
3.	We were not trained about the use of the computer.	8(40.00%)	5(25.00%)	4(20.00%)	3(15.00%)	2.90
4.	Students' participation is very low while using the computer system.	5(25.00%)	4(20.00%)	6(30.00%)	5(25.00%)	2.45
5.	The available computer systems cannot go round the members of the class.	8(40.00%)	6(30.00%)	4(20.00%)	2(10.00%)	3.00
6.	I prefer the conventional method of teaching English language.	9(45.00%)	5(25.00%)	3(15.00%)	3(15.00%)	3.00
	Total	46(38.33%)	31(25.83%)	25(20.83%)	18(15.01%)	2.88

Table 1 shows that 46(38.33%) of the respondents strongly agreed with the statements, 31(25.83%) agreed, 25(20.83%) disagreed, while 18(15.01%) strongly disagreed with the statements. With the mean of 2.88 greater than the average of the mean of 2.50 of the four rating scale, it implies that technological advancement in education moderately affect teachers' effectiveness in the classroom.

Research Question 2: Does ICT in education affect student’s achievement in English language?

Table 2: ICT and students’ achievement

S/N	Items	SA	A	D	SD	X
1.	I learn faster and better through the radio broad cast converted and saved by my teacher as computer data files.	170(68.00%)	68(27.20%)	7(2.80%)	5(2.00%)	3.61
2.	I have been learning a lot through RED – Radio English Direct by BBC	152(60.80%)	71(28.40%)	20(8.00%)	7(2.80%)	3.47
3.	My comprehension reading skills improve through language teaching software.	145(58.00%)	68(27.20%)	24(9.60%)	13(5.20%)	3.38
4.	Browsing through my mobile phone assisted to improve my scores in my take home assignments.	120(64.00%)	72(28.80%)	10(4.00%)	8(3.20%)	3.54
5.	I was able to develop my vocabulary and use of words through the dictionary store in my mobile phone.	140(56.20%)	96(38.40%)	9(3.60%)	5(2.00%)	3.54
6.	My teacher effectively uses technological devices for classroom interaction and allows students participation.	125(50.00%)	72(28.80%)	40(16.00%)	13(5.20%)	3.24
7.	There is a functional language laboratory in my school.	85(34.00%)	72(28.80%)	43(17.20%)	50(20.00%)	2.77
	Total	977(55.83%)	517(29.66%)	153(8.74%)	101(5.77%)	3.37

Table 2 shows that 977(55.83%) of the respondents strongly agreed with the statements, 517(29.66%) agreed, 153(8.74%) disagreed, while 101(5.77%) strongly disagreed with the statements. With the mean of 3.37 greater than the average of the mean of 2.50 of the four rating scale, it implies that ICT in education greatly affect students’ achievement in English language.

Research Question 3: Are there sufficient resources for effective use of the new technological strategies for effective teaching and learning of English language in schools?

Table 3: Resources for effective use of the new technological strategies

S/N	Items	SA	A	D	SD	X
1.	The computer systems in my school are locked up in the store.	4(20.00%)	6(30.00%)	4(20.00%)	6(30.00%)	2.40
2.	The few ones available in my school are not functional.	6(30.00%)	5(25.00%)	3(15.00%)	6(30.00%)	2.55
3.	There are no technological gargets given to my school because there is no electricity.	6(30.00%)	4(20.00%)	7(35.00%)	3(15.00%)	2.65
4.	We have only two computer systems just for the administrative block.	5(25.00%)	6(30.00%)	5(25.00%)	2(10.00%)	2.90
5.	There is no computer laboratory in my school.	5(25.00%)	5(25.00%)	6(30.00%)	4(20.00%)	2.55
	Total	28(28.00%)	26(26.00%)	25(25.00%)	21(21.00%)	2.61

Table 3 shows that 28(28.00%) of the respondents strongly agreed with the statements, 26(26.00%) agreed, 25(25.00%) disagreed, while 21(21.00%) strongly disagreed with the statements. With the mean of 2.61 greater than the average of the mean of 2.50 of the four rating scale, it implies that there are averagely sufficient resources for effective use of the new technological strategies for effective teaching and learning of English language in schools but the resources do not go round the students.

Research Question 4: Are English language teachers interested in using the ICT devices?

Table 4: Interest of English language teachers in using the ICT devices

S/N	Items	SA	A	D	SD	X
1.	I prefer “talk and chalk” method of teaching English language.	6(30.00%)	5(25.00%)	4(20.00%)	5(25.00%)	2.60
2.	I prefer discussion method of teaching English language.	6(30.00%)	4(20.00%)	3(15.00%)	6(30.00%)	2.60
3.	I am just computer literate.	10(50.00%)	6(30.00%)	3(15.00%)	1(5.00%)	1.75
4.	There is irregularity supply of electricity in my school environment	7(35.00%)	5(25.00%)	2(10.00%)	6(30.00%)	2.75
5.	I cannot browse through the net.	10(50.00%)	7(35.00%)	1(5.00%)	2(10.00%)	1.80
6.	We were not trained how to use the technological devices to teach English language.	9(45.00%)	8(40.00%)	2(10.00%)	1(5.00%)	1.75
7.	I am just not interested in using technological devices to teach English language.	8(40.00%)	8(40.00%)	2(10.00%)	2(10.00%)	1.90
	Total	57(40.71%)	43(30.71%)	17(12.14%)	23(16.44%)	2.16

Table 4 shows that 57(40.71%) of the respondents strongly agreed with the statements, 43(30.71%) agreed, 17(12.14%) disagreed, while 23(16.44%) strongly disagreed with the statements. With the mean of 2.16 less than the average mean of 2.50 of the four rating scale, it implies that English language teachers are not interested in using the ICT devices. This might be due to the fact that teachers are not well trained and some are glued to the conventional strategies already.

Discussion

- The main focus of this study was to investigate the influence of ICT on education and specifically on the teaching and learning of English language and teachers’ effectiveness in the ICT resources/facilities. Findings from this study revealed that:
- Information Communication Technology (ICT) in education moderately affect teachers’ effectiveness in the classroom as the mean of 2.88 is greater than the mean of 2.50 of the four rating scale in the statistical table above.
- ICT in education and language positively affect students’ achievement in English language as the mean of 3.37 is greater than the mean of 2.50 of the four rating scale in the statistical table.
- Resources available for effective use of the new technological strategies by

teachers contributes averagely to effective teaching and learning of English language in schools as the mean of 2.61 is greater than the average of the mean of 2.50 of the four rating scale in the statistical table.

- The interest of the English language teachers in using the new ICT devices for effective teaching of English language is relatively low, as the mean of 2.16 is less than the mean of 2.50 of the four rating scale in the statistical table.

2- Conclusion

The results of the study revealed that the application of technological devices have significant positive influences on both teachers' effectiveness in the classroom and students' academic achievement in English language. The challenges as revealed by the study is that the technological devices could not go round the schools and teachers are not well-trained to use the various devices for effective teaching in the classroom. The available devices could not go round the number of students in the different schools. Besides, many professional teachers are already glued to the conventional strategies and find it very difficult to incorporate the technological devices.

Recommendations

Based on the findings of the study, the following recommendations are proffered.

1. That the government should provide the ICT devices for the use of the different schools in the state.
2. That seminars and workshops should be organised to train professional teachers on effective use of ICT devices for effective teaching of English language.
3. Resources for the use of the ICT devices especially electricity or other alternatives should be adequately provided for all schools.
4. Students should also be encouraged and motivated to participate in the effective use of the ICT devices for adequate purposes.
5. Teachers of English language should be encouraged to attend conferences, workshops, seminars and in-service training to acquire practical experiences on how to manipulate these devices and form new strategies for effective teaching of English.
6. Parents should be encouraged to buy relevant text books and ICT gargets for their children to improve them on the effective use of the ICT devices.

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