



The use of Information and Communication Technology (ICT) in teaching and learning of Language

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ARTICLE INFO

Keywords: Information, Communication, Technology, Teaching, Language

Received : 6, November

Revised : 21, December

Accepted: 29, January

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ABSTRACT

The use of Information and Communication Technology (ICT) in teaching and learning of Language has been extensive. It has been effective in increasing performance and retention rate. Research has shown that people remember 20% of what they see, 40% of what they see and hear, but about 75% of what they see, hear and do simultaneously (Lindstrom 73). ICT is now permeating the educational system as a tool for effective teaching and learning. With multimedia, the communication of information can be done in a more effective manner and it can be effective instructional medium for delivering information. Multimedia access to knowledge of the possibilities of information and communication technology has tremendous impact on learning. The instructional media have emerged in a variety of resources and equipment, which can be used to supplement or complement the teacher's efforts in ensuring effective learning by students. It is recognized that conventional media technologies can no longer meet the need of our teaching and learning process; as a result, they are being replaced by multimedia technology.

INTRODUCTION

The challenges of classroom instruction in Nigeria's school system and research started changing dramatically with the emergence of new technologies which include information and communication technology (ICT). This period of computer age has ushered in a new dissemination of information among other vital roles of computer through the help of ICT. These days, ICT has and it continuing to have an increasingly significant impact on all aspects of human life. ICT provides an avenue for people in all aspects of life to access and profit from the borate in groups and to disseminate information locally and globally. For a continuing global interaction in the international community and in a bid to solve the inter-cultural and language barriers that are part of the factors that result in global conflict in recent times, many countries of the world have taken steps to ensure that their citizens have access to information and communication technology through increased reliance on computer assistance in delivering their classroom instructions. In view of that fact that computer has become an inevitable instructional material/method for teaching and learning of language this paper explores how ICT must be harnessed to promote teaching and learning of language.

Attitude is an important concept in social judgment and behaviours and thus, is one of the most important concepts in decision making Venkatesh et al (2003: 78). As a result of a lot of research on the attitude of both students and language teachers towards the use of ICT in teaching and learning had been done with outcome being either positive or negative. For instance Bencta (2000: 43) reported that negative attitude was a barrier towards integration of ICT in teaching and learning while Rhoda and Gerald (2007: 27) found that positive attitudes towards ICT use are widely recognized as a necessary condition for effective computer use in teaching and learning. According to Selewyn (2006: 35) integration of ICT in education environment depends on a great extent, on language teachers and students attitude towards their uses.

Use of ICT such as computer technology and internet are intended to enable English language teachers to facilitate learning more effectively and enhance students understanding og concepts which are expected to translate into expansion of knowledge and improve examination outcomes. However, in this age of information and communication technology (ICT), there is going concern for the use of ICT resources such as the computer, scanner, e-mail, video phone, systems, wireless application protocols (WAP), radio and micro waves television and satellites, multimedia computer and multimedia projector in curriculum implementation in e-learning, curriculum content in the forms of text, visuals e.g pictures, posters, videos, audio, sound, maps and graphics can be simultaneously presented online to students in both immediate location (classroom model of e-learning) Tracy (1995: 21) defines the internet as "international network of communications in which computers in the Wide Area Network (WAN) talk to each other". Shavinna (2001: 43) defines ICT as, all the digital technologies for collection processing, storage and dissemination of information all over the world.

E-learning as an aspect of ICT is relatively new in Nigeria's educational system. It is a departure from the conventional approach in curriculum implementation. The main purpose of e-learning is to transform the old methods and approaches to curriculum implementation and not a silence the curriculum or to extinguish or erase the contents of curriculum. E-learning should ensure effective pedagogy and curriculum implementation in the computer age. E-learning is an instructional medium that permits alternative approaches to curriculum implementation in an ICT age. Richmond (1997: 30) observed that, there is a great link between the curriculum and ICT and that there are three major areas that technology can influence learning. These areas include: presentation, demonstration and implementation of data using productivity tools.

The role of ICT in curriculum implementation is recognized by the Nigeria National policy on education, where it stated that, "The government shall provide facilities and necessary infrastructures for the promotion of ICT and e-learning (FRN 2004). It is against this background that the researcher intends to find out the extent of availability and use of e-learning materials by the English language teachers.

Statement of problem

The call for application of e-learning in the educational sector is to infuse and inject efficiency and effectiveness in curriculum implementation. However, in developing countries like Nigeria, e-learning is challenged with the problem of material devices such as computer internet and e-mail facilities, among others Global Information Technology Report (2005: 2).

The problem is that e-learning in the educational sector is challenged by the new technologies in terms of availability and use. It is against this background that this present study is carried out to determine the extent of availability and use of e-learning material. Lack of inadequate ICT faculties in schools comes second, this finding is corroborated by Ndiku (2003: 92) cited by Wims and Lawler (2007: 45). Observed that inadequate ICT was challenge to integration of technologies in Canadian Schools. Similarly Okwudishu (2005: 18) discovered that unavailability of some ICT components in the schools hampered the language teachers' use of ICT's. This problem may be due to underfunding. Enakwe and Onyenenia (2007: 110).

Frequent electricity interruption, comes third; electricity failure has been a persistent problem militating against ICT application and use in Nigeria Adom (2005) Omodeko and Otole (2004: 43), Okiy and Ruteyan 92003). This makes the few schools with ICT facilities unable to use them regularly. Poor ICT policy/project implementation strategy comes fourth. The Nigerian federal governments 1988 policy introduced computer education to the high school Okebukola (1997: 18). The only way this policy was implemented was the distribution of computers to federal government high schools, which were never used for computer education of the students. No effort was made to distribute computer to state government or private schools.

Although the government planned to integrate ICTs into the school system and provide schools with infrastructure concerted efforts and trained personnel, thus most schools do not yet offer ICT training programmes Goshit (2006: 14). The NEPAD e-schools project is expected to take care of an estimated 600,000 African schools. This means that not all schools will benefit from this initiative. Most countries participating in the NEPAD e-learning project have an ICT development policy or are creating one, but very few have clear implementation plans. Aginam and Evoh (2007: 36-40), observes that despite the recognized role of ICTs in improving education, ICTs remain a low financial priority in most educational systems in Africa. He further observes that most countries in the region lack resources for a sustainable integration of ICTs in education and that African countries face numerous competing development priorities. While all countries in the region acknowledge the strategic role of ICTs in development only a few have established a comprehensive policy. When such policies exist, they tend to remain unclear and make little reference to implementation.

Inadequate ICT manpower in the school is the main problem facing Nigeria. Teaching as a profession in Nigeria is considered to be for poor people. Therefore, the few professionals that are available prefer to work in companies and industries where they can earn better salaries with this deplorable condition, the language teachers are not motivated to go extra mile in assisting the students to acquire computer education. High cost of ICT facilities has been reported as one of the factors which influence provision and use of ICT services Adam (2020: 72)..

The cost of computers is too high for many to afford. Monday internet rates are exorbitant and the charges for satellite television are unaffordable for most people in Africa. This has made it difficult for Nigerian secondary schools to acquire and install ICT facilities for the use of language teachers and students.

Research questions

- i. How can one evaluate the language teachers' attitude towards ICT use in the implementation of language curriculum in schools?
- ii. What are the student's attitude towards ICT use in the implementation of the language curriculum?
- iii. What are the constraints involved in applying ICT in the teaching and learning of language in schools?
- iv. Is lack of knowledge of ICT by the language teachers' use of the major constraints in the use of ICT in teaching and learning of language in schools?
- v. What are the possible strategies for improving the use of e-learning materials in schools?

Research hypothesis

Ho: One cannot evaluate the language teachers' attitude towards ICT use in the implementation of language curriculum in selected schools.

H1: One can evaluate the language teachers' attitude towards ICT use in the implementation of language curriculum in selected schools.

Ho: There are no significant relationship between students' attitude and ICT use in the language in selected schools.

H1: There are a lot of constraints involved in applying ICT in the teaching and learning of language in schools.

The concept of information and communication technology

Information and communication technology (ICT) are electronic technologies used for information storage and retrieval. Development is partly determined by the ability to establish a synergistic interaction between technological innovations and human values. The rapid rate at which ICTs have evolved since the mid 20th century, the convergence and pervasiveness of ICTs, give them a strong role in development and globalization Nwagwu (2006: 13) ICTs have a significant impact on all areas of human activity Brakel and Chisenga (2003: 17). The field of education has been affected by ICTs, which have undoubtedly affected teaching and research Yusuf (2005: 19). A great deal of research has proven the benefits to the quality of education. According to Al-Ansari (2006: 52) ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change Davis and Tearle (1999: 31), Lrmke and Coughlin 1998, Yusuf (2005: 12).

In a rapidly changing world, basic education is essential for an individual being able to access and apply information. Such activity must include ICTs in the global village. The economic commission for Africa has indicated that the ability to access and use information is no longer a luxury, but a necessity for development. Unfortunately, many developing countries, especially in Africa are still low in ICT application and use, Aduwa Ogiegbean and Iyanu (2005: 45). The ability to use computers effectively has become an essential part of everyone's education. Skills such as bookkeeping, clerical and administrative work, stocktaking, and so forth, now constitute a set of computerized practices that form the core IT skills package: spread sheets, word processors, and databases Rffav and Whitworth (2002: 10).

The demand for computer / ICT is interesting in Nigeria, because employers realize that computers and other ICT facilities can enhance efficiency. On the other hand, employers have also realized that computers can be a threat to their jobs, and the only way to enhance job security is to become computer literate. With the high demand for computer literate, the teaching and teaching these skills is a concern among professionals. This is also true of other ICT components. New instructional techniques that use ICTs provide a different modality of instruments. For the student, ICT use allows for increased individualization of learning. In schools where new techniques are used, students have access to tools that adjust to their attention span and provide valuable and immediate feedback for literacy enhancement, which is currently not fully implemented in the Nigerian school system Emuku and Emuku (1999 and 2000).

ICT application and use will prove beneficial in improving Nigeria's educational system and giving students a better education. A technologically advanced workforce will lead to ICT growth in Nigeria, with the potential to

improve military technology and telecommunications, media communications and skilled ICT professionals who will be well-equipped to solve ICT problems in Nigeria and other parts of the world Goshit (2006).

ICT application in Nigeria secondary schools

There are developments in the Nigerian education sector which indicate some level of ICT application in the secondary schools. The federal government of Nigeria, in the National policy on education recognizes the prominent role of ICTs in the modern world, and has integrated ICTs into education in Nigeria to actualize this goal, the documents states that government will provide basic infrastructure and training at the primary school.

At the junior secondary school, computer education has been made a pre-vocational elective, and is a vocational elective at the senior secondary school. It is also the intention of government to provide necessary infrastructure and training for the integration of ICTs in the secondary school system.

It should be noted that 2004 was not the first attempt the Nigerian government made to introduce computer education in schools. In 1988, the Nigerian government enacted a policy on computer education. The plan was to establish pilot schools and diffuse computer education innovation, first to all secondary school, and then to primary schools. Unfortunately, the project did not really take off beyond the distribution and installation of personal computers, Okebukola (1997: 65) cited by Aduwa-Ogiegbaen and Yanu (2005: 72).

The usefulness of ICT in language

The indispensability of ICT in the teaching and learning of language cannot be over emphasized. Abolade and Yusuf (2005: 41) describe ICT as a powerful tool in the teaching and learning process. Information and communication technology (ICT) have the viable potentials to accelerate the acquisition of basic skills and knowledge required in motivating the student to learn. ICT offers the teachers of language new role that is preparing students to manipulate information for solving social, political and economic problems. ICT encompasses different technologies that are used for processing, transmitting and communicating data. Olalere (2005: 23) maintains that ICT has been found very useful in space exploration, engineering, banking and other fields but its greatest influence has been found in the field of education where it has helped tremendously to revolutionize teaching and learning. According to Jokins and Springer (2002: 8) ICT is a willing instructional tool which the teacher can use to present information and manage class activities in order to help students achieve their educational goals.

Information and communication technology can, therefore, be applied to present teaching tasks more vividly, or presenting concepts more clearly, for the purpose of enhancing learning outcomes as students will learn and retain more of what is taught, involving more senses for perception than hearing alone. ICT can be applied in assisting the students to store learning tasks and will give the students extra access to the lesson more than the volume they had in the normal classroom situation. It is therefore, indispensable to all language teachers and

students to have adequate access to information and communication technology so as to acquire the necessary skills, knowledge and taking full benefit of the learning capabilities that ICT provides.

Information and communication technology could be used to provide varieties of programmed instruction to language in other to be taught to the students in an active, interactive and effective way through the utilization of ICT. Orungbemi (2008: 42) maintains that the oldest presentation tools used in classrooms is undoubtedly the chalkboard. It is an essential tool and will remain so in many places and circumstances. This has been replaced or complemented by "flip charts" and overhead projectors Maiwada (2004: 12) Taylor (1980: 10) categorizes the educational application of the ICT into three broad categories, namely ICT, as teacher, ICT as learner and as assistant. ICT can be used to present instruction directly to the students. In this mode, the ICT engages in activities radically associated with language teachers. Utilization of information and communication technology (ICT) in the teaching and learning of language would, therefore, make the students to realize that in almost all setting, there is more than one solution to any problem, more than one way to accomplish any tasks; since a fundamental assumption of inquiry - base instruction is that multiple solutions to any problem are possible.

Constraints of ICT use in teaching and learning of language

While ICT continues to advance in western and Asian countries, African countries still experience a lag in its implementation, and that countries to widen the digital knowledge divides. In a study by Kiptalam et al (2010), observed that access ICT facilities is a major challenges facing most African countries, with a ratio of one computer to 150 students against the ratio of 1:15 students in the developed countries.

There is a result which indicates that ICT has penetrated many sectors including banking, transportation, communications and medical services lag behind. Further, recent report by the National Council for Science and Technology (2010: 43) indicated that computer use in classrooms is still in its early phases and concluded that the perceptions and experiences of language teachers and administrators do play an important role in the use of computers in classroom. Some of the problems include:

Lack of qualified language teachers to teach ICT in schools:

The demand for ICT learning has been tremendous and the number of language teachers who are trained to teach ICT cannot meet the demand. There are more students willing to be taught computing skills than there are teachers to transfer the skills.

Lack of computer:

Computers are still very expensive and despite spirited efforts by the government agencies, NGO, corporate organizations and individuals to donate computers to as many schools as possible, there still remains a big percentage of the schools unable to purchase computers for use by their pupils.

Lack of electricity:

Many schools are still not yet connected to electricity. The government has not been able to connect all parts of the country to the national electricity grid. Consequently, those schools that fall under such areas are left handicapped and may not be able to offer computer studies.

Computers are still expensive:

Majority of the individuals and schools cannot afford to buy a computer and consider it as a luxury item, more expensive than a TV, while 2nd hand computers cost as much as N27,000 and brand new computer are being sold at N70,000.00 as the case may be.

Brokes down computers:

While a good number of schools have benefited from donated used computers, they have not been adequately equipped with the same on maintenance and repair, hence it's very common to see a school computer lab full of broken down computers, some repairable and some out.

Burglary:

The fact that computers are still very expensive makes them a target for thieves who usually have ready markets to another party at a much less figure. This has made many schools to incur extra expenses trying to burglar proof the computer rooms. This extra expense makes some schools shy away from purchasing computers for their students.

Fear by the administration:

There is still a strong perception especially by the older generation that computers require highly skilled personnel to operate them, while this may not be the case, some school administrators also fear that their students will be exposed to adult sites and other undesired sides, through the use of the internet. Some also fear the infection of virus to their computers leading to data loss, while this may be true to some extent, proper education on the safe use of computer will help alleviate some of these fears.

Fear by the teacher:

The teacher may fear being rendered irrelevant by the introduction of computers in his/her class. The feeling that the teacher still remains an authority

and a “know it all” in class is something that most language teachers cherish, and anything that makes them otherwise is deemed an enemy of the classroom.

Lack of internet or slow connectivity:

Most schools are not able to connect to the World Wide Web (WWW), due to the high costs involved in the connectivity. On average, it may cost approximately N20,000.00 per month to connect to about 15 computer on a bandwidth of 128/64kbps. This is considered as very expensive for a very slow speed.

Lack of funds (finance):

In spite of the falling cost of computers, it is still not cheap to install in public schools. Even other electronic devices, the conventional opaque projector, radio, television and video players and tapes are not available in most schools. Hence, there is need for P.T.A companies and non-governmental organization's support.

Hot climatic condition:

The absence of a conditioner (A/C) in most schools creates problems of durability for equipment purchased. Hence, there is need for government to provide electric fans and air condition to schools.

Irregular power supply:

Lack of electricity in most schools coupled with its irregular supply where it is available create problem for effective integration of computer and other electronic devices in Nigeria schools.

Languages teachers incompetence:

As shown by Yusuf (1997), less than 40% of the language teachers in 16 sampled Federal Unity Schools were found to possess the experiences of using computer. Less than 40% also had proficiency in the use of software, word processor, desktop, publishing and data base programs.

Language teachers' incompetence

On the basis of computer operation (keyboard skills, diskette formatting etc) has gross implications on their inability to use computer based ICTs, software packages (example self-learning CDs, CD Roms), statistical/mathematical packages, computer assisted instructional packages. Computer managed Instruction (CMI), graphically illustration, conferencing etc. therefore, the need for computer training of teacher's pre-service and in service cannot be over-emphasized.

RESEARCH METHODOLOGY

Area of study

The research is on the use of information and communication technology in the teaching and learning of language in – Nigeria secondary schools.

Population

Population is the group of unites, such as persons or items enumerated for research. Therefore the population of study in this research is the Nigerian secondary schools in Anambra state which serves as the population. The selected secondary schools area;

- Creative International Secondary School, Iyiowa Odekpe in Ogbaru Local Government Area
- Father Paul’s Memorial Secondary School, Awka Etiti, Idemili South Local Government Area
- Anglican Girls Secondary Schools, Nkpor
- Community Secondary School, Omor, Anyamelum Local Government Area.

Out of the above listed secondary schools selected, two (2) are private while the other two (2) are government secondary schools. This method of selection between private and government schools was done to ensure balance.

Sample:

Sample size is a small unite carved out of the general population. Therefore the sample size of 100 was selected in this project, twenty five (25) from each of the schools under study. The simple Random sampling method was adopted.

Instrument of data collection

To carry out the study, the research developed questionnaires to collect information. The questionnaires contain eight (8) questions each. The research sample and distributed one hundred (100) questionnaires.

Method of data analysis

The raw figures sharing the range of responses by the respondents to each question will be presented in a tabular form indicating the number of positive and negative responses. The raw figures collected will be converted to percentages to indicates the number of responses to the question.

For instance
$$\frac{X}{Y} \times \frac{100}{1}$$

Where X is the number of responses Y is the option that makes up the items and 100 is the percentage.

$$\text{Example: } \frac{X}{Y} \times \frac{100}{1} = \frac{35}{100} \times \frac{100}{1}$$

Presentation and analysis of data

In this chapter, the data collected for this study will be analyzed using simple percentage for questions formulated for this study.

This deals with the results of the research which were conducted with the aid of questionnaire. Out of the hundred (100) questionnaires which, were distributed, ninety (90) were collected by the researcher representing 100% while (10) were either misplaced or damaged.

Question one:

Does the government see ICT as not important in the teaching and learning of language?

Table one

Alternative Response	No. of Respondents	Percentage Response
Yes	43	47.8
No	47	52.2
Total	90	100

Table one above, shows that 43 respondents representing 47.8% says that government sees ICT as not important in the teaching and learning or language while 52.2% representing 47 respondents think otherwise. The margin between those who says yes and those who says no was not much due to the fact that, though the government sees ICT as important but not able to provide ICT facilities in secondary schools.

Question two:

Are students interested in ICT?

Table two:

Alternative Response	No. of Respondents	Percentage Response
Yes	54	60
No	36	40
Total	90	100

Table two above shows that 60% representing 54 respondents says that students have interest in ICT, while 40% representing 36 respondents says that students are not interested in ICT.

Question three:

Does ICT in teaching make students lazy in their academic work?

Table three:

Alternative Response	No. of Respondents	Percentage Response
Yes	45	50
No	45	50
Total	90	100

Table three above shows that 50% representing 45 respondents say that ICT makes students lazy. Due to the fact that they no longer stress themselves in finding answers to questions they are being asked. 50% representing 45 respondents think that ICT does not make students lazy but vast.

Question four:

Does ICT help the researcher to go deep into their research work?

Table four:

Alternative Response	No. of Respondents	Percentage Response
Yes	73	81.1
No	13	14.4
Total	90	100

Table four above shows that ICT helps research to go deep into their research work, while 14.4% thinks is a waste of time.

Question five:

Does ICT expose both the teachers and the students to new discoveries?

Table Five:

Alternative Response	No. of Respondents	Percentage Response
Yes	65	72.2
No	25	27.3

Total	90	100
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Table five above shows that 65 respondents representing 72.2% says that ICT expose both the teachers and students to new discoveries.

Question six:

Does ICT enhance the teaching and learning of language?

Table six:

Alternative Response	No. of Respondents	Percentage Response
Yes	69	76.7
No	21	23.3
Total	90	100

Table six above shows that 76.7% representing 69 respondents says that ICT enhances the teaching and learning of language, while 23.3% disagree.

Question seven:

Do you encourage the use of ICT in the teaching and learning of language?

Table seven:

Alternative Response	No. of Respondents	Percentage Response
Yes	69	77
No	21	23
Total	90	100

Table seven above shows that 69 respondents representing 77% encourages the use of ICT, while 21 respondents says they do not encourage the use of ICT in the teaching and learning of language.

Question eight:

Are there inadequate ICT equipments in schools?

Table eight:

Alternative Response	No. of Respondents	Percentage Response
Yes	88	97.8
No	2	2.2

Total	90	100
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Table eight above shows that 97.8% said that there are inadequate ICT equipments in schools while 2.2% think otherwise.

Findings from the data analysis

The data from this research work has been analyzed and the collections is that ICT is very important in our schools so as to make learning easier and fun for the students.

CONCLUSION

The general idea of this project is to highlight the use of information, communication and technology in the teaching and learning of English language in Nigerian secondary schools. English language in Nigeria serves as the official language and the lingual Franca. It operates as a school subject and as a medium of instruction in our schools from primary to the university, and as such there is the need for the use of ICT, in the teaching and learning of language.

The research highlighted the uses and the findings, indeed, are positive. The use of ICT has facilitated a smooth and an enabling environment for the teaching and learning of language and thus made it more interesting to students.

Today, technology has become an inescapable part of our existence and has cast a spell on all aspects of our lives, including the teaching and learning environment. Technology is empowering as well as disability. On the one hand, all the information of the world is on our finger tips. On the other hand, we have to struggle hand in the classroom to graph the attention of our students addicted to face-book and other social networks.

Using technology and tapping the right resources from the internet, teachers can take the classroom experience of their students to a new level. At the same time, it is a challenge to kindle original thinking and analytical ability in generation that is networked 24 x 7. Learning with movies, images and videos has introduced different teaching tools with appropriate use of technology and also inspire teachers to improve the learning experience of their students through the use of technology.

RECOMMENDATION

There is a need of making IC technologies and applications available and accessible to the teaching and administrative staff as they need them, and giving them the opportunity to integrate it in a variety of ways. It is not the job of the teaching staff, for example, to teach how to use the computer but it is for them to tell students the applications that best suit their linguistic needs.

Teachers often welcome the idea of using technology to support different teaching styles to suit a wide activities, videos and songs in their professional

practice. Nonetheless, teachers are not motivated at all to involve technology in teaching because infrastructural development appears to be a hallmark of the teaching profession in Nigeria. Indeed, access to technology in education is less expected at a time when the economy is deep recession and there is a critical view as to whether allocating resources will make the greatest cost effectiveness.

The Nigerian government should advocate for the establishment of a larger study to investigate the readiness of the school systems to adopt the trend of learning and teaching technology.

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