

# LITERACY IN ICT FOR TEACHING AND LEARNING IN PRIMARY SCHOOLS IN THE SOUTHWEST NIGERIA

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## **ABSTRACT**

*The study investigated ICT for teaching and learning in primary schools in the south-west Nigeria. The purpose of the study was to examine the attitude teachers to the level of availability and usage of ICT facilities in Primary Schools and identify certain variables that inhibit putting in place appropriate ICT structures in primary schools as well as determine the level of exposure of teachers in the use of ICT facilities and learning in primary schools.*

*The sample for the study consisted of four hundred and fifty (450) teachers randomly selected from forty-five (45) primary schools. The primary schools were stratified into the existing three senatorial district of each state for the purpose of sampling. Random sampling technique was employed to select thirty (30) schools from each senatorial district. A questionnaire titled Teachers Questionnaire on ICT for teaching and learning (TQITL) with 10 items were used for the study and validated.*

*The face and content validity of the instrument was done in the faculty of Education who are specialist in Test and measurement and educational Technology. The reliability of the instrument was ascertained when the instrument was administered to 35 teachers who was not part of the sample respondents. The data generated were correlated using Pearson moment correlation analysis which gave a coefficient of 0.76 at 0.05 level of significance.*

*The hypothesis formulated were tested at 0.05 level of significance. The result from the study shows that ICT facilitates were not adequately available for teaching and learning in primary schools.*

*The result also shows that majority of the teachers have a positive attitude towards the use of ICT in teaching and learning in primary schools.*

*It was also found out in the study that there is a significant relationship between teacher attitude toward ICT and their application in teaching and learning the finding point to the facts that interest is a factors for performance as teachers with positive attitude towards ICT were more disposed to its applications.*

*Based on the findings of this study, it was recommended that the positive attitude of the teacher toward the use of ICT should be sustained by making provision for ICT facilities for teaching and learning in primary schools while Government and Private bodies should make effort to increase their budgetary provision for schools to enable meet up with its ICT needs.*

## INTRODUCTION

The whole world has been brought under a roof and turned into a global village since the advent of information and communication Technology (ICT) into the world about the last quarter of the 20<sup>th</sup> century. ICT has made international interaction and communication possible in the area of business social and politics. There are no any aspects of human endeavour that ICT has not touched, now it behaves on everybody every sector of the society to be ICT compliant. People, especially the youth, feel its importance and enjoy its products. It is clear that every high percentage of students visit the Net regularly to browse for various motives, mostly for entertainment, watching movies, connecting overseas friends, chatting on E-mail and facebook. People use GSM phone, watch football matches being played life from other parts of the world in their various homes and some religious organisations reach their members life through satellites all these are made possible through ICT.

According to Shelly, Cashman, Gunter and Gunter (2006), Ogunojemite (2007) Today, students around the world can visit historic places and thousands of others on the web, exploring this locate on interactive and sometimes even virtual tours. It is not only that the internet provides access to extensive text and multimedia resources, it also allows teachers and students to communicate with other teachers and students all over the world, for example 4PALS Classroom exchange, which is a project designed to enable students to develop an understanding of different cultures through students E-mail exchanges. Also, the applications of computer assisted instruction (CAI), Computer Assisted Learning (CAL), Computer Medicated Learning (CML), Computer Mediated Instructions (CMI), indicated that there has been serious incursion of ICT into education. Others are accessing educational resources on the web like accessing online publications, online professional organisations, wikis, Rss Feeds, Governmental sites Educational Portals, Favorite links classroom management tools and academic tools. For teachers and students to be current, they should be able to visit internet regularly for adequate and up-to-date information for assignment and research.

There are developments in Nigeria education sector which indicated some level of ICT application in the primary schools. The Federal Government of Nigeria, in the National policy on Education (2004) in modern world, and has integrated ICTS into education in Nigeria. To actualize the goal, the document states that government would provide basic infrastructure and training at the primary schools. It should be noted that 2004 was not the first attempt, the Nigeria 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 to all secondary schools, but unfortunately the project did not actually took off beyond the distribution and installation of personal computers in schools (Okebukola in Aduwa-Ogrebaen & Iyanu, 2001).

Education is the process by which society transmits its cultural heritage through schools, colleges, universities and other institutions (Gbamanja in Ololube 2006). To fulfil the purpose above, information and communication technology (ICT) is an essential ingredient that could bring the gains and benefits to the fore. Some teachers in Nigerian primary schools find it very difficult to correlate their ICT instructional materials like computer, audio-cult to correlate their ICT instructional materials, video instructional materials audio visual instructional materials including slides, video clips, electronic boards, electronic conferencing materials and so on, to the objectives of their instructional units. Education is a vehicle for development of an individual and society. Various authors such as Ezekiel (2006) had contributed to the definition of Education, he defined Education as the process by which learning is imparted, knowledge acquired and skills developed. Contributing to understanding the concept of Education, Adeosun (1998) referred to education as a process through which we acquire knowledge, skills and habit to elicit attitudes of positive value which make us positively functional in our environment. With the above assertions therefore,

one tend to believe that the greatest investment a nation can make especially for national development is the one committed to the education of its citizen in other words investment in human capital. Improvement in citizen of any nation can be seen in the development of human skills, knowledge and work capabilities. The skills and knowledge acquired through education in future translate to increase in national wealth. The change any nation aspires for is a function of education of its citizens.

The researcher contemplates that there are certain variables which inhibit various governments in putting in place appropriate information communication Technology (ICT) structures at various primary schools which in turn inhibits maximum inputs and output in the system. Such variables may include problem of ignorance of what information communication and Technology is by teachers, poor reward system that those not promote use of innovative techniques by teachers, lack of professionally or academically trained personnel in information, communication and Technology, location of schools, poor funding and allocation for ICT in the primary schools, and lack of space and instructional resources in the schools where most classrooms, lecture halls, etc are not designed or adapted to accommodate devices such as ICT materials. Other related issue include power supply, lack of ICT media operators and maintenance personnel in primary schools, gender of teachers and lastly teachers attitude towards ICT.

The above mentioned variables are operative terms that are worth explaining here to enhance a better understanding of the concepts. Problem of ignorance of what ICT is by teacher refers to the misconception that information communication technology ends with charts and diagrams. This wrong notion is a big obstacle to the proper application of information communication Technology in Nigeria (Adeyanju 2000).

The second variable is poor reward system which implies that teachers that go extra mile to provide and utilize facilities that aid teaching and learning by their personal initiatives are not been rewarded. A teacher who conceived the idea of a field trip for a group of learners to a zoo for practical study of animals and who after the exercises receives no any form of reward from the authorities will most likely not be encourage to embark on another initiative as the one described above. Authorities are expected to watch out for such teachers and modify their behaviours by introducing rewards.

Another variable is lack of professionally trained personnel in areas of information communication Technology. It seems that a great number of teachers in the schools had no sufficient academic or technical training in ICT or Teachers Training having course units on ICT in their course of study. On the other hand it might be that teachers with such training background were not engaged in schools as observed by Imogie (2002).

Poor founding variable is a situation whereby ingredients that will promote application of information communication Technology in schools are hindered by lack of fund. Provision of items such as appropriate classrooms, space for media instruments like dark room, audio/visual or teaching resources, and spare parts. A school is expected to have one form of resource centre or the other, this also requires fund.

The above scenario still raises the questions on how effective are conditions in our primary schools as to applying ICT in solving our myriad of educational problems in the schools? To what extend are the determinant factors as described above responsible for the current perceived situation?. It is against this background that the researcher deemed it necessary to investigate the attitude of teachers to the use of ICT for teaching and learning in primary schools in south west Nigerian.

### **Research Hypothesis**

The research hypothesis for this study state that there are no significant relationship between teacher's attitude towards ICT and their application of ICT in teaching and learning.

## LITERATURE REVIEW

### Human resources and Facilities for ICT in Nigeria Primary Schools

For some time now, there were predictions that new teaching and learning technology would replace teachers, textbooks and even schools. It was also anticipated that the major method of learning by 2000 would involve for example, the use of modern technology like computers at all levels and in almost all subject areas. (Borb, 1980), however, Crook (1984) asserted that this prediction may not appear to be true. Cuban (1986) and Cohen (1987, pp. 153-170) on the other hand claim that the use of ICT has to fit into the teachers pedagogical view of teaching and learning, and if introduction of computer for instance in schools are to be successful, one must start with question of why they should be used and not how they should be used. Yet, it appears that teaching is looked upon as having a supplementary status to the view of most educators and parents (Postholm et al. 2002). It is in this concept that availability and usability of ICT or application of information technology in education processes was not seen in the right perspective. In policy of Education (2004), Nigeria as a developing country has learning and teaching but doesn't seem to have been able to make significant mention in improving primary education through the medium. In 1977 the National Educational Technology (NETC) was established in Kaduna to lead in the development of educational Technology in Nigeria (Adeosun 2008) with this background it becomes obvious that government was aware of the significance of ICT, Universities and colleges of Education included the subjects in their portion of assessment of student teachers during their practical teaching, invariably all state governments attempt schools with provision of child friendly environment for learning.

Olawoye (2001) lamented the poor state of application of technology in most of Nigerian schools which he attributed to certain factors such as

- Lip serve with which information communication Technology is treated in high quarters through meagre budgetary provisions and provisions and poor release of funds.
- Resistance to change on the part of teachers.
- Lack of infrastructure and facilities that might make the use of ICT more meaningful such as lecture halls, audio visual, libraries, independent study spaces, audio-visual resources centre etc.
- Lack of adequate personnel or specialists to train users of the materials in schools.
- Fear that the new technology would replace teacher.
- Lack of training, workshops and seminars in the use of audio visual materials.

In a study to determine which instructional technology facilities were being used by the junior secondary school teacher in Western Nigeria, Iyamu and Ogiegboen (2001) discovered that only 8% of the teachers were using computers with their students. They concluded that the level of the use of instructional technology resources in those schools was still very low. The sum total of their finding showed that 90% of the teachers never used any form of technology with their students. (Computer, CDrom, laser, video disc, and projectors). They also found that pre-service and in service training availability and regularity of electricity were factors influencing instructional technology use by these teachers. This implies that digital technologies are yet to be fully integrated into the curriculum implementation process in Nigerian secondary schools. Lamenting on poor level of educational technology facilities in Nigeria (Imogie 1988) submitted that most buildings and other educational facilities in the country are still been constructed to accommodate only the traditional (teacher-lecture: talk-chalk board). It is still the same method in classroom constructions in the primary schools often visited by this researcher in the course of his official duties. Finally due to the importation syndrome, the mostly highly expensive ICT equipments and materials with little or no spare parts, lie waste and useless in many schools.

Empirical Studies of Information Communication Technology in Nigerian Schools, Ogunojemite (2002) presented an analysis of the Nigeria National Policy for information communication Technology

with a view to assessing its relevance in the Nigeria school system. He came out with submissions that the policy is inadequate to impact positively on the Nigeria educational system and that the philosophical frame of reference was market driven placing little emphasis on the integration and infusion of ICT in educational system. Can we assign any role of technology in leverage development? Banjok (2005) submitted that ICTs can help to expand access to education, strengthen the relevance of education in increasingly digital work place and raise educational quality. He was also of the view that Nigeria needs to harness the inherent power of the computer and the internet to enhance the transmission and retention of knowledge for both the learning and teaching process.

Is it relevant to identify the importance of adoption for e-education in Nigeria? E-Education according to Brown (2002) is electronic mode of knowledge sharing and transmission which may not necessarily involve physical contact between teacher and student. Access to instruction through the internet according to him is flexible, ensures broad viability and availability of educational opportunities. Commenting on the prospects of information and communication technology (ICT) in Nigeria, Wodi (2009) submitted that apart from affording students the opportunity of lifelong learning, instrumentation can afford a more efficient and effective control over learning situation as well as providing interest, meaning and enrichment to the whole learning experience

## **RESERACH METHODOLOGY**

### **Instrumentation**

The researcher designed in instrument called “Teachers Questionnaire on ICT For teaching and Learning” (TQITL) for the respondents who are teachers in the primary schools. The participants used for this study responded to questions that employed a four-point likert-type scale (summated) of (4= strongly agree; 3= agree; 2=disagree; and 1= strongly agree), which allows them to rate their attitude on teaching and learning ICTs. Rating scale considered approximately equal “attitude value”. Section “A” of the research questionnaire described respondents’ background information, they include: gender, status, subject’s taught academic qualification, length of service. Section “B” made used “agree” and “disagree” to establish the attitude of teachers towards ICT.

### **Validity of The Instrument**

The instrument (questionnaire) was given face and content validity by presenting it to experts in the faculty of education who are specialists in Test and Measurement and Educational Technology. This was to solicit their imputes so that the instrument can have clarity, appropriate language and appropriateness of instrument to generate the information it is expected to generate. The experts were guided by the purpose of the study research questions and research hypothesis made available to them. And all corrections, additions and subtractions as suggested by experts were effected before it was used for the study.

### **Reliability of the Instrument**

To ascertain the reliability of the instrument, the instrument was administered to 35 subjects who did not take part in the research. The data generated were correlated using pearson moment correlation analysis which gave a coefficient of 0.76 at 0.05 level of significance. With the result it was found to be usable enough and reliable for the study.

### **Research Population and Respondents Background Information**

The research population for this study was drawn from five states of Nigeria. It is in the south-west geo political zone of Nigeria. The population comprises of all teachers across the five states schools in both rural female hundred and fifty (450) teachers randomly selected from forty five(45) primary schools.

The secondary schools were stratified into the existing three senatorial districts of each state for the purpose of sampling. Random sampling technique was employed to select thirty (3) schools from each senatorial district. All the schools are government owned and all the teachers were recruited and controlled by the same agency, that is, Universal Basic Education Board for each state. Ten (10) male and female teachers were stratified from each primary school.

### Data Analysis Procedures

This study is part of an exploration and a comparative study that examined the attitude of the teachers towards the teaching and learning of ICT. To analyse the responses on personal data, descriptive statistics was adopted. Frequency count and percentage were used to analyse the data collected while correlation were used to analyse the hypothesis. The Pearson product correlation coefficient was computed to test for statistical significant relationship in the variable. It is a statistical significant set at  $p < 0.05$  to assess if the researcher's level of confidence observed in the sample also exists in the population. In other to simplify the analysis of the data in this study. The respondents responded to the research questions in this manner.

## RESULTS AND DISCUSSION

Research question: what is the Attitude of Primary school Teachers Towards ICT?

**Table 1: showing Attitude of Primary School Teachers Towards ICT**

S/N	QUESTION	AGREE FREQ	%	DISAGREE FREQ	%
1	The use of ICT materials in a lesson is necessary	403	90	47	10.0
2	Teachers should be less concerned about regular supply of ICT materials to schools	206	28.6	244	72.4
3	Teachers needs to source for local resources for teaching	406	91.0	44	9.0
4	Teacher should know about his individual learners	430	95.5	20	5.0
5	Lack of regular supply does not allow use of ICT materials	286	86.0	64	14.0
6	Teachers often over depend on instructional media	149	33.0	301	67.0
7	If I am in position of authority, I will ensure all teachers use ICT for teaching	430	96.0	20	40
8	Beautification of ICT environment should be given special attention	428	95.0	22	5.0
9	Lesson plan and note takes a lot of time to prepare so teachers has less time planning for use ICT	300	67.0	150	33.0
10	The time table is too chocked up to allow effective use of ICT	281	63.0	1.69	37.0
	TOTAL	3419		1081	

In the above table the attitudes of the teachers were grouped into positive and Negative. The four likert rates were broken into two thus Agree were regarded as positive Attitude while Disagree were regarded as Negative Attitude. The total aggregate score for the questions were four thousand five hundred and nineteen (3419) for positive response as against one thousand and eight one (1081) with negative response.

**HYPOTHESIS:** There is no significant relationship between teachers' attitude toward ICT and their application of ICT in teaching and learning.

Pearson Product Moment Correlation Analysis was used to test for the relationship of the two variables above, the table below gives a summary of the findings.

**Table 2: The Pearson Product Moment Correlation of Teachers' Attitude and Application of ICT**

Variables	N	Mean	Sd	df	r.cal	r.tab
Attitude	450	31.18	3.95	488	0.40	0.19
Application	450	37.8	4.26			

$P < 0.05$

The result shows that the r.cal is 0.40 while the r. Tab is 0.19. This reveals that the correlation is significant at the 0.05 level (2- table). The mean for the teachers' attitude towards ICT was 31.18 while test of application is 37.8. it shows a strong positive relationship at  $P < 0.05$ . there is a significant relationship between teachers' attitude towards ICT and their application of the concept in teaching and learning. Therefore, the hypothesis is rejected.

## DISCUSSION

Teachers attitude towards ICCT was investigated and the result show that majority of the teachers have positive attitude with respondents scores of 3419 while respondents teachers are in agreement that ICT is vital for solving educational challenges and are prepared to apply same given the appropriate opportunity. It training for teachers and regularity of salaries might have contributed to this positive attitude.

The findings of hypothesis which sought to establish if there is relationship between teachers attitude towards ICT and their application in teaching and learning gave a result that there is a strong positive interest is a factor for performance as teachers with positive attitude towards ICT were more disposed that generally, efficient teachers that conscientiously enhance their commitment towards national objectives, and as observed by Brown (2002) they should be in the pupils. Teacher's execution of their professional tasks and exhibition for good behaviour in the course of discharging their statutory roles.

There is need for synergy and collaboration between university authority including other relevant higher institutions and educational administrators in the various State Ministry of Education and local government Education Authorities. It is most likely that ignorance of the strategic importance of ICT in modern educational system gave rise to non availability of more capital intensive and sophisticated gadgets in the primary schools. Universities can take the lead to propagate this practice through seminars, workshops, articles and media chats to awaken Educational Administrators towards this trend.

ICT teaching and learning in primary school can still be improve upon based on the findings of this study. If;

- Efforts should be made by relevant bodies to improve upon the supply and installation of more electronic devices relevant to teaching and learning such as internet services, projectors and language laboratories.
- Closely related to the above is the need to ensure regular power supply to schools and standby generating plants.
- Further in-service training for the teachers should be expanded to accommodate more instructions on curriculum delivery via electronic devices.

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