



### A SURVEY OF TEACHER AWARENESS AND UTILIZATION OF ICT FACILITY BY EARLY CHILDHOOD AND PRIMARY EDUCATION TEACHERS IN C.O.E WAKA BIU.

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#### **Abstract**

*With the introduction of computer literacy as pre-requisite for teacher's appointment and promotion by the National Commission for Colleges of Education, the need to assess the level of Early Child Care Education*

#### **Keywords**

*Survey, Education, Awareness, Utilization, Teachers*

*teacher's awareness and the extent of utilization of Information Communication*

#### **INTRODUCTION**

The wide use of ICT has been a topic of discussion and concern all over the world, hence, educational system around the world are under increasing pressure to utilize the ICT to acquaint students with the knowledge and skills required in the 21st century. Ability to work with Information and Communication Technology (ICT) is recognized as one of the key competencies necessary for success in life and competition in the labour market (Eurydice, 2002). Electronic education (E-education) has become a necessity to teachers. Many scholars, teachers and teacher-trainers have recognized the potential of ICT in enhancing teaching and learning, and as

*Technology facilities emerged. Therefore, the study examines teacher's awareness and utilization of ICT facilities for effective teaching of ECCE in teachers' training institutions of Borno State. The study is a survey design where questionnaire was used to sort information from twenty six (26) ECCE lecturers and library staff of the two* *ICT available teachers was observed with training institutions in Borno State. Simple percentage and t-test were used to analyze the data obtained. The study revealed among others the non-availability of modern ICT resources in ECCE departments, lack of using the resource available in the virtual library by ECCE lecturers to teach the students and above all a significant variation* *was observed with respect to the level of utilization of ICT facilities available between the teachers of the two teachers' training institutions in the State as tested under 5% significant level. The study recommend among others the need of enhance commitment by lecturers of ECCE in using the ICT facilities available in the school library.*

such the number of published articles about the use of ICT in school work is now increasing. (Bell & Bell, 2003).

In education and specifically teacher education, there increasingly appear concepts of integrated teaching, showing the students the world in a holistic manner. The principle of universal activity of students in cognitive, emotional and practical sphere is preferred. In theory, teacher has numerous possibilities of applying ICT tools at lesson, especially if those elements of ICT-aided education are taken into consideration in the curriculum basis as slides were considered previously. Nowadays, education undergoes the great progress that end the time when the overhead projector with slides was the latest equipment found at school. ICT integration and utilization is the topical requirement of everyday life and plays an important role in society globalization. We are facing a possibility of ICT and thinking of how teaching could be improved and how teaching should become more attractive (Yusuf. 1999).

### **Statement of Problem**

The need for all teachers to operate and effectively utilize existing ICT facilities in schools on a full time basis has become a necessity in the present

educational and technological era, in addition to the significant investment in training and resources, in reality teachers training institutions are still far below the level of ICT use in educational and many other fields (Eteokleous. 2008). Therefore, all teachers specifically training institutions of learning are expected to possess those qualities, having been made a pre-requisite for all lecturers to be computer literate before being employed. Hence, this study aimed at assess any the level of Teachers' awareness and proper utilization of ICT facilities by lecturers in the teachers' training institutions in Borno state.

### **Purpose/ Objective of the Study**

For the purpose of this study, the following research questions were addressed:

1. What is the level of utilization of ICT facilities by teachers?
2. To what extent do teachers use different computer applications and facilities in preparation for classroom work?
3. Are there adequate ICT facilities in schools' library, departmental resource centers and/or lecturers' offices?

### **Research Hypothesis**

1. **Ho:** There is no significance difference in utilization of ICT facilities available at the school library (virtual library) by teachers of different teachers training institutions in Borno State.

### **Objectives of the Study:**

The objectives of the study are to:

1. Assess teachers' awareness of ICT facilities in teaching in different teacher training institutions in Borno state.
2. Assess the extent of utilizing the ICT resources by teachers.
3. Find out the availability or otherwise of such resources in different teacher training institution in Borno state.
4. Find out the availability and level of utilization of the resources available in the virtual library of different teacher training institutions in Borno State.

**Meaning of Information and Communication Technology (ICT):**

The term ICT was limited only to the textual, audio, video mode of transmission of information with ease and fast. Thus, ICT= Information Technology (IT) + (plus) other media. ICT has opened new avenues like, online learning, e-learning, virtual University, coaching e-education, e-journal etc. Third Generation mobiles are also part of ICT mobile phones as being used in imparting information fast and cost-effective. It provides e-mail facility also, one can access it anywhere. The ICT brings more rich material in the classroom and libraries for the teachers and students (Sansanwal, 2009). ICT has provided opportunity for the learners to use maximum senses to get the information. It has broken the monotony and provided variety in the teaching-learning situation and being latest can be used both at school and higher education levels (Bradley & Russell 1997). Use of ICT in teaching according to Mohammed.(2008)entail:

- i. Developing understanding application of the concepts.
- ii. Developing expression power
- iii. Developing reasoning and thinking power
- iv. Development of judgment and decision making ability
- v. Improving comprehension. speed and vocabulary
- vi. Developing self-concept and value clarification
- vii. Developing proper study habits.
- viii. Developing tolerance and risk taking capacity.

**Computer and ICT in the Nigeria Education System:**

The Federal Republic of Nigeria (FRN 2001) put that the Federal Government of Nigeria has initiated policies of ensuring that Nigeria is not left behind in the global drive towards the use of the computer in enhancing development. Efforts made so far by the government towards ICT development in Nigeria include the launching of the National Telecommunication policy in September 2000, development of comprehensive science and Technology policy in 2001, the development and launching of the state life systems programme by the National Space Research and Development Agency (NASRDA) in 2001. Other efforts made are; the granting of license to mobile telephone network operators beginning with MIN in 2001, development of a ministerial initiative on c-education for the Nigerian education in 2004, formulation and

presentation of information technology (IT) bill to the National assembly in 2006, and the organization of computer training for teachers across the country by Educational Trust Fund (ETF) in 2006 (Oloyede&Adekunle, 2009). In the year 2004 however, the Federal Ministry of Education released a document termed “the ministerial initiative on e-education for the Nigerian education system”. This document was an approval in principle for e-education project for the Nigerian education system”. It did not take the place of a national policy on ICT in education. The document listed the major objectives of e-education in Nigeria as follows:

- i. To enhance access to quality education
- ii. To improve the education delivery system
- iii. To ensure optimal utilization of existing ICT resource.
- iv. To ensure a globally competitive education system, and
- v. To reduce/eliminate social vices in the school system.

The Federal Ministry of Education and its agencies have initiated many ICT driven programs. Which include the school Net Nigeria, the National Open University of Nigerian Universities, Nigerian Universities as well as the encouragement by the National University Commission (NUC) to Universities to utilize at least twenty percent of their teaching and research equipment grant for ICT development (Albirini, 2006). Despite these efforts and apparent benefits of the use of ICT for educational purpose, studies showed that in many cases, the learning potential of ICT is deprived as many teachers are still not fully ICT-literate and do not used it in their teaching studies. On teachers’ readiness for ICT, generally suggest that there is still a long way to go before schools in different region will be able to take full advantage of the opportunities provided by 21st century Technology (Sansawal, 2009). Similarly, Barak, (2006) reveals that while teachers exploit ICT for their own learning, they are cautions .about impacting advanced technologies in schools. Another study also suggest that while teachers recognize the potential of technology in stimulating student’s learning and making school studies relevant to real-life contexts, they do not think that ICT is preferable for class-based instruction for promoting cooperation and reflection in learning. (Preston, 2000).

### **Problems militating against Teachers use of ICT in Tertiary institutions**

To examine the factors hindering teachers' readiness and confidence in using ICTs; Tella, Tella, Toyobo, Adika, & Adeyinka, (2007) found that inadequate knowledge to evaluate the impact of ICT in teaching and learning, lack of skills in the use of ICT equipment and software had resulted in lack of confidence in utilizing ICT tools. This is consistent with Preston (2000) who concluded that lack of technical support as the key inhibitor to the use of ICT in classroom. Similarly, Bradley & Russell (1997) argued that recurring faults and the expectation of faults occurring during teaching sessions have reduced teachers' confidence and caused teachers to avoid using technology. In addition, obstacles such as access to equipment time pressures. Lack of mentor and opportunities for apprenticeship of observation also have an impact on teachers' ability to use ICT (slauti & Barton. 2007).

Furthermore, teachers' workload and time management was found to be inhibiting the implementation of computer instruction in classroom (Guha. 2000). Empirical studies have indicated that even teachers who have competence in the use of ICT do not integrate them in their teaching. Problems of quality and lack of resources are compounded by the new realities faced by higher education institutions battle to cope with every increasing student numbers (Ololube, Ubogu, & Ossai. 2007). Milan (2006) states that ICT are accessible at schools and the teachers use them only by adoption of a classical learning method. Therefore, the students' interest in natural sciences is decreasing; the lack of skills in using ICT is one of the reasons why the teachers do not use ICT in teaching ECCE. They do not use the educational discs of ECCE while teaching this course because they do not know how to install a certain program and how to use it. ICT are something new for teachers over 50 and older, and sometimes or in most cases lack of software in schools:

### **Methodology**

#### **Research Design**

The researcher employed a survey design where information were collected and analyzed from sample of lecturers and librarians to represent the opinions of the entire population.

#### **Population of the study and sample size**

The population of this study comprises all lecturers and librarians of teacher training institutions in college of Education WakaBiu. The sample size of the

research work comprised 7 ECCE lecturers and librarians/Library Staff (seven lecturers and four library staff) from the teachers' training institutions in the Biu which were randomly selected during the administration of the questionnaire.

### Method of Data Analysis

The collected information were then analyzed using simple percentage to quantify the weight of responses of respondents answered the research questions while the t-test statistics was used to analyze differences in information obtained in order to accept or reject the hypothesis of the research.

### Presentation of the results

**Table 1.** lecturers responses to research question 1: what is the level of utilization of ICT facilities by teachers?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
1	Are you computer literate?	Yes	20	100
		No	0	0
2	Do you own computer?	Yes	18	90
		No	2	10
3	Do you teach/lecture your student using computer and projector?	Yes	1	5
		No	19	95
4	Do you have access to free internet service in your institution?	Yes	12	60
		No	8	40
5	Does the Use of white board, smart board and other ICT related gadgets enhance teaching and learning?	Yes	18	60
		No	2	40

6	Are you capable of using power point to effectively present your lesson?	Yes	10	50
		No	10	50

**Table 2.**lecturers responses to research question: 2 to what extent do teachers use different computer applications and facilities in preparing for class room work?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
7	Do you prepare your lesson note, examination question (test, question, marking sheet etc) using computer?	Yes	18	90
		No	2	10
8	Do you use any of the ICT resources e.g. LCD projector, interactive white board, smart board in lectures delivery?	Yes	2	10
		No	18	90

**Table 3.**Lecturersresponse to research question 3: is there adequate ICT facilities in departmental resource centers and/or lecturers office?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
9	Do your school have functional virtual library that can be use for teaching ?	Yes	13	65
		No	7	35
10	Are there related software in your school or department?	Yes	7	35
		No	13	65

**Table 4.** librarian/library staff responses to Research Question 1: what is the level of utilization of ICT facilities by teachers?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
1	Is the library equipped with modern ICT resources?	Yes	4	67
		No	2	33

**Table 5.** Library staff responses to Research Question 2: to what extent do ECCE teachers use different computer applications and facilities in preparation for classroom work?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
	Do most teachers utilize the ICT resources of the school library?	Yes	2	33
		No	4	67

**Table 6.** library staff responses to Research Question 3: states that: is there adequate ICT facilities in schools library, departmental resources centers and lecturers offices?

S/N	QUESTIONS	RESPONSES	FREQUENCY	PERCENTAGE
1	This department (library unit) provide free internet acces to all lecturers?	Yes	6	100
		No	0	0
2	LCD projectors are free to be borrowed/use by lecturers at any time in the institutions for their lectures?	Yes	5	83
		No	1	17

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5	Do you have software in the library?	Yes	2	33
		No	4	67
6	Is the library equipped with interactive board?	Yes	5	83
		No	1	17
7	Is there smart board in the library?	Yes	5	83
		No	1	17
8	Is any of the facility (above) available in department of the institution?	Yes	0	0
		No	6	100
9	Is the capacity of the virtual library (if present) enough to accommodate at least 100 students?	Yes	3	50
		No	3	50
10	Is electricity a problem towards effective utilization of library ICT resources by lecturers?	Yes	6	100
		No	0	0

**Table 7.**Library staff response to hypothesis 1: there is no significant difference in the level of utilization of ICT facilities in school library by lecturers.

Schools	D	SSD	S	S <sup>2</sup> <sub>D</sub>	SE <sub>D</sub>	DF	t-values	
							t-cal	t-tab
<b>College of education Waka-Biu</b>	6.6	227.6	113.8	10.67	2.435	4	1.89	2.776

Where D=mean difference, SSD=sum of square of difference, S=variance, S<sup>2</sup><sub>D</sub>=standard deviation, *SED* = Standard error of differences, *DF* = Degree of freedom, *t*<sub>cal</sub>= t-calculated value, *t*= t-tabulated value. From the above table,

the calculated value of  $t$  is less than the tabulated value of  $t$  ( $1.89 < 2.776$ ). Therefore, the null-hypothesis is rejected. Hence, there is significant difference in the utilization of ICT facilities in the libraries of Waka-Biu.

### Findings and Discussion:

The findings of this research can be summarized as follows:

1. That majority of the lecturers of the teacher training institutions are computer literate
2. That most lecturers own computer and prepare their lesson note, examination questions, test questions, marking schemes etc using computer.
3. That majority have access to free internet services
4. That lectures do not teach/lecture students using computer due to lack of software related to as well as electricity instability.
5. One of the institutions lack functional virtual library that can be effectively used for teaching of ECCE and the capacity of the virtual libraries is not enough to accommodate 100 and above students.
6. The libraries of all the institutions under study lacked important ECCE software.
7. ECCE department in most of the institutions lack some important ICT facilities like smart board and interactive white board.
8. The institutions have unequipped departmental resource centers
9. That ICT facility like LCD projectors and the likes are free to be borrowed by lectures although stable electricity is among the obstacles to their use.
10. Lastly, the null hypothesis which says that there is no significance difference in ECCE teacher's utilization of facilities in teachers training institutions in college of Education WakaBiu was rejected.

### Discussions

From the results in *table 1*, it was found that lecturers are computer literate and many possess their own computers but unable to use it in the presentation of lectures. Hence supported the work of Tella, et-al (2007) who states that despite the apparent benefits of the use of ICT for educational purpose .Studies showed that, the learning potential of ICT is deprived as

many teachers are still not full ICT literate and do not use it in their teaching. The findings as shown in table 2 has support the work of Ololube, Ubogu, & Ossai, (2007). “Those even teachers who have competence in the use to ICT do not integrate them in their teaching”. Table 3 show the absence of functional virtual library and biological software in the schools, this finding agreed with the work of Milan (2006) who states that ICT are accessible at schools and the teachers use them only by adoption of a classical learning method. They do not use the educational discs while teaching this subject because they do not know how to install a certain program and how to use it. ICT are something new for teachers over 50 and older, and sometimes or in most cases lack of software in schools.

Table 5 shows that there is a poor level of utilization of ICT facilities available in the schools’ libraries by lectures. Hence, consistence with the findings of Milan (2006)

Table 4 and 6 show the level of how equipped the school’s libraries are as well as the accessibility of free internet services in all the institutions studied; therefore, confirm the work of Preston, (2000) who emphasize the importance of ICT in schools. While the results in Table 7 show a significance difference in level of utilization of ICT facilities in the libraries Waka-Biuby Lecturers. Therefore, rejecting the null- hypothesis and confirm the work of Milan (2006) who opine that ICT are something new for teachers over 50 and older, and sometimes old teachers are away from it due to their conservative culture “. Also is in consistent to the work of Preston, (2000) who states that while teachers recognize the potential of technology in stimulating student’s learning and making school studies relevant to real-life contexts, they do not think that ICT is preferable for class-based instruction for promoting cooperation and reflection in learning.

**Conclusion:**

Based on the findings of this research, it can be concluded that the ICT utilization in teachers training institution in COE WakaBiu is not encouraging as shown by the results of this research. However, the research questions which include teachers’ level of awareness of ICT and how adequate ICT facilities are with the lecturers, department and the schools for effective teaching of were answered in the affirmative.

### Recommendations:

Based on the result of this study the following recommendations have been advanced.

1. Lecturers should effectively learn the practical use of ICT application as well as employ techniques in creating rising and sustaining the curiosity and interests of the students toward lectures and presentations.
2. The Teacher Education Curriculum in Nigerian should be constantly reviewed to emphasized new recent knowledge and skills related to ICT use in the teaching of .
3. There is need for alternative source of light in departments to overcome the problem of electricity supply.
4. There is need to enhance commitment by lectures of the teacher training institutions towards using ICT facilities available in the schools libraries.

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