



# Nigeria Educational Forum

**A JOURNAL OF INSTITUTE OF EDUCATION, AHMADU BELLO UNIVERSITY**

**VOLUME 21 NUMBER 1**

**JUNE, 2013**

**INCLUDES ARTICLE ON** Availability and Use of Information Sources and Service Provided for Business..... Management of Records in Librarians' Registration Council ..... Educational Facilities that can be Provided to Enhance Gender Equity ..... Emotional Problems of Parents and its Implications ..... Influence of Self-concept on Principals' and Vice-Principals' ..... The Child-centred Method of Teaching Literacy as a Technique for Improving Pupil's Performance at the Lower Primary School Level

**Also** A Surveyor on Awareness and Use of Blu-ray in Library Services.... Enhancing the Orthography of a Mother Tongue ... The Principle of Justice in the Glorious Qur'an ... Interaction Between Arabic and English. .. Relationship Between Self-Concept and Academic Achievement Among Colleges of Education Students in North-Western Nigeria. A Psychological and Counseling Perspective.

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# **COMPUTER LITERACY AND TEACHERJOB EFFECTIVENESS AMONG SECONDARY SCHOOL TEACHERS IN ILORIN SOUTH LOCAL GOVERNMENT AREA, KWARA STATE, NIGERIA.**

**Alabi, Afusat. Titilayo. (Ph.D.) & Yisa, Habibat Madami (Mrs.)**

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This study examined the influence of computer literacy on teacher job effectiveness among secondary school teachers in Ilorin South Local Government Area. Kwara State. The study is a descriptive survey of the correlation type. The population for the study comprised 17 senior Secondary School in Ilorin South Local Government Area. Ten schools were randomly selected as sample. Data were collected through the use of two researcher- designed instruments titled "Computer Literacy Questionnaire" (CLQ) and "Teacher Job Effectiveness Questionnaire" (TJEQ). Data collected were analysed using frequency counts, percentage and rank-ordering to answer the research questions while Pearson product moment correlation statistic was used to test the formulated hypotheses at .05 level of significance. The research findings showed that there were 109 computers in the ten selected secondary schools in Ilorin South Local Government Area, out of which 66 (60.5%) were functioning. Microsoft word was ranked as the most used by teachers with frequency of 314 while Database management was the list used with frequency of 35. Teachers' level of computer literacy was 44%. There was significant relationship between computer literacy and teacher job effectiveness (calculated  $r\text{-value} = 0.675 > \text{critical } r\text{-value } 0.062. p < 0.05. df = 398$ ). Based on the findings of this study, it was recommended among others that, the government should pay more attention to teacher computer literacy by making computer education compulsory for all teachers of secondary schools so that lesson preparation and delivery could be improved upon with computer applications such as PowerPoint.

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**Keywords:** Computer Literacy, Teacher Job Effectiveness, Secondary Schools

## **Introduction**

The role of computer as an electronic device that accepts and processes data and produces the result in form of information with minimum level of human intervention cannot be underscored in every sector of the economy, education inclusive. It is the heart of one of the major technologies of the world- Information and Communication Technology (ICT). While the computer is helping manufacturing industries to plan, organised and control their production and sales, it is equally assisting the teachers to become efficient and effective in their functions.

It has therefore become imperative for teachers to be computer literate in the Nigerian secondary schools. This can be done through in-service training and by the use of computer service bureau. There are other consultancy services that can provide computer-training services to the teachers. The educational institutions must have to provide microcomputers that will be able to serve the needs of their teachers (Abolade, 2000). If a great percentage of the teachers of secondary schools are computer literate, many of the problems they do encounter in computation of students results and preparation of lesson notes could be minimized. Suffice to say that the use of computers by teachers can reduce educational problems to the barest minimum. The computer

can keep adequate records of teaching assignments. The unimaginable memory capacity of computer makes it possible to store information and be able to retrieve it within a twinkle of an eye. Regarding the difficulties in retyping the same document several times, once stored in the computer, editing could be done faster and more accurately.

Ololube (2005) stated that the quality of teachers is known in virtually all countries to be a key predictor of student learning. Computer literacy among teachers will help them to take full advantage of the potential of technology to enhance student learning as well as their professional growth. In-service training, computer service bureau, consultancy service providers and inclusion of computer education with emphasis on practical work are some of the avenues teachers in Nigeria can acquire computer knowledge and become computer literate and effective. The educational institutions must have to provide microcomputers that will be able to serve the needs of their teachers (Abolade, 2000). If a great percentage of the secondary school teachers are computer literate, many of the problems they encounter in computation of students' results and preparation of lesson notes could be minimized. The computer can keep adequate records of teaching assignments. The unimaginable memory capacity of computer makes it possible to store information and be able to retrieve it quickly. Regarding the difficulties in retyping the same document several times, once stored in the computer, editing could be done faster and more accurately. Most teachers with access to computer use them at least for writing lesson notes and written reports. A typical course in computer literacy includes the use of spread sheets for tabulating data and computing standard functions, as well as display of the results graphically. It also includes the use of database, and possibly how to define and build one (Kenny, 2004; Viera, 2010).

Computers have introduced a new era in traditional methods of teaching and offering new teaching and learning experiences to both teachers and students. Historically, most teachers' evaluators have focused on teachers practice only, using a set of qualitative measurement approaches such as classroom evaluation and real fact analysis. For a fuller picture of teacher job effectiveness, it is important to combine qualitative measures of teachers' practices with quantitative measures of student achievement outcomes in both internal and external examinations (Ozigi, 2005). Therefore, in order for the students to be well exposed to effective teaching, the teachers must be well informed about the use of computer in the school administration.

Effectiveness is an act of achieving stated goals and objectives by the teachers in teaching/learning activities at a given time. Goffe and Sosin (2005) noted that the last few years have witnessed a steady increase in computer technology in various aspects of life. Secondary schools are not isolated from such development, as technology enjoys several advantages making it an ideal method to be used in proving the educational process and enhancing its quality. Acquisition of computer skills and knowledge by teachers can be employed to lesson preparation, delivery and assessment as well as other school activities.

Computer is an electronic device for storing and processing data, typically in binary form and according to instruction given to it in a variable form. It is a machine for manipulating data according to a list of instructions. Ayo (1994) classified computer by size into microcomputers,

mini computers, mainframe computers and super computers. Neglecting the use of computer in the teaching /learning processes will negatively affect the education system of any nation.

Uma (2009) asserted that the use of computers is the latest and the most useful link in the use of hardware technology in the field of teaching and learning. Their use and application have almost revolutionised the field of education. The services rendered through computers are in the form of the utilisation of multimedia, word processing, power point presentation, database management, retrieval and storage of information, access to internet, e-learning and activities related to education and instruction, both at individualised and group levels.

Computer literacy is the knowledge and the ability of a teacher to use computers and related technology efficiently and with a range of level. It can also be defined as the comfort level one has with using computer programs and other applications such as Microsoft word, database management, Microsoft PowerPoint among other applications. Adio (2003) defined computer literacy as the ability of a computer user to operate the computer system and its gadgets to solve a given problem. Onasanya (2001) asserted that as the world enters the third millennium, there is a great challenge to update the process of teaching and learning and to take a giant stride toward keeping abreast of technological developments and toward application of computer literacy in Nigerian educational system

The Federal Republic of Nigeria (2004) in the national policy on education has spelt out aims and objectives of every level of education. A computer literate and effective teacher can use the computer to achieve such objectives with little efforts in the following ways as slated by Mangal and Uma (2009):

- As a store house of knowledge and information to get all types of relevant knowledge and information regarding the teaching and learning of the topic and content material of the school subject,
- As a good source of self-instruction to the students. A computer literate teacher will be in a better position to guide the students on the use of computer to learn and acquire the concepts, principles, skills and application of various subjects through self-efforts at their own pace, needs and requirements, with the help of services provided by computers.

Computers provide valuable assistance in terms of variety of information, ready materials, methodology, and teaching devices available on the websites; CDs and soft ware for providing desirable experiences to teachers for the learning and acquiring necessary knowledge, understanding and skill for making them better teachers of their subjects thereby bringing necessary improvement on the part of their professional growth.

Teacher job effectiveness in this study was measured using lesson plan preparation, method of teaching, student assessment, classroom management and results of standardised examination obtained from a recognised examination body known as West African Examination Council (WAEC). An effective teacher can be said to be a teacher that focuses his time and resources on educational objectives to bring about desired change in the students through teaching/learning process. Harrington (2004) found in a study on the relationship between Information and Communication Technology and teacher job effectiveness in North American

schools that, teacher effectiveness was shown to improve through computer skills and electronic gadgets. The pace of change brought by new

technologies has had a significant effect on the way people live, work and play worldwide. Adebayo (2000) described effective and efficient teacher as a teacher with certain innate dispositions which take the forms of talent, aptitude, ability to sympathise, to empathise and establish rapport with others, a helping spirit and imaginative decision making potential and in sum, a genial and charismatic personality. New emerging technologies challenge the traditional process of teaching and learning and the way education is being managed. Principally, one of the pre-requisites in achieving effectiveness in educational development, as in other fields, is having access to up-to-date, timely and reliable information. However, in Nigeria, a common problem confronting educational development is obtaining information that is timely, accurate and useful. Ayinla (2004) stated that it is generally believed that computer can empower teachers and learners, promote change and foster the development of 21st century skills, however, data to support this belief are still limited.

This study thus examined the influence of computer literacy on teacher job effectiveness among selected secondary schools of Ilorin-South Local Government Area, Kwara State.

### **Purpose of the study**

A large percentage of the activities in any educational institution, such as a secondary school, comprise the processing of data into information and communicating this in the teaching and learning processes. The purposes of this study therefore, were to:

- i. examine computer application packages used by secondary school teachers in Ilorin South Local Government Area, Kwara state,
- ii. determine teacher job effectiveness in the schools, and,
- iii. examine the Influence of computer literacy on teacher job effectiveness.

### **Research Questions**

1. What is the number of computer systems in Ilorin South Local Government Area Secondary Schools?
2. What is the level of computer literacy among teachers of secondary schools in Ilorin South Local Government Area, Kwara State?
3. What application packages do teachers of secondary schools in Ilorin South Local Government Area use in their schools?
4. What is the level of teachers' job effectiveness in Ilorin South Local Government Area Secondary Schools?

## Research Hypothesis

There is no significant relationship between computer literacy and teacher job effectiveness among secondary schools teachers in Ilorin South Local Government Area.

## Methodology

A descriptive survey was used in this study to correlate the influence of computer literacy on teacher job effectiveness in selected Secondary Schools in Ilorin South Local Government area of Kwara State. The population for the study comprised 17 senior secondary schools out of which 10 were randomly selected as sample for the study. Four hundred (40%) out of 1,007 principals of schools and teachers (10 principals and 390 teachers) were randomly selected as sample for the study. Two instruments were used to gather information. These were 'Computer Literacy Questionnaire' (CLQ) and 'Teacher Job Effectiveness Questionnaire' (TJEQ). The validity of the instruments was done by six experts in the areas of Educational Management and Educational Measurement and Evaluation from the University of Ilorin. Reliability test was done using test re-test method which yielded 0.72 and 0.84 coefficients for CLQ and TJEQ, respectively after been subjected to Pearson product- moment correlation statistic. Frequency counts, percentage and rank-ordering were used to analyse research questions raised in the study while research hypotheses were tested using Pearson product moment correlation statistic at 0.05 significance levels.

## Results and Discussions

Research Question 1: What is the number of computer systems in Ilorin South Local Government Area Secondary Schools?

**Table 1: Number of Computer Systems in Secondary Schools in Ilorin South Local Government Area**

S/N	Schools	Number of Available Computers	Functional %	F	Non-functional F	%
1	A (Govt Tech Coll. Ilorin)	10	6	60	4	40
2	B (Govt GDSS, Okesuna)	15	10	67	5	33
3	C (Govt DSS, Kulende	9	5	56	4	44
4	D (Govt DSS, Tanke)	16	9	56	7	44
5	E (Govt DSS, Oke Aluko)	10	4	40	6	60
6	F (Govt DSS, Agbabiaka)	12	8	67	4	33
7	G (Govt DSS, Omoda)	7	6	86	1	14
8	H (SSS, Opolo)	5	2	40	3	60
9	I (United CSS, Ilorin)	15	8	53	7	47
10	J (Bishop Smith Coll. Ilorin)	10	8	80	2	20
	<b>Total</b>	<b>109</b>	<b>66</b>	<b>605</b>	<b>43</b>	<b>395</b>
	<b>Mean</b>	<b>10.9</b>	<b>6.6</b>	<b>60.5</b>	<b>4.3</b>	<b>39.5</b>

The result in Table 1 shows the number of computers in the selected secondary schools. The total number of computer systems stood at 109 out of which only 66 (60.5%) were functioning. The average number of computers stood at approximately 11 per school, with less than seven functional. These are inadequate for both teachers and students' use for teaching and

learning activities. However, this finding is an improvement on an earlier finding of only two science schools with computers for instructional purposes in Ilorin Metropolis (Alabi, 2001).

**Research Question 2:** What is the level of computer literacy among teachers of secondary schools in Ilorin South Local Government Area of Kwara State?

**Table 2: Level of Teachers' Computer Literacy**

Level	Frequency	Percentage(%)
High	<b>32</b>	<b>8</b>
Average	144	36
Low	224	56
<b>Total</b>	<b>400</b>	<b>100</b>

Results in Table 2 indicate that only 8% of the teachers were highly computer literate, 36% had average computer literacy while 56 % had very little or no computer literacy.

**Research Question 3:** What application packages do teachers of secondary schools in Ilorin South Local Government Area use in their schools?

**Table 3: Application Packages used by Teachers**

S/N	Application packages	Frequency	Rank
1.	Database management	35	4
2.	Microsoft Powerpoint	112	3
3.	Microsoft word	314	2
4.	Spread sheet package	289	1

The responses to application packages used by teachers in the secondary schools were ranked as shown in Table 3. Microsoft word was ranked highest with 314 responses, indicating that teachers take advantage of the use of computer as the electronic equivalent of typewriter, pen and paper. The fact that the computer has the capability to format pages, check spelling, ease correction and updating, store documents among many other functions, makes computer- literate teachers more effective as against those that are not computer literate. The use of Database management was ranked the least with 35 responses. Spread sheet application and Microsoft had 289 and 112 responses respectively. The use of computers is the latest and the most useful link in the use of hardware technology in the field of teaching and learning (Uma, 2009). There are two basic ways in which computers can be used to enhance teaching of school subjects. The first is by using standard applications such as spread sheets, data base programs, and even word processing programs to illustrate the fundamental concepts. The second use of computer in teaching school subjects should be for modelling of dynamic processes that are the basis of all computer science (Viera,2010).

**Research Question 4:** What is the level of teachers' job effectiveness in Ilorin South Government Area Secondary schools, Kwara State?

**Table 4: Level of Teachers' Job Effectiveness**

Level	Frequency	Percentage(%)
High	20	5
Moderate	270	67.5
Low	110	27.5
<b>Total</b>	<b>400</b>	<b>100</b>

The result in Table 4 shows the level of teachers' job effectiveness in Ilorin South Government Area secondary schools, which was just moderate. Teacher's effectiveness is used to describe the ability of a teacher to bring about the Intended result. It entails the ability to adopt, utilize resources and achieve stated educational goals and objectives.

**Research Hypothesis:** There is no significant relationship between computer literacy and teacher job effectiveness among secondary schools teachers in Ilorin South Local Government Area.

**Table 5: Computer Literacy and Teacher Job Effectiveness**

Variable	N	X	SD	Df	Calculated r-value	Critical r-value	Decision
Computer Literacy	400	7.81	4.06				
Teacher job effectiveness	400		5.94	398	.675	.062	Ho Rejected

The result in Table 5 indicates that the calculated r-value (.675) is greater than the critical r-value of .062 at .05 levels of significance and 398 degrees of freedom. Hence the null hypothesis is rejected. This implies that a significant relationship existed between computer literacy and teacher job effectiveness. That is, teachers who are computer literate perform their job more effectively and efficiently in terms of lesson plan preparation, classroom management and student assessment. This in turn helps in the improvement of students' academic performance. Teacher computer literacy would increase productivity in the school system which would invariably enhance high students' academic performance.

Secondary schools must have to provide microcomputers that will be able to serve the needs of their teachers. If a large percentage of the teachers of secondary schools are computer illiterate, many of the problems they encounter in computation of students results and preparation of lesson notes would be minimized.

## **Conclusion**

The number of computer systems in the secondary schools was an average of less than 10 with less than seven of them functional (66%). Computer literacy among the teachers was slightly below average (44%). Teacher job effectiveness was adjudged moderate (67.5%). It can be concluded that significant relationship existed between teacher computer literacy and job effectiveness in Ilorin South Local Government Area secondary schools. Teacher computer Literacy is the knowledge and ability acquired by a teacher to use computers and technology efficiently. The pervasiveness of computers is continuing to grow at an outstanding rate. As schools become ever more dependent on technology, the value a potential teacher has may be measured in terms of his or her technological competency. The highest goal of a computer-literate secondary school teacher is to be able to learn and use new computer programmes/applications effectively. Computer literacy gives teachers of all ages an edge in both their careers and education. Teachers' ability to use computer application packages such as Microsoft word, Microsoft PowerPoint and others would in no small measure enhance their job effectiveness.

## **Recommendations**

Based on the findings of this study, the following recommendations are made:

The government should increase the number of computers available in secondary schools and also computer application software on various subjects to be used by teachers to improve teaching and learning process in the schools. When teachers have access to computers whenever the need arises, this would greatly improve their job effectiveness.

Although there is computer section in the Ministry of Education and Human Capital Development made available for teachers to enrol and learn computer, more emphasis should be laid on computer education through workshops, seminars and conferences for teachers on the use of modern computer application packages.

The government should pay more attention to teachers' computer literacy by making computer education compulsory for all teachers of secondary schools and incorporated into teacher training schools' curriculum with emphasis on practical aspects.

Teachers should be provided with adequate training in the use of computer programmes such as Microsoft Word, Microsoft PowerPoint and their use in lesson delivery. It would help in arousing the interest of students towards effective learning as well as effective class room management.

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