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Dr. (Mrs) E. O. Jones

Box 15, Eugene

My dear Mr. Jones

I have

just received

your letter of the 10th

and am glad to hear

from you. I am

very busy at the

present but will

write you again

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administrative problems that require the intervention of ICT. Information and communication technology (ICT) is the practical offshoot of Educational Technology which by definition is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources (Januszewski & Molenda, 2008). Also, Adegbija (2003) quoting the American National Council for Educational Technology ANCET describes ICT as the handling of and processing of information via electronics devices. *Oxford Advanced Learner's Dictionary* defines ICT as the study or use of electronic equipment, especially computer for storing, analysing and sending out information. Webopedia (2010) defines ICT as the study or business of developing and using technology to process information and aid communication.

Omosebi (1992) was of the view that ICT is the tool of communication for obtaining and getting in touch with any part of the world by mere touching of a combination of keyboard buttons. There is more to ICT than the computer because it is the aggregate of the potential inherent in computing and telecommunication.

The role of ICT in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy (Adegbija & Daramola, 2007). Most experts in the field of education agreed that when properly used, ICT holds great promise to improve teaching and learning in addition to shaping workforce opportunities (Heinch, Molenda, Russell & Smaldino, 2004). It is now regarded as the new literary which has actually rekindled a new and strong desire to equip schools with computers and other ICT and qualified personnel necessary to produce technologically proficient and different students in developed countries of the world.

There is no doubt that ICT can aid instructional process and facilitate students' learning. Studies have found positive effects associated with technology aided instructions (Bunnet, 1994). ICT is rapidly changing our world in all ramifications; it has transformed our world into a global village.

In addition, ICT devices play a significant role in everyday life and technological development of car engines, telephone system, industrial robot, home appliances, toy games, etc. These and many others have various components of ICT incorporated in them. Through the use of ICT devices, doctors can consult, prescribe drugs with precision and monitor patients on the bed electronically. ICT devices are also used in the collection of data for educational research with the current emphasis on science and technology by both the Federal and state governments. The use of ICT has become imperative for secondary schools in general. But as indispensable as ICT is to the attainment of educational stated goals and technological development as a whole, its use is confronted with some problems. In the light of this, this paper examined the problems confronting the

use of ICT in selected secondary schools in Ilorin East Local Government Area of Kwara State.

Purpose of the Study

The general purpose of this study was to investigate the problems confronting the use of ICT in secondary schools in Ilorin East Local Government Area of Kwara State. The study specifically investigated:

- 1) The factors hindering the use of ICT among secondary school students in Ilorin East Local Government Area;
- 2) The factors hindering the use of ICT among secondary school teachers in the local government area;
- 3) Whether factors hindering the use of ICT varied among public and private secondary school students; and
- 4) Whether the factors also varied among teachers of public and private secondary schools in the local government area.

Research Questions

The following research questions were raised and answered in the study:

- 1) What are the factors hindering the use of ICT among secondary school students in Ilorin East Local Government Area?
- 2) What are factors hindering the use of ICT among secondary school teachers in the local government area?
- 3) Are the factors hindering the use of ICT vary among public and private secondary school students?
- 4) Are the factors hindering the use of ICT vary among teachers of public and private secondary schools?

Research Hypotheses

The following two null hypotheses were raised and tested in the study:

- H_{01} : There is no significant difference in the expressed factors hindering the use of ICT among public and private secondary school teachers in Ilorin East Local Government Area.
- H_{02} : There is no significant difference in the expressed factors hindering the use of ICT among public and private secondary school students in Ilorin East Local Government Area.

Methodology

The study was the descriptive research of the survey type; a descriptive research involves the collection of data from subjects on a particular phenomenon to describe the phenomenon the way it is. The population for this study consisted of secondary school teachers and students in the public and private secondary schools located in Ilorin East Local Government Area of Kwara State. From the population, random sampling technique was used to sample 240 teachers and 300 students from randomly selected 4 public and 4 private secondary schools within the local government. The sample consists of 120 teachers and 150 students from private secondary schools and another 120 teachers and 150 students from public secondary schools. In all, a total of 540 respondents were involved in the study.

The instrument used for the study was a researcher-made questionnaire titled ICT Problems Questionnaire (ICTPQ). The questionnaire was structured to elicit data on factors that hinder availability, adequacy and use of ICT among staff and students of selected secondary schools. The instrument has two sections: Section 'A' elicited respondents' biographical data such as school type and Section 'B' which has 20 items eliciting respondents' expressed factors hindering their use of ICT in the three areas indicated within. Each of the items has response options ranging from Applicable (A), Sometimes Applicable (SA), Hardly Applicable (HA) and Not Applicable (NA). The instrument was validated using face and content validity approaches. This was achieved by giving the instrument to two Educational Technology lecturers in the Department of Science Education, University of Ilorin. A reliability co-efficient of 0.67 was derived for the instrument using test-re-test approach. Data were analysed using percentages and t-test statistics.

Data Analysis and Results

The first part of this analysis presents the answers to the raised research questions using percentages.

Table 1: Factors Hindering the Use of ICT among Teachers and Students of Public Secondary Schools.

No	Factors	Students		Teachers		Total	
		n	%	n	%	n	%
1	Inadequacy of ICT devices	54	36	52	43.33	106	39.33
2	Poor knowledge of ICT	23	15.33	11	9.16	34	12.59
3	Poor maintenance policy	43	28.66	51	42.5	94	34.81
4	Inadequate ICT teachers	62	41.33	49	40.83	111	41.11
5	Strict school ICT policies	23	15.33	36	30	59	19.62
6	Poor ICT aid infrastructures	56	37.33	50	41.66	106	39.25

As shown in table 1, out of the 270 sampled respondents from public secondary schools, 106 (39.25%) identified inadequacy of ICT device as one of the factors hindering use of ICT in their school. On the other hand, 34 (12.59%) identified the problem to be that of poor knowledge of ICT among teachers and students, 94 (34.81%) said the problem was poor maintenance policy for ICT and 111 (41.11%) said the problem was inadequate ICT teachers in their schools. While 53 (19.62%) identified the problem to be that of strict school policies on ICT use, 106 (39.25%) identified the problem to be poor ICT aid infrastructures such as electricity.

Table 2: Factor Hindering Use of ICT among Teachers and Students of Private Secondary Schools

No	Factors	Students		Teachers		Total	
		n	%	n	%	n	%
1	Inadequacy of ICT devices	22	14.66	38	31.66	60	22.33
2	Poor knowledge of ICT	12	8	24	20	32	11.85
3	Poor maintenance policy	32	21.33	51	42.5	83	30.94
4	Inadequate ICT teachers	36	24	12	10	36	13.33
5	Strict school ICT policies	4	2.66	17	14.16	21	7.77
6	Poor ICT aid infrastructures	113	75.33	68	56.66	181	67.93

Data in table 2 indicated that poor ICT aid infrastructure was the major hindrance to the use of ICT in private secondary schools in Ilorin East. This assertion was supported by 181 (67.03%) of the sampled teachers and students of the schools. Also, while only 21 (7.77%) identified the problem to be that of strict school ICT policies, 83 (30.74%) said the problem was poor maintenance policy for ICT in the schools.

Hypotheses Testing

The two hypotheses raised were tested using t-test statistic and presented as follows:

H_{01} : There is no significant difference in the expressed factors hindering the use of ICT among public and private secondary school teachers in Ilorin East Local Government Area.

Table 3: T-Test Analysis of ICT Use Hindrances

Teachers	n	$\bar{X}$	Sd	df	t-cal	t-crit
Private	120	64.2	16.66	238	2.1	1.96
Public	120	58.3	12.33			

As shown in table 3, the t-test calculated value of 2.1 is higher than the t-test table value of 1.96. Therefore, hypothesis 1 was not accepted and it was concluded that significant difference existed in what teachers of public and private secondary schools identified as problems encountered in their use of ICT devices in schools.

H_{02} : There is no significant difference in the expressed factors hindering the use of ICT among public and private secondary school students in Ilorin East Local Government Area.

Table 4: T-Test Analysis of ICT Use Hindrance among Private and Public School Students

Teachers	n	$\bar{X}$	Sd	df	t-cal	t-crit
Private	150	52.8	14.11	298	2.32	1.96
Public	150	56.6	12.62			

Also, in table 4, the t-test calculated value of 2.32 is higher than the t-test table value of 1.96. Therefore, hypothesis 2 was not accepted and it was concluded that significant difference existed in what students of public and private secondary schools identified as problems encountered in their use of ICT devices in schools.

Summary of Findings

The following can be summarised as major findings of the study:

- Inadequate ICT facilities were reported as a major problem in public secondary schools;
- Poor state/maintenance of ICT aids infrastructures; and
- Low knowledge of ICT was among problems identified as a hindrance to using ICT among public and private secondary school students in Ilorin East Local Government Area of Kwara State. These identified problems were, however, found to vary across public and private schools in the area.

Discussion of the Findings

Information and Communication Technology (ICT) devices aid learning and teaching in schools. Across the world, ICT tools have been identified as indispensable gadgets that can ensure adequate acquisition of knowledge and skills for national development. Thus, in line with this awareness, nations are charged to come up with policies and practices that will aid teaching and learning of ICT in schools of all levels.

Unfortunately though, a lot of problems are still encountered in the area of availability, accessibility, utilisation and knowledge of ICT in schools, especially in developing countries. As revealed in this study, teachers and students of secondary schools in Ilorin East identified some problems that hinder their adequate use of the devices. For example, sampled public teachers and students in this study identified the main problem they encountered in their use of ICT in school as inadequate ICT devices and poor state of infrastructures like electricity that would have aided their use of ICT. On the other hand, 34.81% of the public school samples also said the few devices they have are not properly maintained. Electricity is very important in development. It is one basic need for ICT use; this has been confirmed by Delta (2000) in a similar study conducted in Liberia where he found out that ICT use became difficult in some secondary schools in the country because of poor electricity supply.

It was discovered that strict rules and regulations were not a major threat to utilising ICT in the schools as only 53 (19.62%) of the sample identified the problem among the sampled public school teachers and students. In fact, only 21 (7.77%)

of sampled respondents from private schools also identified this problem as a major hindrance.

This study, however, revealed that significant differences existed in what public and private secondary schools teachers and students identified as problem to their ICT use. The implication of this is that what will be stated as problems of ICT in the nations secondary schools will depend on whether the respondents is in public or in private school. This assertion is in line with what Pelemo-Olorunbe (2010) expressed when she said ICT advance differently in public and private schools.

Recommendations

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

- 1) Both the state and local government authorities should make concerted effort towards the provision of funds for the supply or procurement of ICT tools or devices such as laptops, internet facilities, air conditioner and television for use in their schools;
- 2) Government and private schools should find a lasting solution to the problem of inadequate electricity supply to schools and proper maintenance of ICT tools in their schools; and
- 3) Periodic workshops, seminars, symposia and training should be organised in schools to increase the awareness and knowledge required of students and teachers in the use of ICT to boost teaching and learning activities.

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