

IMPACT OF COMPUTER IN PUBLIC SECONDARY SCHOOLS IN ILORIN METROPOLIS, KWARA STATE

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FEBURARY, 2017

ABSTRACT

This paper focuses on the impact of computer in public secondary schools in Ilorin metropolis, Kwara State. The impact of computer and how it is expected to exposed students and teachers to the world of knowledge at this jet age. It gives brief history of computer education in Kwara state. The objective of this study is to find out the contribution of information and communication technology and computers in public secondary schools in Ilorin metropolis, Kwara State. Simple random sampling technics was used to select ten (10) of forty (40) public secondary schools offering computer education. Similarly, the purposive sampling technics was used in selecting eight (8) students and two (2) teachers from each of the ten (10) selected schools. This gave a total of One Hundred (100) respondents used for the study.

A self -structured questionnaire titled impact of computer on public secondary education questionnaire (IOCOPSSEQ) was used. The finding of this studies indicate the contribution of computer teaching across public secondary schools in Ilorin metropolis and also while knowledge of computer application often contributes to student learning.

Keywords: Computer, Information and Communication Technology, Parent Teachers' Association.

Introduction

Education as a concept has been widely accepted not just as a means of social change but a means through which cherished values of a society can be transmitted from one generation to another. Fafunfwa (1974) defines education as, what each generation gives to its younger ones which makes them to develop, abilities, skills and other behaviours which are of positive values to the society in which they live. Amaele (2003) also defines it as, the development of human beings in the cognitive, affective, psychomotor and psycho-productive domains. While the cognitive aspect refers to intellectual development and the knowledge of subject matter, affective domain refers to the development of desirable behaviours and psycho-motor and psycho-productive domains refers to skill acquisition and its application for purposeful activities.

Nigeria like other African countries had its own system of education before the introduction of Islamic and western education. According to Jimoh (2004), there are three

forms of education: informal, non-formal and formal education. Informal education refers to education unconsciously learnt either from parents, teachers, peer groups, markets, churches, mosques, objects or elders in the society while non-formal refers to education received outside the classroom usually trades or skill biased.

Cohen (2006) had emphasized that, developing countries require not just any educational system but type of education that,” enable (s) learners to dramatically surpass the full range of limitations imposed by the circumstances of their birth thus, and disrupt the cycle of poverty.” This means that, for the children that will perform this wonder, he posited, the child:

“Will need instrumental skills of reading, writing and basic Computation as well as content – driven knowledge in the Natural sciences, social studies, health and nutrition as well as Focus on values, processes and attitudes.” (Cohen,2006).

Introduction of Computer into Nigeria Education System

Right from the era of industrial revolution, there has been tremendous increase in technological innovations. By the 1980s electronic computer system was introduced into education systems in Nigeria. This new education system was first introduced at the tertiary levels: Universities, Polytechnics and Colleges of Education. It later permeated into secondary and primary schools in Nigeria. Zakawa (2013) posited that, computer technology in schools has one of the most far reaching and fast growing development in education. Ene (2006) stressed that, computer has brought into lime –light, the indispensable roles of computer in the area of information technology and teaching.

Objectives of Computer Education

The following general objectives’.

- i. To bring about a computer literacy in each state in Nigeria
- ii. To develop the use of computer as teacher tools in all subject area and to familiarize student with the use of computer technology.
- iii. To enable the present generation of school children at the secondary school level appreciate the potentials of the computer and be able to utilize the computer in various aspect of life and later occupation; and
- iv. To expose the teachers and the students to the latest scientific knowledge and skills

Computer Education in Kwara State

In 1988 the State Ministry of Education organized workshop and seminar for Directors and Assistant Directors of Ministry of Education, Teaching Service Commission, the Primary Education Board and other stakeholders who went through similar capacity building included: Principals, selected teachers and other personnel that will assist in ensuring the implementation of the policy. In the spirit of Public-Private Partnership, the Federal Ministry of Education in conjunction with MTN Multi-Choice and state government started equipping the secondary schools with computers since the 1990s. The state government was required to build or provide the computer centres while the other stakeholders provide and install the equipment as well as the training of personnel. The pilot secondary schools used for the project in Kwara State include: Queen Elizabeth secondary school, Ilorin; Sheikh Abdulkadir College Ilorin, Okelele secondary school, Ilorin and Offa grammar school, Offa.

KWARA		
S/N	NAME OF SCHOOLS	ADDRESS
1	GOVERNMENT SECONDARY SCHOOL OMU-ARAN	OMU-ARAN, KWARA
2	PATIGI SECONDARY SCHOOL PATIGI	PATIGI KWARA
3	GOVERNMENT SECONDARY SCHOOL ILORIN	GOVERNMENT SECONDARY SCHOOL ILORIN
4	MOUNT CAMEL COLLEGE OLOJE	OLOJE, ILORIN KWARA
5	BAPTIST GRAMMER SCHOOL OKUTA	OKUTA KWARA
6	OFFA GRAMMER SCHOOL	OFFA KWARA
7	OKE-ODE GRAMMER SCHOOL (UNITY)	OKE-ODE KWARA
8	ANSARUL ISLAM GRAMMER SCHOOL ORO IREBODUN	IREBODUN KWARA
9	LAFIAGI SECONDARY SCHOOL	LAFIAGI, KWARA
10	IPEE BAPTIST GRAMMER SCHOOL IPEE	IPEE, KWARA
11	SHIEK ABDULKADIR COLLEGE, ILORIN	ILORIN KWARA
12	ABEKU COMMUNITY SECONDARY SCHOOL IFELODUN	IFELODUN ILORIN
13	GOVERNMENT UNITY SECONDARY SCHOOL KAIMA	KAIMA, KWARA
14	GOVERNMENT SECONDARY SCHOOL YASHIKIRA	YASHIKIRA, KWARA
15	UMCA COMPRESHIVE HIGH SCHOOL JEEBA	JEEBA, KWARA
16	OYELAGBOWO GRAMMER SCHOOL IIALA NEAR OMUPO	IIALA, KWARA
17	BARAKAT COMMUNITY SECONDARY SCHOOL. ILORIN	ILORIN, KWARA

18	COMMUNITY SECONDARY GANMO	GANMO, KWARA
19	OMUPO MUSLIM COLLEGE OMUPO	OMUPO KWARA
20	OYUN BAPTIST HIGH SCHOOL IJAGBO	IJAGBO KWARA
21	ANSAR-UD- DEEN ISLAMIC HIGH SCHOOL IPEE	IPEE –OYUN, KWARA
22	ENRIN-ILE- SECONDARY SCHOOL	ENRIN- ILE KWARA
23	GOVERNMENT DAY SECONDARY KARUMO	ILORIN. KWARA
24	OMUPO GRAMMER SCHOOL OMPUPO	IREPODUN, KWARA
25	ESIE-ILUDUN GRAMMER SCHOOL	IREPODUN, KWARA
26	MODEL SECODARY SCHOOL (COED) ORO	IREPODUN, KWARA
27	ANSARU ISLAM SECONDARY SCHOOL ILORIN	ILORIN, KWARA
28	IGOSUN HIGH SCHOOL IGOSUN	IGOSUN, KWARA
29	BABOKO SECONDARY SCHOOL	ILORIN, KWARA
30	OKELELE SECONDARY SCHOOL	ILORIN KWARA
31	GOVERNMENT SECONDARY SCHOOL GWANARA	BARUTEN, KWARA
32	GOVERNMENT SECONDARY SCHOOL KUGIJI, KAIMA	KAIMA, KWARA
33	GOVERNMENT DAY SECONDARY SCHOOL AMULE	ILORIN KWARA
34	GOVERNMENT GIRLS DAY SECONDARY SCHOOL PAKATA	ILORIN, KWARA
35	ANGLICAN COLLEGE OF COMMUNITY ERCE OFFA	OFFA, KWARA
36	GOVERNMENT TECHNICAL COLLEGE ERIN ILE	OYUN, KWARA
37	GOVERNMENT DAY SECONDARY SCHOOL ILORIN	FATE ILORIN, KWARA
38	UNITED SECONDARY SCHOOL ILORIN	ILORIN, KWARA STATE
39	GOVERNMENT DAY SECONDARY SCHOOL ADETA	ILORIN, KWARA STATE
40	GOVERNMENT GIRLS DAY SECONDARY SCH. PAKATA	ILORIN, KWARA STATE

Source: Ministry of Education and Human Capital Development, Ilorin.

The Special Duties department of the Presidency through the Nigeria Communication Commission (NCC) and Multi- Choice jointly make available at least 20 set of computers for between eight (8) and ten (10) secondary schools in the state annually. About Thirty –seven (37) Senior Secondary Schools have been fully equipped. Many other Senior Secondary Schools in the state have also established computer centres on their own either with the support of the Parent Teachers Association (PTA) or philanthropists.

Statement of Problem

Consequently, the researcher has decided to examine the impact of Computer education on the achievement of the goals of secondary education in Ilorin Metropolis, Kwara State.

Research Questions

In view of the background to this study and the statement of the Problem, the following Research Questions were raised to guide the study.

- i. What is the level of provision of computer physical infrastructure in the learning of computer applications by students in Public secondary schools in Ilorin Metropolis, Kwara State.
- ii. What is the level of contribution of computer to teaching in Public secondary schools in Ilorin Metropolis, Kwara State?
- iii. How often is student learning attributed to the knowledge of computer application in Ilorin Metropolis?

Purpose and Significance of the Study

The purpose of the study is to find out the contribution of information and communication technology to secondary school education in Ilorin Metropolis Kwara State. The result of the study is significant because it may reveal how much computer education introduced into the secondary school curriculum has been effective in the teaching learning process. This may likely determine additional efforts required to achieve the set target of the scheme.

Literature Review

According to Adomi, E.E & Kpagbani (2010) claimed that the adoption and use of ICTs in schools have a positive impact on teaching, learning, and research. Yet despite the roles ICTs can play in education, secondary schools in Nigeria are yet to extensively adopt them for teaching and learning. Efforts geared towards integration of ICTs into the secondary school system have not had much impact.

According to the finding of Yusuf, M.O & Afolabi, A.O, (2010) their research work was aimed on finding the effects of Computer Assisted Instruction (CAI) on Secondary School Students' Performance in Biology in Oyo state, Nigeria. The result of the authors 'findings of the study showed that the performance of students exposed to Computer Assisted Instruction (CAI) either individually or cooperatively were better than their counterparts exposed to the conventional classroom instruction.

According to Odera F.Y,(2012) focused on the factors militating against computer education in Kenyan public secondary schools on the Implementation of Computer Technology into Kenyan Secondary School Classrooms. The author identified some factors militating against computer education in public secondary schools which included lack of adequate training in computer skills, lack of enough time for teachers and students to use computers effectively, lack of confidence and skills with computers; difficulties of access to the computers and software; lack of enough computers for students to use effectively and the issue of computer support materials, and technical assistance.

Bada, Adewole and Olalekan (2009) emphasized that, “computer education can turn Nigerian education system towards the positive direction. As a vocation it may provide jobs for millions of Nigeria’s unemployed youths as well aid students in their studies, thus serving dual purposes”.

Goals of Secondary Education

The broad goals of secondary education according to the revised National Policy on Education (2004) are as follows:

- Useful living within the society; and Preparation for Higher Education. In specific terms, Secondary education shall: -
- Provide all primary school leavers with the opportunity for education of a higher level, irrespective of sex, social status
- Offer diversified curriculum to cater for the differences in talents, opportunities and future roles.
- Develop and promote Nigeria languages, art and culture in the context of world’s cultural heritage.
- Inspire students with a desire for self-improvement and achievement of excellence.
- Raise a generation of people who can think of others, respect their views and feelings of others, respect the dignity of labor, appreciate those values specified under our broad nation goals and as good citizens.

Computer as an Aid to Students

Information and communication technology according to Oloruntegbe (2006) can be viewed from four perspectives: “an object” “an assisting tool”, “as a medium of teaching and learning” and “as a tool for organization and management”. As an object, what is learnt is dependent on the type of education and the level of learners. Objects include: computer and

accessories, internet access, satellite, on –line self-learning packages etc. On the other hand, ICT can be regarded as a tool which can be need to support teaching in content and methodology as well as to conduct research, collect data and communicate. Teachers can use it to teach students through drills, simulations and educational networks while it can be useful in the management of the school particularly, keeping of school records like: Time tabling, attendance register, fees collection, examination registration and Examination results.

Torruam and Abur (2013) listed computer assisted instruction aids which teachers can use in teaching and learning include: television, satellite receivers, radio, recorder, cameras, Video/picture/CCTV, Projector/Beams, Video cameras, NP3 -4 players, Floppy diskettes used in preparing lesson notes, CD-ROMs and Flash drives that can be played, copy and transfer materials from one system to another. Illaonusi and Osagwu (2009) posited that, some problems are facing the use of these ICT facilities in teaching-learning situation. Include: inadequate teachers' professional knowledge and technical know-how, lack of computers that cans go round the large number of students' inadequate power supply.

The literature review had indicated clearly that, information and communication Technology can enhance the student's capacity and facilitate the achievement of goals of the educational system.

Methodology

The descriptive survey self-designed questionnaires were used in carrying out this study because of it characteristics in using opinion of sampled target population. The population of this study comprise of public secondary schools in Ilorin metropolis Kwara State. A simple random sampling technique was used to select ten (10) of forty (40) public secondary schools offering computer education. Similarly, the purposive sampling techniques was used in selecting eight (8) students and two (2) teachers from each of the ten (10) selected schools. This gave a total of One Hundred (100) respondents used for the study.

A self-structured questionnaire titled impact of computer on public secondary education questionnaire (IOCOPSSEQ) was used. The validation and reliability test were carried out and the questionnaire has a correlation co-efficient of 0.72 which make it very reliable for the study. Data collected was analyzed with descriptive statistics of mean (M) and standard deviation (SD).

Results

Research Question 1: What is the level of physical infrastructure in the learning of computer application by student's in public secondary schools in Ilorin metropolis, Kwara State?

Table 1: Level of Physical Infrastructure in the Learning of Computer Application

S/N	Items	N	X	SD	Decision
1	The School has a computer laboratory	67	3.28	.57	High
2	The computer laboratory has at least 10 No complete functional computer sets	67	2.56	.71	Average
3	The school library has relevant textbook on computers	67	2.50	.66	Average
4	The school computer laboratory is connected to the internet which enables communication links between teachers and student	67	1.41	.54	Low
5	The computer center has a stand by generator	67	2.82	1.07	High
6	The school computer center is provided with operation fund regularly for repairs, consumables and fueling	67	2.57	.42	Average

Source: Fieldwork, 2016

Key

\bar{X}

1.00-1.59 Low

1.60-2.59 Average

2.60-5.00 High

A study of Table 1 shows that, the level of physical facilities in the learning of computer application by students is average across the public secondary schools in Ilorin metropolis, Kwara State.

Research Question 2: What is the level of contribution of computer to teaching in public secondary schools in Ilorin metropolis, Kwara State?

Table 2: Level of Contribution of Computer to Teaching

S/N	Items	N	X	SD	Decision
1	I am computer literate	67	3.40	.83	High
2	The school has one qualified permanent computer teacher at least	67	3.62	.73	High
3	The computer teacher gives students opportunities for practical's exercise	67	2.53	.49	Average
4	The teacher uses computer in teaching various subjects	67	1.59	.63	Low
5	Computer teacher is receiving the expected support of the school management	67	3.37	.43	High

6	The teacher use computer to produce materials needed for their teaching purpose	67	3.56	.55	High
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Source: Fieldwork, 2016

Key X

1.00-1.59 Low

1.60-2.59 Average

2.60-5.00 High

Statistics in Table 2 revealed that, the level of contribution of computer to teaching is high across the public secondary schools in Ilorin metropolis, Kwara State.

Research Question 3: How often can students' learning be attributed to the knowledge of computer application in Ilorin metropolis, Kwara State?

Table 3: Student Learning due to the Knowledge of Computer Application

S/N	Items	N	\bar{X}	SD	Decision
1	The use of computer by student is restricted to science students only	67	1.52	.49	Not Often
2	Computer education is taught as a subject in this school	67	3.47	.63	Very Often
3	The possession of computer set by some families generally facilities the performance of such students in computer application	67	3.40	.49	Very Often
4	Computer is used in processing examination and result in my secondary school	67	3.59	.49	Very Often
5	The use of computer by students improves their learning ability	67	3.35	.48	Very Often
6	Student are taught useful aspects like power point, excel, graphic design and the like of internet and not just the 'word' alone	67	2.52	.60	Often

Source: Fieldwork, 2016

Key X

1.00-1.59 Not Often

1.60-2.59 Often

2.60-5.00 Very Often

Table 4: Numbers of Students / Numbers of Computers Ratio

S/N	SCHOOL	RATIO	NUMBERS OF STUDENT	NO OF COMPUTERS
1	G.G.D.S.S PAKATA	1:51	1,272	25
2	G.D.S.S KARUMA	1:10	714	70
3	CAIS ILORIN	1:43	639	15

4.	QUEEN ELIZABETH SCHOOL	1:20	606	30
5.	ANSARUL ISLAM SECONDARY SCHOOL	1:8	958	115
6	GOVERNMENT SECONDARY SCHOOL	1:6	323	55
7	BARAKAT COMMUNITY SEC, SCHOOL	1:41	821	20
8	G.D.S.S ADETA	1:86	1291	15
9	SEHEIK ABDUKADIR COLLEGE	1:14	557	40
10	OKELELE SECONDAY, SCHOOL	1:8	363	46

Table 4 shows that; the number of computers are inadequate for the students. The schools where we have the ratio of 1 computer to between 6 and 10 students are four (4). ; G.S.S Ilorin with ratio 1 : 6, Okelele Secondary, School, and Ansarul Islam Secondary, School Ogidi with the ratio of about 1 : 8 students at G.D.S.S Karuma with ratio of 1 : 10. Furthermore, SeheikAbdukadir College has a ratio of 1: 14 and Queen Elizabeth School has the ratio 1 : 20. The schools with the high ratio includes Barakat Community Secondary School, with ratio of 1: 41, College of Arabic and Islamic Studies, Ilorin with the ratio of 1 : 43 and Government Girls Day Secondary Schools Pakata has ratio of 1:51. Finally G.D.S.S Adeta was the highest ratio of 1: 86.

Table 5: Numbers of Computer teachers / Numbers of Student Ratio

S/N	SCHOOL	RATIO	NUMBERS OF COMPUTER TEACHERS	NOOF STUDENTS
1	G.G.D.S.S PAKATA	1:424	3	1,272
2	G.D.S.S KARUMA	1:714	1	714
3	CAIS ILORIN	1:320	2	639
4.	QUEEN ELIZABETH SCHOOL	1:303	2	606
5.	ANSARUL ISLAM SECONDARY SCHOOL	1:319	3	95
6	GOVERNMENT SECONDARY SCHOOL	1:162	2	323
7	BARAKAT COMMUNITY SEC, SCHOOL	1:411	2	821
8	G.D.S.S ADETA	1:430	3	1291
9	SEHEIK ABDUKADIR COLLEGE	1:279	2	557
10	OKELELE SECONDAY, SCHOOL	1:182	2	363

Table 5 indicates that, the ratio of computer teachers to students .in all the schools sampled is very high. G.S.S ILORIN has the ratio 1: 162, while Okelele Sec., Sch. has the ratio of 1: 182. The school with the ratio above 200 are sheik Abdulkadir college with the ratio of 2: 279, QES with the ratio of 1: 303, Ansarulislamogidi with ratio of 1 :319 and CAIS Ilorin with ratio of 1: 320. Does with the ratio of over 400 are Barakat Community Secondary School with 1: 411, G.D.S.S Adeta 1 : 430 and G.G.D.S.S Pakata 1 : 424. The schools with the highest

computer teacher's ratio/computer student's ratio is G.D.S.S Karuma with the ration of 1: 714. With this situation as presented by the ratio between computer teachers & students, the numbers of computers and students which is relatively high, computer teaching in public secondary schools of Ilorin metropolis may not be difficult because of the inadequacies involved.

An examination of Table 3 revealed that, knowledge of the computer applications very often contributes to student's learning.

Discussion of Findings

The finding from Research Question 1 was that, physical infrastructure provided for Information and Communication Technology in secondary schools in Ilorin Metropolis is average, which is inadequate while the finding from Research Question 2 which revealed that, the level of contribution of computer to teaching in public secondary schools in Ilorin Metropolis, Kwara state was high. Furthermore, the finding from Research Question 3 was that, the knowledge of computer application often contributes to student learning.

By this implication, the study has established that, physical facilities made available for computer education is inadequate. In many schools, you may find out that, what they call a Computer centre is a classroom just adopted for that purpose without the necessary specification of a well-planned Computer centre. This does not augur well for proper ICT education. The contribution of computer to teaching in secondary schools of Ilorin Metropolis was average. One may therefore infer that; teachers are apparently not using ICT in their teaching to the level one would have expected. This might be due to some of the problems highlighted by Illaonusi and Osagwu (2009) which included: inadequate teachers' professional knowledge and technical know-how, lack of computers, inadequate power supply and environmental factors and lack of operation fund to run computer education in the school.

On the other hand, the finding from Research Question 3 seems to indicate that, knowledge of computer applications often aids students' learning. The finding also corroborates the study by Abimbade (1997) who found out that, computer is a very useful and versatile tool in education. As an instructional tool, it permits self-pacing by learner, provide remedial instruction for those who need it, and support learner's exploration of all aspects of knowledge that is of interest.

Torryanm and Abur (2013) stipulated that, information communication technology plays a vital role in supporting powerful, efficient management and administration in the

education sector: technology can be used for student administration including the management of students' records.

Conclusion

The use of computer can provide a number of benefits to the imparting and management of secondary school education in Nigeria in general and Ilorin Metropolis Kwara State in particular. In computer science, decision making for the present and future is very crucial. For effective decisions, data and information must be accurate, timely and up to-date. The computer has capabilities for information gathering, storage, processing, retrievals, and communication. These capabilities are developed into various systems such as decision support system for effective planning and administration of education. All hands must be seen to be on deck towards computerization of schools towards globalization of education and networked computer science. This networked computer science would only be practicable with the provision of necessary computer infrastructure, computer training, appropriate database, Internet connectivity and well –trained personnel.

Recommendations

From the findings and conclusions of this study, the following recommendations are made:

There is the urgent need for government at Federal, State and Local levels to organize trainings, workshops, seminars and conferences for teachers of public secondary schools on computer applications. This is to equip teachers with modern computer applications.

The Federal Government should continue with her plans of installing computers in all secondary schools across the nation. This is necessary because computers are cost intensive and many states of the federation may not be capable of providing computers for their secondary schools, yet Nigeria needs to join the rest of the world on ICT and transform Nigeria's economy.

There is need for computer teachers to be encouraged to study more. This can be done through provision of adequate infrastructural materials, in-service training and scholarship grants for academic pursuit.

Kwara State government as part of its own share-prosperity programme should focus more on the ICT policy in public senior secondary schools particularly now that SUBEB has focused on computerizing public primary and junior secondary schools so that graduates of

JSS will have the opportunity of progressing in computer education when they advance into senior secondary schools (SSS).

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