AN ASSESSMENT OF TEACHERS USE OF COMPUTER FOR INSTRUCTIONAL DELIVERY IN PUBLIC SECONDARY SCHOOLS IN LAGOS STATE, NIGERIA

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ABSTRACT

This study adopted the survey design to assess teachers' use of computer for instructional delivery in public secondary schools in Lagos state. Purposive sampling technique was used to draw the sample for the study. Structured questionnaire was used to elicit information from the respondents. Data were analyzed using frequency count and simple percentage. Findings revealed that availability of computer and internet facilities, competency level of teachers on computer utilization for instruction was very low and inadequate to cope with the recent trend, while teachers has a very good attitude to computer and internet utilization. It is therefore recommended that government and educational managers should invest more on human resource development, provision of computer system and other resources that cannot be improvised locally.

Keywords: *Computer, teacher, teacher-attitude, instruction, proficiency, global education*

INTRODUCTION

The teacher is the pivot in the entire educational programme to the extent that his training marks or mars the end product of his job as a teacher. In order to reposition the Nigerian teacher so that he can face the global competition and promote the quality of education, there is need for appropriately planned and deployed teachers' use of computer for instructional purposes in schools.Without similar prioritization and attention as done in the developed world, our educational institutions will be totally incapacitated and unable to compete favorably in the global education market. According to Olarinoye (1999), a qualitative teacher is a personification of reality for the child. This role, however, demands a lot from the teacher, he has to be honest, accurate and sincere in what he teaches and how he teaches. He commands the respect of the students by virtue of what he himself is. To enable him accomplish the task ahead of him, he must be innovative and capable of imparting knowledge of his subject matter to students without much difficulty.

However, the quality of teacher depends on the quality of the teachers' educators, which in turn depends on their involvement in relevant research endeavours. The richer the teachers are in their innovative ideas, the more competent they would certainly be in preparing progress of all. Oconto (1999), Obdurate (2000) and Edward (2005) also see education as a process of developing individuals intellectually, physically and socially so that he can be useful member of his family

and the society at large. Amoo, Ayodele and Egbowon (2000) define teaching as "guiding the students to acquire basic knowledge, attitude and skills (through the use of various media and methods) that can be effectively applied to solve relevant problems and improve the environment. According to them, effective teaching requires a careful and selective application of learning theories, materials to meet the various conditions of a given learning situation.

Goodland, (2000) who spent a large portion of his life investigating educational change once says, “for schools to be significantly better they will have to be substantially different”. The most radical change that can be made is delivered to students. Nwaboku (2002) notes that the present state (Teacher Chalk-Board Method) is highly pathetic bearing in mind the obvious capacity of the computer such that it ensures creative and independent learning, immediate feedback and the provision of unparallel interaction. The various technologies such as the slide projector overhead projectors etc have been promoted over the last 100 years to revolutionize education. Although, technological advances might revolutionize the tools that are available with which to teach, none of these technologies (earlier mentioned) have yet revolutionized the dialogue and thinking that are necessary in teaching and learning. In the views of Godwin (2004) if education is to achieve its goal and play its role effectively, the teacher without any doubt is a key-factor in the translation and implementation of educational programmes. There are currently many ongoing reforms and innovations in the Nigerian education system with newer knowledge and technologies, the essence of all these is to make positive changes in our educational development.

Computer as a Unification of Instruction: Abimbola (1988) defines computer as "an electronic device, which is manufactured to accept an ordered sequence of instruction given to it in an appropriate language and to carry out these instructions with great speed and accuracy. Sampath *et al* (1998) notes that the computer is a power driven machine equipped with keyboards, electronic circuit, and storage compartments and recording devices for high-speed performance of mathematics operation. The traditional teaching problems lies in the management of large classes, comprising many individual differences and the lack of any workable teaching method that specifically individualized instructions to meet all needs, even if instructional methods are adopted to suit smaller groups of students with smaller ability profiles, the teacher is humanly unable to actively monitor the progress being made by each student and to provide immediate feed back to teaching during the process of learning. The one-to-one correspondence provides between the computer and the student on computer-assisted instruction can overcome some of the limitations of instructional materials (Amoo, Ayodele and Egbonwon, 2000). The use of computer in teaching and learning could embody the best available professional judgment regarding diagnosis and the prescription of the subject matter areas. Thus, providing the teacher with a highly competent assistant to make routine instructional decisions

Uses of Computer in Teaching and Learning

Abimbola (1998), Sampath (1992), Adewoyin (1999) and Abdullahi (2004) have identified four main uses of which computer can be put in the classroom situation. These are: (i) Computer Assisted Instruction (CAI), (ii) Computer Managed Instruction (CMF), (iii) Computer Based Instruction Stimulation (CBIS), and (iv) Problem Solving. Abimbola (1998), Goodland (2000) and Nwaboku (2002) have suggested different uses of computer as a powerful tool in teaching and learning to include:

i Computer is interactive unlike books, films, radio and television: users' response determines what happens next.

ii Computer is fun: human being loves to respond to challenges, loves to make thing happen.

iii Computer has indefinite patience for learners to learn: it does not care how slowly the learner responds.

iv Computer as an instructional material: it never put a learner down but positive reinforcement.

v Computer can be used for privacy: mistakes made and learner can be corrected.

vi Computer can be used in a variety of social situations, which includes classroom activities.

vii Computer can explain concept in a more interesting and understandable manner by means of animated material.

viii Computer has the ability to stimulate complex situations

ix Computer as multimedia in teaching and learning.

Nellie (2004) summarizes the production of Yoloye, (2005) and Denanu, (2006) in relation to the future trends of ICT and suggests a follow-up of new innovations of ICT trends, points to the fact that the educational system cannot shy away from the application of computer for instructional purposes in its entire ramification. In this era of ICT, moving education forward means that teachers will not be teaching information; they will be teaching students how to use information. The value of teaching resources depends to some extent on teacher's having pre-requisite skills that enable them to exploit resources to their full potential (Becker, 2000). There is therefore the need to carryout a research on the awareness and extent to which teachers make use of the computer, the perception and the preparedness in the utilization of computer as an instructional material.

The study examined teachers' use of computer and internet facilities for pedagogy of instruction at the secondary school level, specifically; the study took cognizance of the role of ICT resource support availability, competence level, teachers' attitude and the importance of use of computer for instructional purposes in schools. It is also of great concern for this study to address the above problems from the following viewpoints.

i Resources support accessible to school in the use of computer and Internet services for teaching and learning process.

ii Competency level of teachers on computer and Internet utilization for instructional purposes in schools.

iii Teachers' attitude towards utilizing computer and Internet facilities for instructional purposes.

iv Relevance of computer and Internet facilities for teaching and learning process.

The following research questions have been formulated to guide the study.

1) What resources supports are accessible to schools in the use of computers and Internet facilities for instructional purposes in schools?
2) What is the competency level of teachers in computer and Internet utilization for instructional purposes in schools?
3) What is the attitude of teachers towards utilizing computer and Internet facilities for teaching and learning process in schools?
4) What is the relevance of computer and Internet facilities when used as instructional material in schools?

The result of this study will be a significant addition to existing literature on enhancing teaching and learning in various subjects. The study will also have a lot of implications for the following people. The teacher, the school, Government and the students.

METHOD

The design adopted in the study is a survey research design to assess teachers' use of computer for teaching and learning purposes in Lagos State Public Secondary Schools. The target population consisted of all the six hundred and fourteen secondary schools teachers in the Lagos State public secondary schools i.e. three hundred and eleven junior secondary schools with three hundred and three senior secondary schools that cut across the six local educational district in the State. Purposive random sampling technique was used by the researcher in selecting the sample in Agboju Local Education District VI (LED) in all, a total of 120 respondents were sample at the rate of 20 respondents in each of the six(6) sampled schools within Agboju Distrct(VI).

Purposive random sampling technique was used by the researchers in selecting the secondary schools in Ojo Local Education District 1V (LED). 600 teachers from the six (6) selected secondary schools were involved in the study to ensure that all categories of teachers both male and female in the education district are presented and also to ensure an in-depth study of the scenario. The researcher adopted the use of structured questionnaire to obtain relevant information for the study. Four point Likert scale rating was used. The validation and reliability of the instrument was achieved by expert criticism and correction. Simple percentage and frequency count were used by the researchers to analyze the data gathered. This is so because the study is aimed at assessing the teacher's use of computer in teaching and learning in Lagos State Public Secondary Schools. The research questions were analyzed with data generated from subjects' responses to items 1-5 of the questionnaire item. The analyses are as presented on the tables.

RESULTS AND DISCUSSION

Table 1: Availability of Computers and Internet Facilities for Instructional Purposes

Variables	SA & A	%	SD & D	%	Total
My school has a well-equipped computer laboratory that is convenient for teaching and learning process	38	31.7	82	68.3	120
All these computers are connected to the internet with reliable and functional telecommunication line	45	37.5	75	62.5	120
I regularly use computer laboratory for information sourcing, learning, and teaching and to practice on my own	22	18.3	98	18.7	120
My school has computer technician (personnel) to handle the computer for instructional purposes	26	21.7	94	78.3	120
My school has a standby source of power supply in case of power failure	32	26.7	88	73.3	120
Total	163	27.2	437	72.8	600

Source: Survey, 2011.

Table 2: Competency level of teachers on computer utilization for instructional purposes

Variables	SA & A	%	SD & D	%	Total
I can print, insert, edit, and copy documents from hard disk to floppy disk and vice-versa	48	40	72	60	120
I can start up, shut down and operate a computer system using any application software.	58	48.3	62	51.6	120
I can browse the internet, use different search engines, open and create folders and files.	52	43.3	68	56.7	120
I can name and save a document using both save and save as command.	15	12.5	105	87.5	120
I can demonstrate these skills.	36	30	84	70	120
Total	209	34.8	391	65.2	600

Source: Survey, 2011.

Table 3: Teachers attitude towards utilizing computer and Internet facilities in schools

Variables	SA & A	%	SD & D	%	Total
Computer usage for instructional purposes should be restricted to students alone.	106	88.3	14	11.7	120
Workload of teachers will not allow them to integrate the technology into teaching and learning process.	112	93.3	08	6.7	120
Every teacher should be equipped with personal computer to support their teaching and research for purpose.	105	87.5	15	12.5	120
Seminar, workshops and training for teachers should be introduced to augment literacy level of computer usage for teachers.	108	90	12	10	120
High cost of purchase of computer and internet services is an impediment to teachers' usage.	110	92	10	9.6	120
Total	541	90.2	59	9.8	600

Source: Survey, 2011.

Table4: Relevance of computer for teaching and learning

Variables	SA & A	%	SD & D	%	TOTAL
Teaching with computer and internet resources make difficult concepts easier to learn by students.	109	90.8	11	9.2	120
Giving learners' assignments that encourage them to source for information on the net improve their skills and help them to cope with other students.	105	87.5	15	12.5	120
Learner's exposure to computer with internet services will improve their academic performance.	115	95.8	05	4.2	120
Learner's show more interest when taught with computerized based resources that facilitate meaningful learning.	111	92.5	09	7.5	120
Learner's exposure to internet provides them with relevant skills needed to source for latest and up to date information.	108	90	12	10	120
Total	548	91.3	52	8.6	600

Source: Survey, 2011.

The result of the findings, reveal that 27.2% of the respondents either agreed or strongly disagreed with available resource support accessible to school while a greater percentage of 72.8% lack important resource support in the use of computer and internet facilities. Based on the analysis above, it was concluded that since the percentage response of strongly agreed and agreed is less than 50%, we then accept that the level of resource support accessible to school is inadequate (table 1). Further findings revealed that 34.8% reacted positively while 62% reacted negatively. However, majority of the total respondent reacted negatively. Based on table 2 above, summatively therefore, teachers' competency level for computer process is very low and inadequate to cope with the recent trend (table 2). Based on the analysis on table 3, it was discovered that out of the total respondents sampled, 90.2% reacted positively to the research question, while a fewer percentage of 9.8% of the respondents hold a contrary opinions; this might be as a result of their exposure, environment, or their literacy level. Since the percentage, of disagreed response is far below 50%, that is, 9.8%, we then conclude that teacher attitude towards computer is very high, this might be as a result of awareness and environment (table 3). The result of the finding revealed that 91.3% reacted positively on the relevance of computer and internet resources while a negligible percentage of 8.6% of the respondents hold a contrary opinion. The result therefore reveals that computerized based instruction for teaching and learning process has a lot of positive implication (table 4).

CONCLUSION AND RECOMMENDATIONS

The use of computer to facilitate learning which is in vogue in the developed world is yet to make an appreciable impact in most developing countries like Nigeria. There is the acute need to avail teachers the opportunity of learning to use multimedia for instructional delivery: teacher in the 21st century classroom must be kept abreast of all electronic gadgets necessary for efficient classroom interaction. Through the findings of this study, teachers' competency skill, extent of use, attitude and accessibility of resource support available for school has been found to increase the possibility of using computer for instructional purposes in schools by identifying and alleviating teaching methodology. Also training and retraining of teachers should be carried out at regular intervals through seminars, workshops, conference. Based on the finding of the study. The study therefore recommends that government should pay considerable attention to man power development, adequate educational facilities, media resources and laboratory equipment with well-equipped classrooms should be provided. Teachers should be more committed towards imparting the necessary skill, knowledge and attitude.

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