

**ENHANCING THE ACQUISITION OF COMPUTER KNOWLEDGE IN NIGERIAN
EDUCATIONAL SYSTEM.**

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ABSTRACT:

This research addressed the factors challenging the acquisition of basic computer skills in Nigerian educational system. These factors include inadequate facilities, lack of trained personnel, time constraints, insufficient funds, and unstable power supply. The research was guided by four research questions which extracted the personal opinions of the respondents using a structured questionnaire. The data obtained helped hugely to get to the rudiment causes of non-implementation of computer skills in Nigerian educational system. Diverse attempts in tackling the outlined problems which affect the acquisition of computer skills in Nigeria educational system, and their possible solutions were made available. These include creating a platform with all the required facilities that will digitalize Nigerian education system. The results of the findings and possible recommendations were made available.

Keywords: computer education, computer literacy, teacher, facilitator, instruction.

INTRODUCTION

No nation moves forward in this 21st century without attributing her success to the advancement in computer technology. Computer skills are needed in the development and sustenance of any nation's educational system, including that of Nigeria. In recent times, computer knowledge has become very essential in the promotion of national development. As such, education as the key to national development needs to embrace advancements in computer technology. However, it is shocking that the

educational system in Nigeria is having a lot of challenges in embracing advancements in computer technology.

This anomaly has been attributed to some factors such as inadequate facilities, lack of trained personnel, insufficient funds, unsteady power supply, time constraints among others. It is obvious that the absence of teaching and learning facilities creates problems and confusion to the learner, instead of making positive changes. According to Mitro and Rana (2001), cited in Sugata and Ritu (2017), the acquisition of basic computing skills by any set of learners can be achieved through incidental learning provided the learners are given access to a suitable computing facility, with entertaining and motivating content, and some minimal (human) guidance. They called this Minimally Invasive Education.

Education plays an important role in enhancing social reformation process of individuals, groups and society at large. Also, education is seen as a process of eradicating anti-social factors and maintains gender equality rights as well as empowering men and women at equal status to ask for their various rights. Through constant practice, workshops and seminars, the teachers will be equipped with the relevant computer knowledge which is needed for effective teaching and learning of computer education. The acquisition of computer knowledge without the necessary hardware and software facilities is just like going to school without writing materials.

OBJECTIVES OF THE STUDY

The study sought to find out:

1. How inadequate facilities effect the acquisition of computer skills in Nigerian educational system.
2. How teachers' incompetency affect the acquisition of computer skills.
3. The type of teachers' training required to enhance their competency of computer literacy.
4. The maintenance requirements of hardware and software components.

SIGNIFICANCE OF THE STUDY

- The students will immensely benefit such that the actual practical implementation of computer will gainfully equip them with skills to adapt in any form of living
- The practical when done effectively, will improve the learning process and increase retention of the students.
- The teachers will be trained and regular refresher courses given to them to have confidence in themselves and impart the knowledge on others.
- The government having supported fully to achieve this, will ease out the issue of unemployment since the students will have skills on their graduation.

SCOPE OF THE STUDY

- This article is for the sensitization of the needs of enhancing computer knowledge in Nigeria educational system.
- The actual implementation process of such facilities may not be included in this article.

RESEARCH QUESTIONS

1. What is your level of agreement that inadequate facilities of computer affect the acquisition of computer skills in Nigerian educational system?
2. What is your level of agreement that teachers' incompetency affect the acquisition of computer skills in Nigerian educational system?
3. What types of teachers' trainings are required to enhance on their competency of computer literacy in Nigerian educational system?
4. What are the maintenance requirements of both the hardware components and software upgrading in Nigerian educational system?

REVIEW OF RELATED LITERATURE

ROLES OF COMPUTER IN EDUCATION

The major roles of computer in education are not limited to the following: the use of computer:

- As an instructional tool
- For educational research
- In achieving distance learning
- In online examination, monitoring and evaluation
- As a storage device for storing data and information.

Li Yimmei (2012) cited in Neetu, (2018), affirmed that computer can be used in education in three different ways such as a teacher, learner and an assistant. According to Kersh (1995) cited in Bada et al, (2009), the classroom teacher will never be replaced by programme of self-instruction, rather, he will be freed to guide the learning of his students in ways that only a human being can. For instance, when computer is used in education as an instructional tool, the role of teachers' shift from traditional test evaluators to facilitators and problem solvers. Accordingly, Vemula, (2013), asserted the two aims of teacher training as thus: teacher education in ICT and teacher education through ICT, and a paradigm shift through ICT in education in teacher education as teacher direction and decisions learner autonomy. Generally, the introduction of computer in education is intended to ensure that all scholars become computer literate. Computer literacy according to Bada et al (2009) means the ability to tell the computer what you want it to do and understand what the computer says. To be computer literate amounts to be able to read, write and speak the language of the computer, Ajibade, 2006 cited in Bada et al (2009). Computer education encapsulates computer literacy, computer assisted instruction and computer appreciation (Bada et al, 2009)

IMPORTANCE OF COMPUTER EDUCATION:

According to Ozodener (2005), education is a process of producing desired change in the behaviours of students through their own experiences. Computer education should be tailored towards reading the desired behaviours required by the students. It is important to note that computer education curriculum should be both operational and flexible. Similarly, Y.Bo (2011) in Neetu, (2018) averred that computer technology should be used to reform the teaching methods and curriculum program and JTFout maintained that the first computer was introduced into the field of education as students and teachers learning program. Thereafter, learning process was improved by software sophistication and instructional design, which is still in progress. Cox et al (1998) observed that teachers frequently lack knowledge and skills for effective stimulation of students' microcomputer activities, and thus, children failed to learn what they might learn with judicious teacher intervention. Also, teachers experience many practical problems when they start to use computers (Elder et al, 1997). Using computers is not limited to internet application, Darejan (2015) defined internet in three various ways:

- Internet is a way of strengthening communication between teachers and students
- Internet is a strong tool used for socialization
- Internet has become a virtual space where people socialize with their colleagues, friends and family members. The author went further to state that using computers and internet makes the learning process more interesting and diverse, and leads to increase in cognitive activity.

Sangra (2001) cited in Albert and Mercedes (2010) defined internet as a learning tool and categorized it into three:

- As a tool to develop training activities at school in the form of a complementary activity
- As a way to facilitate personal contact and therefore interaction among people

As a resource to widen access content and services

TEACHERS' IMPACT ON EDUCATION

In a formal education setting, there must be a teacher who plays many roles such as counsellor, evaluator, facilitator, and disciplinarian in reforming and imparting knowledge in the lives of the students, which in turn benefits the society. Also, a teacher should have an exceptional and creative

personality. This means that he/she should have the abilities to react to students' input and give feedback where it is deemed necessary. The teacher is a pioneer model in the creation of solutions for the diverse numerous issues which are existent in the society. A teacher should impart confidently in the children, knowing fully well that he/she needs to set a high standard for the younger generations, as a legacy of his/her work. A creative and dedicated teacher sees his students with full potentials to illustrate ideas that will make the children independent and relevant carrier holders in the society.

COMPUTER LITERACY

Microcomputers, which include laptops, desktops, palmtops among others arose the interest of the authors in using computers as a method of delivering instruction in educational system, such that our educational perspectives will change along with the digital innovative. According to Voloye (1990), computer literacy is defined as the knowledge and ability to use computers and related technology efficiently with a range of skills covering level from advanced problem solving. Having basic computer skills is significant asset in the society to minimise the issue of unemployment that trends everywhere in our society. Vemula, (2013), states that teachers have to be trained to facilitate the learning process, make the process real, achievable, challenging, yet exciting and not intimidation. Basically, computer skills can be categorised as follows:

- knowing how to boot a computer to being able to use the mouse, keyboard, exit and shutdown after use.
- Having the knowledge of word processing, email application, spreadsheets, internet, application among others.
- Lastly, going into programming or coding, fixing both software and hardware issues.

Anderson and Basking (2002) stressed that in the level of computer literacy, one must try to gain an advantage over others who depend on the society. Also, Jegede (2003) added that computer literacy is considered to be very important skill to possess while in developed and developing countries, employees want their workers to have basic computer skills because companies become even more dependent on computers. West (2011) cited in Olaf and Colin (2018) observers that there is practical value to understanding where we are right now and where we have been in the very recent past.

Hargitay (1991), outlined the stages in the software acquisition process: "the process may be divided into four stages; (i) identify the need and define the job to be done (ii) formulate software acquisition strategies (iii) select the optimal software and put it into operation and (iv) monitor the efficiency of the software selected and decide about its maintenance and updating.

METHODOLOGY

This study adopted a descriptive survey research design to answer the research questions. Some public schools/institutions within the country were selected as the case study. The choice of public schools is because they are government owned, and so, nobody's business; hence, lack adequate management, The population of the study comprised 100 teachers from the area of study, and this equally constituted the sample, as the population is small. A structured questionnaire was designed and modified to contain four point Likert scale of Strongly Agreed (SA); point 4, Agreed (A); point 3, Disagreed (D) point 2, and Strongly Disagreed (SD); point 1. Cronbach alpha method was used to determine the internal consistency of the items in the questionnaire with the reliability scale at 0.71. Mean and standard deviation were used to analyze the results from the participants' responses. As a decision rule, a mean of 2.5 and above is considered as "Agreed", but when it is less than 2.5, it is taken as "Disagreed".

DATA ANALYSIS

RESEARCH QUESTION 1: What is your level of agreement that inadequate facilities of computer affect the acquisition of computer skills in Nigerian educational system?

TABLE 1: Mean ratings of the teachers' responses on their level of agreement that inadequate facilities of computer affect the acquisition of computer skills in educational system in Nigeria.

S/N	ITEM	SA	A	D	SD	$\bar{X}$	DECISION
1	Computer acquisition skill is affected by inadequate facilities such as laptops, desktops etc	85	10	5	-	3.4	Agreed
2	Students are not exposed to learn the practical computer due to inadequate facilities	90	7	3	-	3.5	Agreed
3	Students retention of the course is very low due to lack of practical	88	10	2	-	3.4	Agreed
4	Students' lack of interest is due to lack of practical work	85	12	3	-	3.4	Agreed
5	Poor environmental atmospheric condition affect the acquisition of computer in educational system.	88	11	1	-	3.4	Agreed

RESEARCH QUESTION 2: What is your level of agreement that teachers' incompetency affect the acquisition of computer skills in Nigerian educational system?

Table 2: Mean ratings of teachers' responses on their level of agreement that teachers' incompetency affect the acquisition of computer skills in educational system in Nigeria.

S/N	ITEMS	SA	A	D	SD	$\bar{X}$	DECISION
1	Teachers method of delivering the instruction is cumbersome due to lack of practical work.	90	8	2	-	3.5	Agreed
2	Teachers lack of computer skill affect method of teaching.	87	10	3	-	3.4	Agreed
3	Teaching interest of the teachers is very low due to poor remuneration	85	10	5	-	3.4	Agreed
4	Teachers poor teaching is as a result of poor instructional materials	85	12	3	-	3.4	Agreed
5	Teachers time schedule in teaching is limited to make a huge success.	89	10	1	-	3.4	Agreed

RESEARCH QUESTION 3: What type of teachers training are required to enhance their competency in computer literacy in Nigeria educational system?

Table 3: Mean ratings of teachers' responses on the type of training required to enhance their competency in computer literacy in educational system in Nigeria.

S/N	ITEMS	SA	A	D	SD	$\bar{X}$	DECISION
1	Teachers 're-training of computer is required to improve on their knowledge of computer literacy.	88	10	2	-	3.4	Agreed
2	Teachers should be compulsorily given laptops to enhance their daily practical exercise.	92	5	3	-	3.5	Agreed
3	Teachers will be subjected to strict supervision and monitoring to ensure proper implementation of their training exercise.	87	10	3	-	3.4	Agreed
4	Teachers will also be subjected to unbiased routine test to evaluate their performance of the training .	85	10	5	-	3.5	Agreed
5	Teachers welfare should be tackled to avoid any distraction in their duties.	89	9	2	-	3.4	Agreed

RESEARCH QUESTION 4: What are the maintenance requirements of both the hardware components and software upgrading?

TABLE 4: Mean rating on the maintenance requirements of both the hardware components and software.

S/N	ITEMS	SA	A	D	SD	$\bar{X}$	DECISION
1	A consistent routine check of the system.	92	5	3	-	3.5	Agreed
2	Regular upgrading of the software	93	6	1	-	3.5	Agreed
3	Active anti-virus installed in the system	87	10	3	-	3.4	Agreed
4	An experienced computer engineer to maintain the hardware components	85	11	4	-	3.4	Agreed
5	Dusting and covering the computers when not in use.	88	10	2	-	3.4	Agreed

FINDINGS OF THE STUDY

- The findings of table 1 on the mean ratings of the respondents on the extent of inadequate facilities as an impediment to computer acquisition in Nigerian educational system are as follows:
 - There is a lack in computer acquisition in the educational system.
 - Students find it difficult to have a retention of what is taught to them theoretically.
 - Students lack interest in the acquisition of computer due to lack of practical exercise and poor environmental atmospheric condition.
- The findings of table 2 on the mean ratings of the respondent on the extent of incompetency of teachers as an impediment in the computer acquisition in educational system are as follows:
 - Teacher's method of delivering instruction is cumbersome due to poor instructional materials.
 - Time schedule to take computer instructions are limited.
 - Most teachers are not basically competent enough to teach computer studies.

3. The findings of table 3 on the mean ratings of teachers training requirements to enhance on their competency of computer literacy are as follows:
 - There is an urgent need on providing teachers with adequate training on computer skills, strict supervision on the exercise and subjecting them on evaluation test regularly.
 - Also, every teacher requires a functional laptop to enhance their performances.
4. The findings of table 4 on the mean ratings on the maintenance requirements of both the hardware components and software upgrading are as follows:
 - There should be regular maintenance of the hardware components and upgrading the software to suit the users' needs
 - There is also need to keep the computer laboratory clean and cover the computers once they are not in use.

RESULTS OF THE FINDINGS

Having seen the findings of the study on the four tables above, it is obvious that:

- i. Teachers who are teaching computer education are not skilfully equipped,
- ii. There is no instructional materials
- iii. There is inadequate time allocated to the subject
- iv. There is lack of hardware maintenance and upgrading of software to impart computer skills successfully to the students, and this has deeply affected the interest of the students towards the acquisition of computer skills in Nigerian secondary education system.

ACTION SOUGHT

This article sought to:

- Sensitise the public on the need to enhance the acquisition of computer acquisition skills in collaboration with the computer experts, volunteers, and groups to establish a platform that will facilitate the processes of implementation in Nigerian secondary education system.
- Incorporate curriculum planners, computer professional organisations, and NGOs into actualizing the goal of making every student computer literate, and to adapt globally by embracing the use of computer in Nigerian secondary educational system.

CONCLUSION

The need to embrace the use of computers in education cannot be overemphasized. The educational curriculum in Nigeria should lay more emphasis on curbing the challenges that impede the acquisition of computer skills in this digital age, and equally focus on the recommendations of this study to enhance the services of education to humanity, thereby, achieve the basic goal of education in the 21st century.

RECOMMENDATIONS OF THE STUDY

The study recommends the following:

- Fully equipped computer science laboratories in all Nigerian secondary schools, especially, the public ones
- Training and re-training of teachers to update their knowledge on computer skills.
- Allotting efficient time for computer practical
- Alternative power to minimise the effect of epileptic power supply.

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