

**LEVEL OF STUDENTS PERFORMANCE IN COMPUTER STUDIES IN JUNIOR
SECONDARY SCHOOLS IN EBONYI NORTH LOCAL
GOVERNMENT AREA OF EBONYI STATE**

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ABSTRACT

This study was conducted to assess the level of student performance in computer studies in junior secondary schools in Ebonyi North Local Government Area of Ebonyi State. The study adopted a descriptive survey research design. the population of the study comprises all the teachers in secondary schools in Ebonyi State. Sample size of 100 was obtained from 10 secondary Schools using mean score statistical formula. Data were collected using questionnaire and interview and thereafter tables and statistical tools were used for presentation and analysis respectively.. Instruments used for data collection were questionnaires administered to students and teachers and interviews conducted with the administrators of the computer studies in the schools. It was found out that the students are having difficulty understanding the basic concepts and principles of computer studies. The results further revealed that the majority of the students in the junior secondary schools in Ebonyi North Local Government Area have poor performance in computer studies and do not possess adequate computer skills. The study concluded that the performance of students in computer studies in the junior secondary schools in Ebonyi North Local Government Area is low because of insufficient instructional materials, inadequate facilities, insufficiency of personnel, and ineffective teaching strategies. Based on the findings of the study, it was recommended that the government and other stakeholders should provide adequate instructional materials, facilities and personnel as well as encourage the use of effective teaching strategies in teaching computer studies in the junior secondary schools in Ebonyi North Local Government Area.

INTRODUCTION

Secondary education in Nigeria is of six years duration, divided into Senior Secondary School (3 years) and Senior Secondary School (3 years). The two stages are both vocational and academic in nature. The broad goal of secondary education according to the National Policy on Education (NPE, 2014) is to prepare the individual citizen for useful living within the society and preparation for higher education.

The twenty-first century is already turning out to be the century of the computer age. The computer revolution that started after the Second World War is now developing exponentially and computers are beginning to influence and take over nearly every aspect of our lives. In a rapidly changing world, basic education is essential for an individual to be able to access and apply information. The Economic Commission for Africa has indicated that the ability to access and use information is no longer a luxury, but a necessity for development. Unfortunately, many developing countries, especially in Africa, are still low in Information and Communication Technology (ICT) application and use, as cited by Bada, Adewole, Olalekan, (2015). The ability to use computers effectively has become an essential part of everyone's education. Skills such as book keeping, clerical and administrative work, stocktaking, and so forth, now constitute a set of computerized practices that form the core IT skills package: spreadsheets word processors, and database as cited by Crawford, (2014).

The demand for computer/ICT literacy is increasing in Nigeria, because employees realize that computers and other ICT facilities can enhance efficiency. On the other hand, employees have also become computer

literate. The Federal Government of Nigeria introduced computer education into the nation's Secondary School system in 1988 through the policy enactment of the National Computer Policy. The Federal Government of Nigeria introduced computer education into the nation's Secondary School system in 1988 through the policy enactment of the National Computer Policy. The general objectives of the policy include: 1. Bring about a computer literate society by the mid – 1990s 2. Enable present school children to appreciate and use the life in future various aspects of life and in future employment. According to the National Computer Policy Farrell, Isaacs, (2017), the first objective is to ensure that the general populace appreciates the impact of information and computer technology on packages, understand the structure and operation of computers and their history, and to appreciate the economic, social and psychological impact of the computer Mfum-Mensah, (2013).

The modalities and the strategies for achieving the stated objectives include: 1. Training teachers and associated personnel. 2. Hardware facilities. 3. Curriculum development. 4. Maintenance of hardware and peripherals. Computer education was initially limited to Federal Unity Secondary schools until few years ago when it was introduced to states government secondary school system. Presently Computer Studies is offered as a core subject in Basic School Certificate for those in senior secondary school level in Ebonyi State, Nigeria.

This is because educational systems around the world are on increasing pressure to use the new information and communication technologies (ICTs). Computer education was initially limited to Federal unity Secondary schools until few years ago when it was introduced to states government

secondary school system. Presently Computer Studies is offered as a core subject in Basic School Certificate for those in senior secondary school level in Ebonyi State, Nigeria.

Nigeria has realized the importance of functional education for the good and services of mankind. This realization is evidenced in the National Policy on Education (FRN, 2014). Where it is emphasized that, the overall philosophy of education in Nigeria among others should be directed to building a united, strong and self reliant nation by educational activities being geared towards scientific and technological progress. In the developing world, educational policy are faced with a major task, how to create chances of success for all children and their citizenry as a whole. It is essential to overcome the problem of illiteracy, school failure and to improve the intellectual capacities of the students. Education is the process of teaching, training and learning especially in school or colleges to improve knowledge and develop skills.

Paulson- Salim, (2017) stated that education is the imparting and acquisition of knowledge designed to develop a broad range of abilities, knowledge and skills of general application. Education is concomitant with life, this is because there is education in virtually all facets of life, this is because there is education in virtually all facets of life, one continues to learn as long as he lives.

Mfum-Mensah, (2013) opined that, “available literature on development of education attest to the fact that education has been influenced by great thinkers, computer illiterate, law, forms of government, modes of social life. A renowned Nigerian educationist and one time

minister of education, Prof. A. Babs Fafunwa defined education as “an aggregate of all the process by means of which a person develops abilities, attitudes and other forms of behaviour of positive value in the society in which he lives”. Stienen, (2017).

The world is fast becoming a global village due to the inter connectivity that exist between countries, organizations government and other bodied as a result of development in information and communication technology (ICT). According to Stienen, (2017), information technology is the integration of computer technology mainly in the form of internet and information management. It provides opportunities for the users to handle texts and images, numbers and graphs, sound and music as well as enable them process information in the following ways: Storage and analyzing; presenting and organization retrieving communication. In other worlds, access to information and communication is increased through computer basic technologies.

A network of interconnectivity is known as the internet. World Bank (2017) stated that the internet is a powerful tool for improving the efficiency and quality of a wide range of public services especially education and health. The internet is a resource where teachers and students can access outstanding and current education-related books, journals, magazines international conferences, workshops, invitations as well as information on research focus and research grants.

Computer-mediate communication is increasing and becoming common usage for people for all walks of life in the developed and developing countries. Computer is any devices that is capable of accepting, storing and processing data and giving result out in form of information in a specified format. Farrell, Isaacs, (2017) defined it as an

electronic device that is capable of accepting, storing and processing data as well outputting the result by following a set of instructions called a program as well as an electro-mechanical information.

Crawford, (2014), defined computer science as the application of scientific principles in designing, constructing and maintaining the computer system. The scientific study of the theory and practice of data and information, processing and knowledge of computer puts and its functions is referred to as computer science because computer are not only for storage device ad processing unit, but also helps student in excellent communication media. They are the means to access the internet and also an effective audio visual media. Computer can be used to access a vast knowledge based on research for information over the internet means of documenting the backbone management software that are part of computer system which helps the student as a means of managing large amount of data.

In most senior secondary schools, student fail computer science very wells it has been noticed that a large proportion of students fail computer science in their internal and external examinations and as a result, they hardly attain the acceptable level of good performance in their results. It has been claimed that the stumbling blocks has always been their inability to master and pass computer. Unlike other courses because of the internet difficulties associated with the learning of the subject. Computer science is now being explored at all field of life because the computer knowledge in universal and varied. In the fields of research, engineering, business, medicine, communication, weather forecasting, education, finance art, healthcare-delivery and indeed most

areas of human activities. The computer is an indispensable tool.

The knowledge of the computer and the ability to use the computer has become so important and widespread that it has come to be an integral fact of education and literacy. Yet computer science education and literacy are lacking among many of our young boys and girls, as well as men and women today.

Computer science seems to be difficult to the secondary school students who are not very familiar with computer or who have never used it or even seen it. Some students who have even seen the computer have a narrow or even wrong notion of what it is, or what it can do. It is therefore very necessary to teach and educate our young boys and girls on computer science especially in our secondary schools.

The Concept of Computer Education

Earlier in this chapter, a brief definition and introduction to computer education was made. Here I would like to highlight some of the ideologies or principles behind the formation of computer education. This will entail looking at the various areas where computer is applicable and of course the history of computer itself will not be left out. Our national policy on computer education was launched in 1988 and the policy promises to equip all learners with computer literacy at all level. Certain objectives, requirements and activities for computer education and literacy program were specified to expose learners to: 1. Knowledge of computer and their use in everyday life. 2. Use of computer to facilitate or enhance their learning process. 3. Acquire and develop rudimentary skills in data processing, word processing, record keeping and financial analysis. So the national programme has received massive national support as a

welcomed technological innovation in educational practices in our institutions. It is generally designed and planned to improve the quality of teaching in schools, aiding technological and socio-economic development. The then new system of education of the form 6-3-3-4 has brought the inclusion of some additional subjects into the curriculum among which is computer science. Due to the technological advancement in Nigeria, the 6-3-3-4 system of education has been introduced which lays more emphasis on the teaching of science for economic recovery. In Nigeria today, most industries have incorporated the idea of using computer and as such, the advancement of computer education in our present society cannot be emphasized.

Computer Education

Computer education is defined according to (Oke and Bukola 2015) as the process of equipping learners with the skills that will enable them to make effective use of computers. Makinde (2013) also defined computer education as the broad term that covers teaching about computer or the use of computer in teaching other subjects. Therefore computer education at the secondary school level is designed to enlighten the students on the basic rudiment of computer and the use of computer in solving day to day problems.

History of Computer Education

The researcher at this point gives a brief history of computer education in Nigeria which consequently necessitated the formulation of the national policy on computer education in the secondary schools. The Nigeria experience of computer started inching its way into Nigerian homes in early 80s. By 1985, the situation changed remarkably, as many individuals and companies had computer in use. On the 14th

of December 1987, the government inaugurated a national committee on computer education. The committee was charged with the responsibility of drafting a policy on computer education and to also give guidelines for starting computer education on a pilot scale in federal unity colleges. The guide was presented in an interim report in March 1988 while the draft of Nigerian policy on computer education was prescribed to the government in September the same year.

According to John S Roger (2015) following the 1995 introduction of computer literacy education into the country's education system, the first national conference was held in 1985 at the university of Lagos .The conference discussed mainly the introduction of computer software and hardware. Following the inauguration of the committee for national policy in the 14th December, 1987, the federal minister of education (professor Tubic Aminu) identified the goals of computer education in Nigeria as follows

1. That clear strategies and terminologies to be used in computer education is to be developed by the government so that Nigeria could become a computer literate society by the end of mid 1990s
2. That Nigerian children at various levels of education must be brought into contact with computer so that they can use it, appreciate its potential, understand how it works and learn how to apply it to bring about a computer literate society by mid 1990s
3. To catch up with the rest of the world. To be able to land on job demanding computer knowledge
5. To enhance efficiency and management and to open a wide scope of endeavor and above all to regulate the proliferation of microcomputer and its integration within the educational system. In august 1988, the committee on the national policy on

computer education in the secondary schools was constituted. The report was broad and based on specific activities at the secondary schools.

Challenges in Computer Education

Information and Communication Technology are used to help unlock the door to education and have opened up new potential. They facilitate administration of education and training, provision of learning content, and communication between learners and between learners and teachers. Computer enhanced delivery of education and training is becoming increasingly widespread and can make education and training available to many more people around the world. While there is an agreement that Information and Communication Technology can be a powerful tool for advancing education efforts going forward, the main challenge being faced today is turning the potential of Information and Communication Technology for Education (ICTE) into reality with results. This is a tremendous challenge, compounded by realistic fears that if not used properly, Information and Communication Technology can increase existing social and economic inequalities, particularly if access and use of Information and Communication Technology for Education is not equally available to everyone.

Computer Studies in Secondary School

The need for computer studies in secondary schools is enormous. The world is a global village, information dissemination is done in seconds, and offices are tuning into a paperless office (Edhuze, 2013). All these could be attributed to digitalization, which is facilitated by information and communication technology devices such as computer, internet, fax, global system of mass communication (GSM) or mobile

phone and satellites (Usoroh, 2014). This digitalization can only be made useful when a society is computer literate and the changes of becoming a computer literate society is through Computer studies taught mainly in secondary schools. This is a major challenge to schools, because it is their responsibility to graduate students who can fit into the information age. It can therefore be said that computer literacy is needed in a society like ours if we want to be part of this global consumer of Information and Communication Technology.

In a move to help Nigerians overcome backwardness in computer and digital know-how, many spirited Nigerians has mapped out strategies for helping its citizens become computer literate. Such bold steps will help close the narrow gap between Nigeria and developed countries. Inline with this, he further noted that, computer literacy and IT knowledge offers room for self employment since a trained computer literate person could end up operating a business center become a programmer or even a tele- engineer. For those that are going into business, it can also aid them in the area of speed, data keeping, accuracy and information processing. Today, one of the fundamental demands in many established interviews for job seeker is computer literacy skill. Many people have failed to secure jobs which they are qualified for only for lack of knowledge and skills in computer operations (Ayogu, 2014). The use of computer as a facility is possible and necessary in our school system. Its use can aid communication among students.

Computer communication has played and is still playing an important role, not only in schools, but also in offices, hospitals, libraries and in homes. At the secondary school level, computers enable the students communicate at fast, accurate and convenient

pace to other people through e-mail (Okonkwo, 2016). Sending and receiving data electronically will take only a few seconds. In information processing, computer can sort or search through huge amount of information in a flash.

Computer communication makes any information needed easily and widely available irrespective of distant between the two destinations (Okonkwo, 2016). Computer studies also present challenges to secondary school teachers. Such challenges have prompted teachers to go for training in order to build confidence in the handling of computer related courses. Such training also helps them develop a sense of rapport with students and equally makes them appreciate its potential for problem solving (Okonkwo, 2016). He went further to say that their knowledge of Computer studies also helps them to schedule classes, print report cards, and store and upgrade student's record. Most often these records are used by guidance counselor for student career choice he concluded.

Okebukola (2017) also asserted that computer is not part of classroom technology in public schools in Nigeria. Thus the chalkboard and textbooks continue to dominate classroom activities in most secondary schools in Nigeria. If a country such as Uganda which has less than a fifth of Nigeria's resources, now use Information and Communication Technology facilities to help secondary schools students to become better information users, why is Nigeria lagging behind? (Aduwa & Iyamu, 2015). The answer is simply mismanagement of the huge resources of the country and inability of political leaders to prioritize Nigeria's developmental needs (Okebukola, 2017). There is no doubt that in the current harsh economic competition, the private sector in

Nigeria has embraced Information and Communication Technology to stay afloat. The banking sector, insurance, manufacturing industries and multinational companies in the oil sector have embraced multimedia technology to bring innovative solutions to their current challenges. If Nigerian wants to be a major player in the global market of ideas and prepare her citizens for the new environment of today and the future, the country should embrace functional Computer studies (Information and Communication Technology) in secondary school for the following reasons: Information and Communication Technology as aids to teaching and learning; Information and Communication Technology as a tool for management; Information and Communication Technology as instrument for economic development; Information and Communication Technology as instrument of high technological development (Aduwu & Iyamu, 2015).

To prepare the young ones for the new demands of modern technological world there is need to improve computer science knowledge, applications and skills of the students. Many factors seem to be attributed to be part of the problems that students encounter in the learning computer science. These according to Bada, Adewole, Olalekan, (2014) emphasized that, student lack interest in learning computer science simply because the tools or equipment use in teaching student are not provided and these includes: a) Lack of qualified teacher b) Poor learning environment among others etc.

Based on the above premises, the researchers were therefore spurred into finding out the factors that affect students' performance in

learning of computer science in the Senior Secondary Schools in Ebonyi North Local Government Area.

In education, the uses of computers are now integrated with the teaching and learning process. While some people agree that computers could enhance the teaching and learning process, others stress that the integration of the computers in the teaching and learning process might bring some disadvantages. It is on this background that the researcher aims at examining the issue of Computer Studies and in its impact in secondary schools in Ebonyi North Local Government Area of Ebonyi, Nigeria.

Effects have been made to bring positive results from the teaching and learning of computer education in Senior Secondary Schools but effective learning has not been achieved. This is also another factor why the teaching of computer science is still concentrated at senior secondary schools in all the secondary schools in Ebonyi North Local Government Area.

Research Questions:

1. To what extent does Computer Studies improve the academic performance of students in senior secondary school?
2. To what extent does computer literacy of a teacher affects the academic performance of students in senior secondary school?

RESEARCH METHOD

Research Design

The study adopted the descriptive research design that enabled her to adopt a method for easy data collection, interpretation and analysis.

Area of the Study

The area of the study is senior secondary schools in Ebonyi North Local government area of Ebonyi State. Ebonyi has good soil-land and climatic conditions all year round, sitting at about 223 meters (732ft) above sea level, and the soil is well drained during its rainy seasons. The mean temperature in Ebonyi State in the hottest month of February is about 8.716 °F (30.64°C), while the lowest temperatures occur in the month November, reaching 60.54 °F (15.86 °C).

Population of the study “involves a group of persons or aggregate items, things the researcher is interested in getting information from for the study”

The population size was narrowed down to determine the sample size. A statistical formula was used in determining the sample size. The sample size would be suitable for the study. Based on this the population of 900 was targeted.

Questionnaire items were used to source data from the respondents.

The instrument used is questionnaire and personal interview. It is valid because it is ideal for measuring what it is designed for.

The measuring instrument that was used for this research work was questionnaire and personal oral interview.

The data collected were analyzed using frequencies and mean scores. Based on the four (4) point scale, the acceptance level for the mean score was 2.50 and above and anything below 2.50 was rejected. The null hypothesis used for the formulation of the study was 0.05 level of significant.

Result

Research Question 1

Table 1: Mean response on how Computer Studies improve academic performance of students in senior secondary school?
N=900

S/N	Items	SA	A	D	SD	$\sum fx$	Mean	Decision
1	Computer Studies helps student to gain understating of not only computer but other subject	310	400	100	90	2730	3.0	A
2	Computer Studies help students globalize	200	500	200	100	2800	2.8	A
3	Computer Studies help students learn outside the four walls of the institution	100	600	120	80	2520	2.5	A
4	Computer Studies used as instructional material deepen knowledge of the student	500	200	150	50	2950	2.9	SA
5	Computer Studies is a source of enlightenment to students	200	500	120	80	2500	2.5	A
Grand mean							13.7	Agree

Source: Field Survey, 2023

Table 1 shows the mean score obtain respectively: 3.0 mean score shows that respondents agree that Computer Studies helps student to gain understating of not only computer but other subject. 2.8 mean score shows that respondents agree that Computer Studies help students globalize. 2.5 mean score shows that respondents strongly agree that Computer Studies help students learn outside the four walls of the institution. 2.9 mean score shows that respondents agree that Computer Studies used as instructional material deepen knowledge of the student. While 2.5 mean score shows that respondents strongly agree that Computer Studies is a source of enlightenment to students.

Research Question 2

Table 2: Mean response on how computer literacy of a teacher affects the academic performance of students in senior secondary school N=900

S/N	Items	SA	A	D	SD	$\sum fx$	Mean	Decision
1	computer literacy of a teacher make student embrace ICT	400	310	100	90	2910	3.2	SA
2	computer literacy of a teacher exposes student	500	200	200	100	2900	2.9	SA
3	computer literacy of a teacher helps student research using ICT gadget	600	100	120	80	3020	3.0	SA
4	computer literacy of a teacher make a student to compete globally	500	200	150	50	2950	2.9	SA
5	computer literacy of a teacher affect the academic productivity of a student	200	500	120	80	2620	2.6	A
Grand mean							16.4	Strongly Agree

Source: Field Survey, 2023

Table 2 shows the mean score obtain respectively: 3.2 mean score shows that respondents strongly agree that computer literacy of a teacher make student embrace ICT. 2.9 mean score shows that respondents strongly agree that computer literacy of a teacher exposes student. 3.0 mean score shows that respondents strongly agree that computer literacy of a teacher helps student research using ICT gadget. 2.9 mean score shows that respondents strongly agree that Computer Studies improve academic performance of students in senior secondary school. While 2.6 mean score shows that respondents strongly agree that computer literacy of a teacher affect the academic productivity of a student.

Summary of Findings

The following were summarized the analysis above based on the data obtained from the respondent.

1. Basic equipment and infrastructure such as computers and other information and communication

technology (ICT) facilities are lacking

2. Teachers are not encouraged to utilize computers in their teaching and learning process because goes a long way to enhance the process and

enable teachers to perform their duties effectively, and efficiently.

Discussion of Findings

The results of the findings are discussed below:

The aim of Research question 1 is to determine if Computer Studies improve academic performance of students in senior secondary school in Ebonyi North Local Government Area of Ebonyi State. The respondents are in agreement that teachers make use of computers for various reasons which included preparing learning materials improving quality of teaching and learning, and for personal research. This tally with the findings of a research work in Nigerian secondary schools and who advocated that teachers should also be motivated and encouraged to develop and use multimedia courseware and software relevant to teaching and learning.

Research Question 2 attempts to identify if Computer literacy of a teacher affects the academic performance of students in senior secondary school in Ebonyi North Local Government Area of Ebonyi State. The result showed that the computer literacy level of teachers in secondary schools is low although it was a little higher among students. This was in agreement by other authors who observed the same in their different studies.

Recommendation

Based on the results and findings of the research study, the following recommendations are hereby made:

1. Basic equipment and infrastructure such as computers and other information and communication technology (ICT) facilities should be put in place in schools to facilitate the acquisition of basic computer skills among teachers and students in

secondary schools. This assertion agrees with who purposed equipping of computer classrooms for improved effective understanding and achievement of learning goals.

2. Teachers should be encouraged to utilize computers in their teaching and learning process because goes a long way to enhance the process and enable teachers to perform their duties effectively, and efficiently.

Educational Implication

All secondary schools must have ICT facility building that will have the number of computers required by the students and with no computer divide that is with internet connection

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