

Investigating Problems Associated With Mass Failure in Computer Studies among Secondary School Students in Ife North Local Government, Osun State, Nigeria

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Abstract

Computer studies necessitated teaching and instilling in the learner the introductory skills demanded to independently function and utilize the computer to attain educational intentions. This study inquired the Problems Associated with Mass Failure in Computer Studies Among Senior Secondary School Students in Ife North Local Government with the specific objectives of; examining accessible teaching and learning materials for computer studies in secondary schools and to ascertain whether the teaching and learning environment is contributive for effective teaching and learning of computer studies to take place or not, in Ife North Local Government, Osun state Area. The descriptive survey research intention was adopted. The population of the study principally constitutes all students studying computer studies and all computer studies Teachers of secondary schools in Ife North Local Government while 100 samples were randomly picked-out from five (5) chosen secondary schools for the study. The findings of the study revealed the accessible of teaching and learning materials for computer studies and also the findings revealed that there is contributive learning environment for teaching and learning of computer studies in secondary schools but there were foreign interference and noise constructing by the students during the lesson period Lastly, It was recommended that Teachers should insure appropriate study-hall management and governing during the lesson; governing body should ensure that no student with any conduct of incontinences goes relinquish absent suitable sanction and schools should be properly walled or construct away from market to avoid foreign noise.

Key Words: Education, Teaching and Learning, Computer Studies, Mass failure

Introduction

Education can be viewed as a revealer of the innate ability and potentialities of the souls in the society and the acquirement of skills, aptitudes, and proficiencies necessary for self-actualization and for dealing with life's challenges. According to Osokoya M. M. (2013) Education was defined as an endless procedure which the society demonstrates to assist its inhabitant to realize the preceding inheritance in-order to participate and add profitably in the future. Also, Afe J. O. (2015) reckoned education as an instrument to be applied for the regeneration of the individual into the society to receive or fulfil self-actualization, grow national awareness, promote oneness, and contest for social, economic, political, scientific, cultural and technological procession. Therefore, education in science and engineering fields becomes fundamental cornerstone foundation and essential artilleries for technological, economic and scientific advancement in any country. Moreover, education affords the country a capability to manipulate engineering for the using of the natural resources in which such usage will rely exceedingly and absolutely upon computer science for providing bedrock for governmental, political, scientific, military, civil, technological progress, economic promotion, environmental tranquility and socio-cultural stability (Kwache, P. Z. (2013)).

Meanwhile, the two hundred and third decade is already transformed to be the decade of the digital lifetime which is also known as computer era. The computer gyration that commenced after the Second World War is presently arising exponentially which computers have commenced to modify and affect almost every facets of our existence. In a speedily transformative global village, basic education is crucial for a person to be capable of accessing and applying information which can only be achieved by computer education through teaching and learning. Daud K.. (2015), cited Edhuze (2013), which described computer education as the knowledge and skill acquisition process to make the entire group of individual computer literate via teaching and learning. Computer literacy is the capability for studying, examining, writing, speaking and comprehending in the computer code or language, which is effective and efficient communication in electronic manner (Okorie, 2017). It can also be described as a process of enlighten the people on how to utilize an electronic device such as computer to execute a series of code, software and various application including industry, trading, and commerce (Okorie, 2017). Computer studies based on opinion of Edhuze (2013) referred to as acquisition of skill and knowledge by learner and infusing in the learner the fundamental attainment required to autonomously control the computer to realize educational destination. It was also stressed further by him that, computer

studies as a learning content concentrated on ensuring students' acquisition of knowledge, providing conducive environment for students to obtain skills and efficiently requested in the digital and technological universe of innovation and creativity, with absolute understanding such elementary skills and fitness upon convocation afford them friendly with terms and custom engrafted in the digital or computing field. Thus, Computer studies is a discipline arranges for ascertaining learners comprehend all functional capability, adoption and boundary of the computer with the motive of providing opportunity towards the examination of latest techniques of data and information manipulation. However, the motive of government of Nigeria for adding computer studies in the post-primary school syllabus traces back to late 19th century, 1988 to be précised when there was enactment and launching of National Policy on Computer Education (Abimbade, 2015).

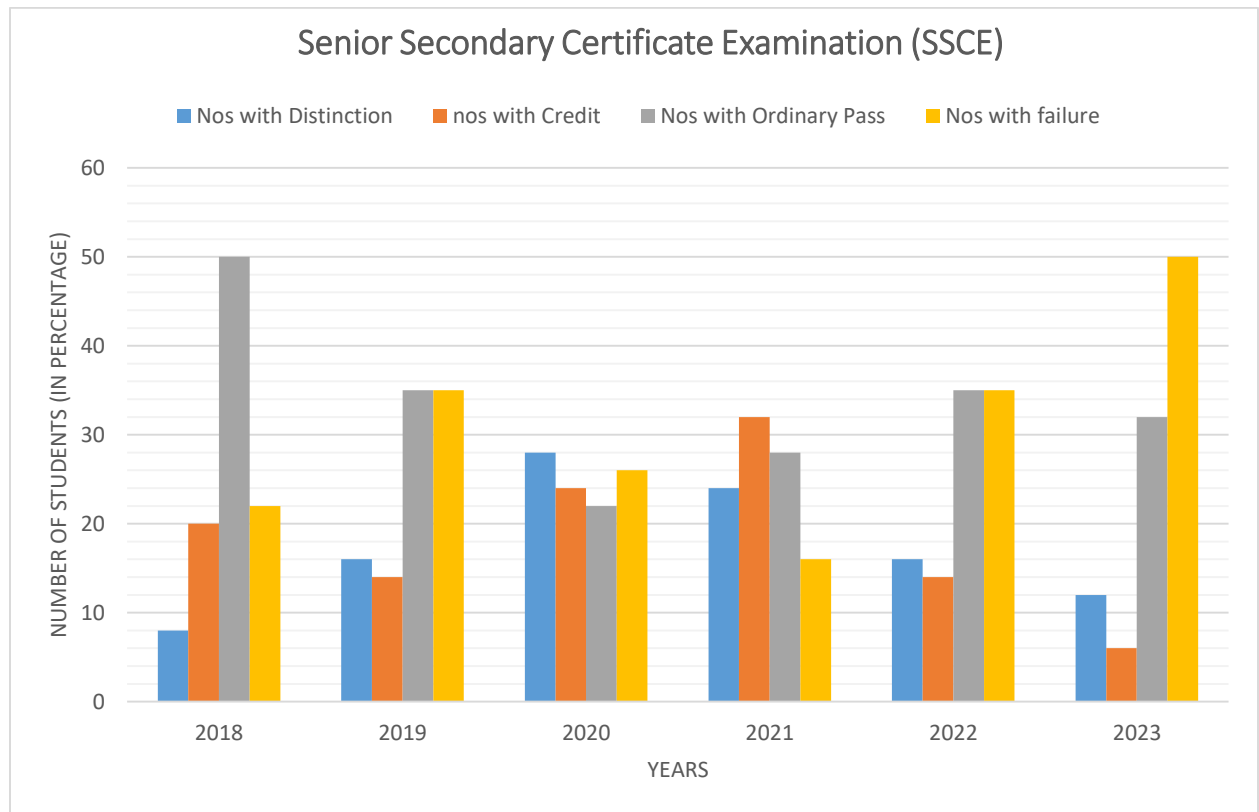
The National Policy on Computer Education (2006) states that students should have sufficient knowledge and proficiency with software, such as Microsoft Office, graphics applications, and database management programs, by the time they complete their post-primary education. This will enable them to interact with computers in the manner of their choice. (Ayogu R.B, Nwachi I. C, Madukwe E. U, Udentia E. A., 2018). According to Ogwo E., Maidoh N. E., & Onwe C. E. (2015), computer education was first only available in Federal Unity Secondary schools till couple of years, while it was suggested that States should implement their own post-primary educational systems. At this point, computer studies became necessitated subject in the Fundamental School Certification for Junior Secondary School students within Nigerian states. Umeozor, U. J. and Onuh, U. B. (2023) cited in Oladimeji A. I., Yusuf H. A., Njoku C. C., and Owolabi A. A. (2018) which further confirmed that computer education is extremely important for the development of a country. Based on this understanding, the Nigerian Federal Government recommended and included computer studies in the syllabus for all students, from elementary to secondary school (J. E. Anene – Okeakwa; Monday C. N.; Musa M.; Hilary O.; Samson O. C.; T.A. Umoru; G.C. Edozie and O.E. Okonta (2023). Therefore, indicates that to attain these objectives as expressed in the National Policy on Education, schemes are required and must be embraced and all sort forms of impediment factors viewed as problems must be identified and corrected appropriately.

Statement of the Problem

As a classroom teacher of Computer studies in secondary School, it was observed that some secondary students who offering computer studies perform woefully in the school examination and general board examination such as NECO, WAEC e.t.c. even to the extent that some candidate submitted emptied answer booklets blankly and some examinees only rewrite the questions, when the large proportion of those examinees who wrote scored below passed mark.

Furthermore, data and observations from assessment bodies such as JAMB, NECO, and WAEC (2014–2018) have showed that a significant portion of secondary school students still do poorly on computer studies exams. Despite enormous efforts to provide a broad computer science curriculum that is acceptable, students' achievement in the subject appears deteriorating many time. Adeniyi (2013), who thoroughly examined and concluded that anyone can be made unpleasant at the secondary computer science level in Nigerian schools by participating in the scoring activities of computer studies for the West African Examinations Council (WAEC), accurately describes this annoying situation. Some applicants purposefully turn in their response sheets without trying to answer any questions. A considerable proportion of candidates who answered questions with a score lower than the passing mark (i.e., 40%) simply replicated the questions. (Adamu, 2015). The poor performance is reflected in the result of students in computer studies at the Senior Secondary Certificate Examination (SSCE). The below graph presents the results between 2018 and 2023.

Figure 1: **Computer Studies Results for Ife North Local Government (2018-2023)**



Source: Osun State West African Examination Council (WAEC), 2023.

The oppugns that unhesitatingly arrive to mind are; are there problems associated with the students' mass failure in computer studies during secondary school examination and upon this interrogative statement that the researchers deemed it fit to carry-out this study.

Purposes of the Study

The principal purpose of this study is to inquire the Problems Associated with Mass Failure in Computer Science Studies among Secondary School Students in Ife North Local Government, Osun State. Specifically, the study examined;

- i. the accessible teaching and learning materials for computer studies in Secondary Schools in Ife North Local Government, Osun State and;
- ii. Whether the teaching and learning environment is contributive for effective teaching and learning of computer studies to occur.

Research Questions

The study sought answer to the following research question;

- i. What is/are the accessible teaching and learning material(s) for computer studies in secondary schools in Ife North Government, Osun State?
- ii. Is the learning environment contributive for effective teaching and learning of computer studies to occur?

Scope of the Study

The measure of this study covered only five (5) selected individual and government owned secondary schools in Ife North Local Government. And the samples were restricted to only Senior Secondary School students. The study was geographically limited to in Ife North Local Government, Osun State.

Methodology

This section discusses the methodology which include Research Design, Population, Samples and Sampling Techniques, Research instrument, Data Collection, Validity Test and Reliability Test of the Research Instruments, as well Data Analysis Procedures.

Research Design

The study adopted the descriptive research design. According to Mugenda (1999), descriptive design is useful as it aids to gather information that reveals the existing phenomena by asking individuals about their perceptions, attitudes and values. Thus, the descriptive design was used so as to achieve the main objective of the study which was to evaluate the availability of teaching and learning materials of computer science in Secondary Schools in Ife North Local Government, Osun State and examine whether the teaching and learning environment is conducive for effective teaching and learning of computer studies to take place. Data was collected through the self-administered questionnaire.

Population, Sample and Sampling Techniques

The study population comprised all learners offering computer studies and all computer studies Teachers in Ife North Local government in Ife North Local Government Area, Osun state, Nigeria and five (5) Secondary Schools were chosen for the study which include;

- Foreign Links International School, Moro,
- Victor Model College Moro,
- Anglican High School Edunabon,

- Origbo Grammar School, Moro,
- Yakoyo Grammar School, Yakoyo,

This study deployed the multi-stage random sampling method for picking five (5) Secondary Schools and to draw twenty (20) samples from each selected school which include; Eighteen (18) students and two (2) teachers making total number of One hundred (100) samples or respondents who responded to the items in research instruments of the study.

Research Instrument, Reliability and Validity of Instrument

The instrument used for this study is Questionnaire. The 4-likert Rating scale point such as Strong Agreed (SA, Agreed (A), Disagreed (D) and Strong Disagreed (SD), was adopted for responses of each item that formed the research instrument. The instrument comprises two (2) sections which are Section A for Demography information and Section B for collection of information on two different research questions of the study. Ten (10) items were raised to answer research question 1 while six (6) research items were formulated to answer Research Question 2. The total number of One hundred (100) questionnaires was administered to the respondents directly by the researchers and all items in the instrument were fully filled correctly and collected by the researchers.

The research instrument was validated by giving it to three (3) professional in the field and was adjudged to be content valid. The reliability of research instrument was ensured through pilot test.

Data Collection, Procedure and Method of Data Analysis

The source of data collection for this research mainly entails Primary Source of data. The researcher administered the questionnaires to the respondents directly.

After obtaining the permission for the appropriate authorities at each selected school, the samples were selected randomly from SSS2 class and intention of the research was illustrated to respondents by the researcher thereafter instruments were distributed to respondents and respondents were allowed to provide their personal opinions as responses to the items in the instrument and was collected immediately.

The responses received through survey were analyzed using Mean Rate and Simple proportion percentage table.

Data Analysis

The demography information gathered through the survey disclosed that the proportion of male respondents were 32 students (32%) and 68 students (68%) Female respondents based on gender which indicated that the majority of respondents were female respondents; Also, an overwhelming majority of the respondents 52, representing (52.0%) of the total sample size falls within the SSS 3 class, 28 respondents representing (28.0%) of the sample size falls within the SSS 2 class and 20 respondents representing (10.0%) of the sample size falls within SSS 1 class while 10 respondents representing (10%) were teachers. This indicated that majority of the respondents had enough or rich knowledge of happen in their school environment based on the period of their stay within the school and therefore the reliable data were gathered.

Research Question 1:

What are the accessible teaching and learning materials for computer studies in secondary schools in Ife North Government, Osun State?

This research question sought to find out available teaching and learning materials for computer studies in secondary schools of Ife North Local Government, Osun State

Table 1: Accessible teaching and learning materials of computer science in secondary schools of Ife North Local Government, Osun State

Items	N	Min	Max	Mean		Std. Dev.	Decision
				Rate	Std. Error		
1. There is no separate computer studies laboratory in our school.	100	1	4	2.26	.122	1.220	Disagreed
2. There is no ICT hall in our school	100	1	4	2.02	.109	1.092	Disagreed
3. There are no real objects (computer internal components) in our school for teaching and learning computer studies.	100	1	4	2.04	.124	1.238	Disagreed
4. There are peripheral components devices such as keyboard, mouse, scanner, printer etc, in our computer Laboratory for teaching and learning.	100	1	4	3.36	.096	.959	Agreed
5. There is no complete computer system in our school for teaching and learning.	100	1	4	1.90	.101	1.010	Disagreed
6. There is no Projector in our Computer Laboratory.	100	1	4	2.02	.097	.974	Disagreed
7. There is no models of computer related components in our Computer Laboratory for teaching and learning.	100	1	4	2.22	.107	1.069	Disagreed
8. There is no computer related chart in our computer laboratory for teaching and learning.	100	1	4	2.26	.106	1.060	Disagreed
9. There is no storage medias such as flash drive, hard disc, disc in our school for teaching and learning	100	1	4	1.86	.106	1.064	Disagreed
10. There is no laptop in our school for teaching and learning	100	1	4	1.82	.094	.936	Disagreed

Source: Survey 2024

Decision Rule: the decision rule of above research Question 1 was determined based on the fact that 4-likert-scales were used as response to each item. Thus, 2.5 and above was used as an indication of agreed response to an item while below 2.5 was picked as an indication of disagreed response to each item. From Table 1 above, it was revealed that the mean rate of item 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 were 2.26, 2.02, 2.04, 3.36, 1.90, 2.02, 2.22, 2.26, 1.86 and 1.82 mean rate respectively.

Research Question 2:

Is the teaching and learning environment contributive for effective teaching and learning of computer studies to occur?

This research question sought to provide answer to assurance of presence of the contributive teaching and learning environment for effective teaching and learning of computer studies to occur.

Table 2: The contributive teaching and learning environment for effective teaching and learning of computer studies to occur

Items	N	Min	Max	Mean		Std. Dev.	Decision
				Rate	Std. Error		
11. There are chairs and tables for proper sitting in our computer laboratory.	100	1	4	3.26	.102	1.021	Agreed
12. There are windows and doors in our classroom and computer laboratory	100	1	4	3.52	.070	.703	Agreed
13. There is an individual seat for each student to sit during computer studies lesson	100	1	4	3.36	.077	.772	Agreed
14. There is a well cooling system such as fan, AC, well ventilated system in our class room or computer laboratory	100	1	4	2.96	.094	.942	Agreed
15. Our classroom or computer laboratory is cover with ceiling	100	1	4	3.48	.070	.703	Agreed
16. There is external noise around our classroom during lesson period	100	1	4	2.56	.099	.988	Agreed

Source: Survey 2024

Decision Rule: the decision rule of above research Question 2 was determined based on the fact that 4 likely scales were used as response to each item. Thus, 2.5 and above was used as an indication of agreed response to an item while below 2.5 was picked as an indication of disagreed response to each item. From Table 2 above, it was revealed that the mean rate of item 11, 12, 13, 14, 15 and 16 were 3.62, 3.52, 3.36, 2.96, 3.48 and 2.56 mean rate respectively.

Discussion of Findings

The study findings revealed some facts grounded by collected data through the instrument from the case study. The study findings were discussed in-relation with the stated research objectives and specifically based on formulated research Questions.

What are the available teaching and learning materials for computer studies in secondary schools of Ife North Government, Osun State?

In order to respond to research question 1, responses to question or item 1 to question or item 10 on the questionnaire were analyzed. From the findings in table 1 using decision rules of 2.5 and above mean rate for Agreed response while below 2.5 Mean rate for Disagree response, it was clearly revealed that the accessible teaching and learning materials for computer studies in secondary schools in Ife North Government, Osun State are; Computer Laboratory, ICT hall in our school, real objects (computer internal components), complete computer system in the school, models of computer related components, computer related chart, storage medias such as flash drive, hard disc, disc and laptops are accessible in our school for teaching and learning.

Is the learning environment conducive for effective teaching and learning of computer studies to take place?

To answer this research question, responses to question or item 11 to question or item 16 on the questionnaire were analyzed and from the analysis of data in table 4.6 using decision rule of 2.5 and above mean rate for Agreed response while below 2.5 mean rate indicates Disagreed, the finding of this study indicated that there are; chairs and tables for proper sitting in the computer laboratory, windows and doors in the classroom and computer laboratory, individual seats for each student to sit during computer studies lesson, well cooling system such as fan, AC, well ventilated system and the classrooms or computer laboratory are cover with ceiling but there is external noise around our classroom during lesson period. This indicated that there is conducive learning environment except the presence of external noise

Conclusion and Recommendations

According to the results of this study, it was concluded that there are adequate and accessibility of teaching and learning materials for computer studies in secondary schools of Ife North Government, Osun State. Also, the study findings revealed that there is contributive learning environment except the presence of external noise, noise making by the students and uncontrolled external noise from outside the school e.t.c. Lastly, there is need for adjustment and re-arrangement of topic(s) in each level computer studies syllabus.

Recommendations

The researcher strongly recommended that teachers should ensure proper class management and control during the lesson; School Management should provide necessary policies and regulation to reduce external noise from outside the school premises; Teachers should be ensured that they relate with their students in a polite way without compromise with their integrity; School Management and private and public school owners should supply necessary equipment and amenities for proper and effective teaching and learning of computer studies

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