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Pg.133 - 145

PROBLEMS ASSOCIATED WITH THE TEACHING OF COMPUTER SCIENCE STUDIES IN SOME SECONDARY SCHOOLS.

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Abstract
This work involved; the opinions of teachers about students taught by qualified teachers and those taught by non-experts, the opinions of teachers about students taught using instructional materials and those taught without, the effect of time allocation on the time table, the effect of Government funding of computer science studies. The population of the study consists of all the computer science teachers in Ekwusigo Local Government Area of Anambra State. The sample size was 70 teachers randomly selected from different schools in Ekwusigo Local Government Area of Anambra State. A simple survey method was designed to identify the problems. Four research questions and hypotheses guided the study. The instrument used for data collection was a questionnaire developed by the researcher and validated by three experts in Science Education, Madonna University Nigeria. The researcher also administered 120 questionnaire but 104 were returned and data were analyzed. The research questions were answered using purely simple percentages and hypotheses were tested using chi-square. The result revealed that there is significant difference between the opinions of teachers about the students taught by qualified teachers and those taught by non-experts, there is significant difference between the opinions of teachers about students taught using instructional materials and those taught without, enough periods are not allowed on the time table and adequate provision of fund from government are not always available for teaching of computer science. Conclusion and recommendations were made to improve the methods of teaching computer science. Suggestions for further research were also made.

Introduction

Science and technology have become the bed rock for national development. They form the yardstick for determining civilized and uncivilized, advanced and backward, developed and underdeveloped and developing nations. Notwithstanding the exhaustible potentials and under tapped resources in Nigeria in classification of nations in the world, she (Nigeria) is still placed under developing nations based on her level of scientific literacy. Information and communication technology are electronic technologies used for information storage and retrieval. Computer science as stipulated by the national policy on education Federal Republic of Nigeria, FRN (2004) is one of the pre-vocational subjects. After passing through it one should possess an appropriate level of literacy, numeracy, communication, manipulative and problem solving skills which makes one employable and useful to oneself and the society at large.

Our society is moving towards making education relevant is making information and communication technology (ICT) a common feature of educational process. Typical electronic facilities include computers, videos, radios and phones. These gadgets facilities learning and enhance individualized learning. Again, Kwache (2007) was of the view that in concrete terms ICT enhances teaching through its dynamics interactive, flexible and engaging content. It provides real opportunity for individualized instruction, accelerates, enriches and deepens skills and engages students' activity in teaching. The importance of computer in teaching is rapidly becoming one of the most important and widely discussed issues in contemporary education policy (Thirer : 2000). Some experts in the field agreed that when properly used, information and communication technology (ICT) have the tendency of enhancing teaching in addition to sharpening work force opportunities. Computer illiteracy is now regarded as the new illiteracy. This has actually gingered a new and strong desire to equip schools with computer facilities, qualified personnel necessary to produce technologically proficient and efficient students in developed countries of the world. There is no doubt that computer can aid the instructional process and facilitate student learning. Many studies have found positive effect associated with technology aided instruction. Bearing this in mind, the importance of computer cannot be overemphasized. It therefore becomes necessary that teaching should be adequately planned in such a way as to enable computer science graduates make their impact on the society. This can only be achieved through acquisition of computer scientific knowledge by the students like the use of mouse, manipulation of keyboard, scanning, etc.

Some strategic firms volunteer to sponsor the teaching of computer in schools. Even at that, computer science is not well taught in schools and most students are not even interested in the subject. Therefore, this study is carried out to investigate the facing the teaching of computer science in secondary schools in Ekwusigo Local Government Area of Anambra State.
The study is primarily designed to show the problems facing the teaching of computer science in secondary schools. Numerous factors have been hindering the effective teaching of computer science in secondary schools. These problems include lack of qualified teachers, lack of funds, inadequate time allocation on the timetable, inadequate instructional materials and updated computer hardware. These problems stated above are the major factors that hinder effective teaching of computer science in secondary schools.

The computer is made up of electroncic gadgets or components. Data can be described as raw or unprocessed fact sent into the computer for processing. All the arimathmetic and logic manipulation are performed to convert data to information by the system. The computer may garther data from various incoming sourced, sort the data, re-arrange them and then print them out by the help of the printer. The purpose of computer is to speed up the rate of operation in data processing.
History of Computer.

Agbasi (1993) said that a complete history of computing would include multitude of diverse devices such as the ancient Chinese abacus, the Jacquard loom (1805) and Charles babbage's "analytical engine" (1834). It could aso include discussion of mechanical, analog and digital computing architectures and as late as the 1960s, mechanical devices such as the Marchant calculator, still found widespread application in science and engineering. During the erly days of electronic computing devices, there was much discussion about the relative merits of analog and ditigal computers.

In fact, as late as the 1960s, analog computers were routinely used to solve systems of finite difference equations arising in oil reservoir modeling. In the end, digital computing devices proved to have the power, economics and scalability necessary to deal with large scale computations. Digital computers now dominate the computing world in all areas ranging from the hand calculator to the super computer and are pervasive throughout society. Therefore, this brief sketch of the development of scientific computing is limited to the area of digital, electronic computers. The evolution of digital computer is often divided into generations. Each generation is characterized by dramatic improvements over the previous generation in the technology used to build computers, the internal organization of computer systems and programming languages.

Although, not usually associated with computer generations, there has been a steady improvement in algorithms, including algorithms used in computational science. The following history has been organized using these widely recognized generations as mileposts.

First Generation Electronic Computers (1937-1953); The three machines have been promoted at various times as the first electronic computers. These machines used electronic switches, in form of vacuum tubes, instead of electromechanical relays. In principle the electronic switches were more reliable, since they would have no moving parts that would wear out but technology was still new at that time and the tubes were comparable to relays in reliability. Electronic components had one major benefit, however, they could "open" and "close" about 1,000 times faster than mechanical switches. The earliest attempt to build an electronic computer was by J.V. Atanasof , a professor of physics and mathematics at Iowa State, in 1937. Atanasoff set out to build a machine that would help his graduate students solve systems of partial differential equations. By 1941, he and graduate student of Clifford Berry had succeeded in building a machine that could solve 29 simultaneous equations with 29 unknowns. However, the machine was not programmable and was more of an electronic calculator.

The first general purposes programmable electronic computer was the Electronic Numerical Integrator and Computer (ENIAC), built by J. Presper Eckert and John V. Mauchly at the University of Pennysylvnia. Work began in 1943, funded by the Army Ordinance Department, which needed a way to compute ballistics during World War II. The machine wasn't completed until 1945, but then it was used extensively for calculations during the design of the hydrogen bomb. By the time it was decommissioned in1955, it had been used for research on the design of wind tunnels, random number generators and weather prediction. Eckert, mauchly and John Von Neumann, a consultant to the ENIAC project, began work on a new machine before ENIAC was finished. The main contribution of EDVAC, their new project, was the notion of a stored program. There is some controversy over who deserves the credit for the idea, but no one knows how important the idea was to the future of general purpose computers. ENIAC was controlled by a set of external switches and dials; to change the program required physically altering the settings on these controls. These controls also limited the speed of the internal electronic operations. Through the use of a memory that was large enough to hold both instructions and data, and using the program stored in memory to control the order of arithmetic operations, EDVAC was able to run orders of magnitude faster than ENIAC. By storing instructions in the same medium as data, designers could concentrate on improving the internal structure of the machine without worrying about matching it to the speed of an external control. Regardless of who deserves the credit for the stored program idea, the EDVAC project is significant as an example of the power of interdisciplinary projects that characterize modern computational science. By recognizing that functions, in the form of a sequence of instructions for a computer, can be encoded as numbers, the EDVAC group knew the instructions could be stored in the computer's memory a long with numerical data. The first programs were written out in machine code, i.e. programmers directly wrote down the numbers that corresponded to the instructions they wanted to store in memory. By the 1950s programmers were using a symbolic notation, known as assembly language, then hand26translating the symbolic notation into machine code. Later programs known as assemblers performed the translation task.
As primitive as they were, these first electronic machines were quite useful in applied science and engineering. Atanasoff estimated that it would take eight hours to solve a set of equations with eight unknown using a Marchant calculator, and 381 hours to solve 29 equations for 29 unknowns. The Atanasoff- Berry computer ws able to complete the task in under an hour. The first problem runon the ENIAC, a numerical simulation used in the design of the hydrogen bomb, required 20 seconds, as opposed to forty hours using mechanical calculators. Eckert and Mauchly later developed what was arguably the first commercially successful computer, the UNIVA; in 1952, 45 minutes after the polls closed and with 7% of the vote counted, UNIVAC predicted Elsehower would defeat Stevenson with 438 electoral votes (he ended up with 442).

Second Generation (1954-1962)

The second generation saw several important development at all levels of computer system design, from the technology used to build the basic circuits to the programming languages used to write scientific applications. Electronic switches in this era were based on discrete diode and transistor technology with a switching time of approximately 0.3 microseconds. The first machines to be build with this technology include TRADIC at Bell laboratories in 1954 and TX-0 at MIT's Lincoin Laboratory. Memory technology was based on magnetic cores which could be accessed in random order, as opposed to mercury delay lines, in which data was stored as an acoustic wave that passed sequentially through the medium and could be accessed only when the data moved by the 1/0 interface.

Important innovations in computer architecture included index registers for controlling loops and floating point units for calculation based on real numbers. Prior to this accessing successive elements in an array was quite tedious and often involved writing self-modifying code (programs which modified themselves as they ran, at the time viewed as a powerful application of the principle that programs and data were fundamentally the same, this practice is now frowned upon as extremely hard to debug and is impossible in most high level languages). Floating point operations were performed by libraries of software routines in early computers, but were done in hardware in second generation machines.

During this second generation many high level programming languages were introduced, including FORTRAN (1956), ALGOL (1958) and COBOL (1959). Important commercial machines of this era include the IBM 704 and 7094. The latter introduced I/O processors for better throughput between I/O devices and main memory. The second generation also sees the first two supercomputers designed specifically for numeric processing in scientific applications. The term "supercomputer" is generally reserved for a machine that is an order of magnitude more powerful than other machines of its era. Two machines of the 1950s deserve this title. The Livermore Atomic Research Computer (LARC) and the IBM 7030 (aka Stretch) were early examples of machines that overlapped memory operations with processors operations and had primitive forms of parallel processing.

Third Generation (1963-1972)

The third generation brought huge gain in computational power. Innovations in this era include the use of integrated circuits, or ICs (semiconductor devices with several transistors built into one physical component), semiconductor memories starting to be used instead of magnetic cores, microprogramming as a technique for efficiently designing complex processors, the coming of age of pipelining and other forms of parallel processing and the introduction of operating systems and time-sharing. The first ICs were based on small-scale integration (SSI) circuits which had around 10 devices per circuit (or "chip"), and evolved to the use of medium-scale integrated (MSI) circuits, which had uo to 100 devices per chip. Multilayered printed circuits were developed and core memory was replaced by faster, sold state memories. Computer designers began to take advantage of parallelism by using multiple functional units, overlapping CPU and I/O operations and pipelining (internal parallelism) in both the instruction stream and the data stream. In 1964, Seymour Cray developed the CDC 6600, which was the first architecture to use functional parallelism. By using 10 separate functional units that could operate simultaneously and 32 independent memory banks, the CDC 600 was able to attain a computation rate of 1 million floting point operations per second (I Mfiops). Five years later released the 7600, also developed by Seymour Cray. The CDC 7600, with its pipelined functional units, is considered to be the first vector processor and was capable of executing at 10 Mflops. The IBM 369/91, released during the same period was roughly twice as fast as the CDC 660. It employed instruction look ahead, separate floating point and integer functional units and pipelined instruction stream. The IBM 360-195 was comparable to the CDC 7600, deriving much of its performance from a very fast cache memory. The SOLOMON computer, developed by Westinghouse Corporation, and the ILLIAC !V, jointly developed by Burroughs, the Department of Defense and the University of Illinois, was representative of the first parallel computers. The Texas Instrument Advanced Scientific Computer (TI-ASC) and the STAR-100 of CDC were pipelined vector processors that demonstrated the viability of that design and set the standards for subsequent vector processors.

Early in this third generation Cambridge and the University of London co-operated in the development of CPL (Combined Programming Language, 1963). CPL was, according to its authors, an attempt to capture only the important features of the complicated and sophisticated ALGOL. However, the ALGOL, CPL was large with many features that were hard to learn. In an attempt at further simplification, Martin Richards of Cambridge developed a subset of CPL called BCPL (Basic Computer Programming Language, 1967).

Fourth Generation (1972-1984)

Balogun, Daramola, Obe, Ojokoh and Oluwasare (2996) was of the view that the next generation of computer systems saw the use of large scale integration (LSI-1000 devices per chip) and very large scale integration (VLSI-100,000 devices per chip) in the construction of computing elements. At this scale entire processors will fit into a single chip and for simple systems the entire computer (processor, main memory and I/O controllers) can fit on one chip. Gate delays dropped to about Ins per gate.

Semi conductor memories replaced core memories as the main memory in most systems; until this time the use of semiconductor memory in most system was limited to registers and cache. During this period, high speed vector processors, such as the CRAY1, CRAY X-MP and CYBER 205 dominated the high performance computing scene. Computers with large main memory, such as the CRAY 2, began to emerge. A variety of parallel architectures began to appear however, during this period the parallel computing efforts were of a mostly experimental nature and most computational science was carried out on vector processors. Microcomputers and workstations were introduced and saw wide use as alternatives to time-shared mainframe computers.

Developments in software include very high level language such as FP(Functional Programming) and Prolog (programming in logic). These languages tend to use a declarative programming style as opposed to the imperative style of Pascal, C. FORTRAN, et al. in a declarative style, a programmer gives a mathematical specification of what should be computed, leaving many details of how it should be computed to the compiler and /or runtime system. These languages are not yet in wide use, but are very promising as notations for programs that will run on massively parallel computers (systems with over 1,000 processors). Compilers for established languages started to use sophisticated optimization techniques to improve codes, and compilers for vector processors were able to vectorize simple loops (turn loops into single instructions that would initiate an operation over an entire vector).

Balogun, daramola, obe, Ojokoh and Oluwadare (2006) maintains that two important events marked the early part of the third generation: the development of the C programming language and the UNIX operating system, both at Bell Labs. In 1972, Dennis Ritchie, seeking to meet the design goals of CPL and generalize Thompson's B, developed the C language. Thompson and Ritchie men used C to write a version of UNIX for the DEC PDP-!!. This C-based UNIX was soon ported to many different computers, relieving users from having to learn a new operating system each time they change computer hardware. UNIX or a derivative of UNIX is now a defacto standard on virtually every computer system.

An important event in the development of computational science was the publication of the lax report. In 1982, the US Department of Defense (DOD) and National Science Foundation (NSF) sponsored a panel on Large Scale Computing in science and Engineering, Chaired by Peter D.Lax. The Lax Report stated that aggregative and focused foreign initiatives in high performance computing, especially in Japan, were in sharp contrast to the absence of coordinated national attention in the United States. The report noted that university researchers had inadequate access to high performance computers. One of the first and most visible of the responses to the Lax report was the establishment of the NSF supercomputing centers. Phase 1 on this NSF program was designed to encourage the use of high performance computing at American universities by making cycles and training on three (and later six) existing supercomputers immediately available.

Fifth Generation (1984-1990)

Toward the end of this period, a third type of parallel processor was introduced to the market. In this style of machine, known as a data-parallel or SIMD, there are several thousand very simple processors. Transitions between generations in computer technology are hard to define, especially as they are taking place. Some changes, such as the switch from vacuum to tubes to transistors, are immediately apparent as fundamental changes, but others are clear only in retrospect. Many of the developments in computer systems since 1990 reflect gradual improvements over established systems, and thus it is hard to claim they represent a transition to a new "generation", but other developments will prove to be significant changes.

Concept of Computer science

Computer science is systematic study of an electronic device which is manufactured to accept an ordered sequence of instruction given to it in an appropriate language. Abdullahi (2004) says that computer science is one of science subjects that deals with the study of a machine that can receive instructions, carry out these instructions and give feedback on its actions. Computer in education can be defined as the process of training and instructing children and young people on how to use and operate to develop basic skills in computing and making contributions to the society.

- To develop computer attitude
- To develop interest in the appreciation of the plan of life through the computer
- To develop or help the students acquire scientific methods of solving problems
- To also help the students acquire useful knowledge of computer scientific principles
- To expose students to hand –on experience using programmed package that are relevant to the interest of the pupils as teaching aids indifferent subjects.
- To develop an understanding of the concept of different computer languages and their applications..

Importance and Application of Computer science

With reference to the definition of computers as electronic devices that are capable of accepting data into memory and perform the operations to produce the result at a very fast speed. Ezeliora (2004), the knowledge of computer can be applied in many areas such as;

Business Applications

Computers are used in almost every field of business. With the knowledge of computer science, you can process information in a fraction of the time it would take to perform the same type of calculation manually, using a computer. Business activities like controlling inventory levels, billing customers for services and products, calculating payroll and taxes for inventory and supplies are been done better with the aid of computer. Computerized robots are used to paint; weld fastens and attaches parts along the assembling line. Online banking would not be possible without a computer and even if a computer is present, a computer literate is needed to operate it.

Office Automation

Today many companies are employing computer literates to stream line office operations, perform word processing, electronically handle mails, messages and handle electronic voice storage and forwarding.

Computer through the use of television-like devices can hold meetings so employees can watch and hear the other speakers. Automated office computer systems allow the worker to access data through computer. Authorized users get information almost instantly. All these would not work effectively if the workers were not computer science literates.

Health care

Computers help doctors do their jobs faster and more accurately. In hospitals, computers keep records, monitor patients, schedule operations, order supplies, bill patients and pay employees. Only few years ago, twenty-four nursing care was needed for a critically ill patient, but now computers are being used in intensive care and coronary care units to analyzed patients statistics. This computerized monitoring system frees the nurse from constant watch over the patient. The computers provide an immediate alarm if something goes wrong, allowing the nurse to react promptly, these doctors and nurses have to be taught computer studies to

be able to operate the computer. Therefore there is need for the effective and normalizing computer as a subject in secondary school curriculum so that they are being taught at an early stage.

Computer Education

The use of computer in educational sector provides a teaching medium that can result to more effective learning based on the concept of students learning In schools, computers are used to teach students in various subjects or courses to test their intelligent quotient (IQ) and grade them. Similarly, the teachers use application packages known as computer assisted instruction (CAI) to teach most of their major subjects. The computer programmes display one at a time, the facts and explanations the students are to learn. The programme frequently asks questions. Based on the answers from the students, it can review the materials the students have not understood well. It can also explain previously covered materials in depth or skip materials already understood by students. In most cases, the programme decides what materials to present.
Here the computer serves as the teacher, tutor or instructor to the students. The students followed set of instructions as been displayed on the computer in which they will be graded accordingly Presenting educational materials in a navigable form

- Assessing individual capabilities with a pre-test.
- Providing repetitive drills to improve the participant's command of knowledge.
- Recall on individual's score and progress for later inspection by a course ware instructor
- Providing game based drill to increase teaching.

Computer is used in making students multiple-choice questions as well as in the administrative sectors where students' records are being put in database.
More so, computer is used in the allocation of courses to teachers and computation of results of students in schools. In fact, in many schools where computer is lacking, keeping of students' records suffer severely especially when disasters occur like stealing or fire outbreak, this will condemn majority of students; data and even secret information concerning the progress of the school. It is also used in processing students' admission, students' records, stocks and human inventories, library services example online libraries, school timetables and host of other schools administrative operation.
These problems may be summarized as follows:

a. Lack of Qualified Computer Science Teachers:
b. Method of Teaching
c. Lack of Instructional Materials
d. Attitude of School Administration
e. Perception of Computer science among Students
f. High Cost of Computer system
g. Lack of Funds

a. Lack of Qualified Computer Science Teachers;

This is the greatest problem that has affected the effective teaching of this subject. It is often said that the quality of education is determined by the quality of teachers. The quality of any teaching therefore depends on the quality of teachers (Poola: 1999). This means that a highly qualifies teacher certainly impact high standard of education to the students but the problem remains the sufficient well-equipped or highly qualified and competent computer teachers are lacking in secondary schools today. For effective teaching and learning to take place, there must be well qualified and competent teachers who will handle and teach the students effectively. Oyebanji (2003) stated that the performance of students depend to a large extent on the competence of teachers. Computer science contributes to the objectives of self-realization of an individual. Work offered in computer science studies enables the students to improve their abilities to solve problems in the world. Lack of sufficient practically oriented technical teachers who would arouse and sustain students' interest is a serious setback in the progress of computer science as a field of study. Most schools lack computer literate teachers and experts that would support and mange the applications of computing in the teaching-learning process. The lack of computer literate

teachers might not be unconnected with the non-inclusion of ICT in teachers training programme in school curriculum at all level of education in Nigeria. The main problem facing Nigeria and its computer science program is work-force training (Goshit: 2006). Teaching as a profession in Nigeria is considered to be for poor people. Therefore, the few professional teachers that are available prefer to work in schools where they can earn better salaries. With these deplorable conditions we have little or no qualified teachers of computer science. Specifically, writing on the findings of Annie (2006), the qualification of computer teachers is based on the following:

1. Computer skill
2. Technical related guidance
3. Computer work experience
4. Degree of college certificate
5. Teaching preparation and experience
6. Abilities and public relations
7. Personal/social characteristics

A computer teacher without the above qualifications will be ineffective in his /her teaching. Ukeje (1997) commented that there is direct relationship between the quality of the teaching personnel and the quality of the educational process. He maintained that in fact the defect of the present Nigeria educational system is partially the result of poor teaching. There cannot be good students unless there are good teachers. Some teachers are professionally qualified quite alright but lack the relevant skills. The commitment and practical orientation requires for effective teaching of science and technical courses.

The computer teachers' role is to facilitate learning experience and it is hoped that the teacher would be able to lead the students towards an appreciation and understanding of computer science and its method by use of good teaching methods which comprise of practical part of teaching. The methods are lecture method, text book teaching methods, class activity and so on. Laboratory method which involves the use of mouse, clicking and manipulation of keyboard and also taking close watch on figures on the screen.

From the above, teachers need to acquire the best method to teach, vary his/her method to suit the learning environment and create room for questions, reinforcement and set induction in order to arrive at the most appropriate method of teaching.

b. Lack of Instructional Materials

Lack of instructional materials also contributes to the problems facing the teaching of computer science in secondary schools. Instructional materials are those facilities which help the teacher to derive home his point while teaching. Teaching tools make teaching interesting and effective. According to Nwankwo (2003), lack of instructional materials would create a poor image to both students and teachers.

The attitudes of the school administration towards the teaching of computer science some how influences it. The Governments itself have not made effective provision concerning computer studies, teachers and computer equipment. It can be said that the slow progress experienced in the study of computer science is due to ignorance of the school administration and also Government. The school management must be able to buy and keep necessary equipment in the laboratory and will be put to use when required. Evoh (2007) stated that many of those who occupied the exalted positions of education planning in most federal and state ministry of education are inexperience teachers and principals who have no formal training as educational administrators and planners, poor planning and management affect the implementations of computer science in secondary schools due to the facts that planning and management of computer science are placed in the hands of unqualified teachers and principals who are not professionally trained or oriented in the field of computer science.

c. Perception of Computer Science among Students

There is a wide spread ignorance and misconception about computer amongst Nigerian students (Okwudishu: 2005). One of the major inhibitors to Nigerian schools fully embracing computer science is that the average Nigerian lack general exposure to the importance and benefits of computer science in education..

There is a mystifying belief among students about the exceptional difficulties associated with learning of science and technology. Students' attitude influences the teaching of computer science. Attitude is sometimes taken to be readiness to act in certain way expressed by a personal word, gesture or facial expression. It is what we input to a person on the basis of our expectation and tentative deduction of further behavior. It is rather unfortunate that students' perception and attitude towards computer science is bad. Due to students' poor perception of computer science, they tend to lose interest in the study of computer,' service toward the use of ICT in teaching stated that in the acquisition for any skill, there must be interest. It is only when there is interest that the person will perform well despite its complexity. But some of the students still lack interest in computer science and this is a point to low progress recorded in the study of computer science in the secondary schools. Most Nigerian students see computer science as something unfamiliar, distant and mysterious. Rather than being seen as a tool for personal and national development, computer science is seen as a hurdle.

d. High Cost of Computer System

The rate of purchase of computer system is astronomically high that some schools or individuals cannot afford the price of obtaining a computer system. Computer is always imported, the price tariffs of importation of such goods are considered by importers before giving it a price. In developed countries, individuals and schools kids owns a computer system in homes.

Data Analysis

Data collected were analyzed to test the research questions and to arrive at logical conclusion using the techniques described earlier.

Research Question 1; What are the difference between the opinions of teachers about the students taught by qualified teachers and those taught by non-experts?

Table .1

Response	Frequency	Percentage
SA	42	40.4%
A	31	29.8%
D	12	11.5%
SD	10	9.6%
UD	9	8.7%
Total	!04	100%

From the table above, 42 (40.4%) respondents strongly agreed on the opinions of teachers about the student taught by qualified teachers and those taught by non-experts, 31(29.8%) respondents agreed on the opinions of teachers about students taught by qualified teachers and those taught by non-expert, 12(11.5%) respondents disagreed on the opinions of teachers about the students taught by qualified teachers and those taught by non-experts and 10(9.6%) respondents strongly disagreed on the opinions of teachers about non-experts, 9(8.7%) respondents were undecided.

Research Question 2; What is the difference between the opinions of teachers about the students taught using instructional materials and those taught without them?

Table .1

Response	Frequency	Percentage
SA	32	30.8%
A	40	38.5%

D	14	13.5%
SD	10	9.5%
UD	8	7.7%
Total	!04	100%

From the above table above, 32 (30.8%) respondents strongly agreed on the opinions of teachers about the students taught using instructional materials and those taught without them, 40 (38.5%) respondents agreed on the opinions of the teachers about the students taught using instructional materials and those taught with them, where 14(13.5%) respondents disagreed on the opinions of teachers about student taught using instructional materials and those taught without them, 10 (9.5%) respondents strongly disagreed on the opinions of teachers about the students taught using instructional materials and those taught without them, 8 (7.7%) respondents were undecided.

Research Question 3; What is the effect of time allocated the teaching of computer science on the output?

Table .1

Response	Frequency	Percentage
SA	32	30.8%
A	34	32.7%
D	12	11.5%
SD	10	9.6%
UD	16	15.4%
Total	!04	100%

From the table above, 32(30.6%) respondents strongly agreed that a single period will not be enough for teaching computer science, 34(32.7%) respondents agreed that a single period will not be enough for teaching computer science where 12(11.5% respondents disagreed that a single period will not be enough for teaching of computer science, 10(9.6%) strongly disagreed that a single period will not be enough for teaching computer science, 16 (15.4%) respondents were undecided.

Research Question 4; What is the effect of Government funding computer science programme on the methods of teaching computer science?

Table 4

Response	Frequency	Percentage
SA	34	32.7%
A	25	24.0%
D	19	18.3%
SD	14	13.5%
UD	12	11.5%
Total	!04	100%

From the table above, 34(32.7%) respondents strongly agreed that schools receiving funds from Government will prove more than those not funded by the Government, 25 (24.0%) respondents agreed that schools receiving funds fund Government will improve more than those that do not receive fund from the Government; where 19(18.3%) disagreed that schools receiving fund from the government will improve more than those not funded by Government and 14 (13.5%) respondents strongly disagreed that schools receiving fund from Government will improve more than those not funded by the Government, 12(11.5%) respondents were undecided.

Research Hypotheses

There is no significant difference between the opinions teachers have about students taught by qualified teachers and those taught by non-experts:

From table 1.2, the finding shows that there is difference between the student taught by qualified teacher and those taught by non-experts. Therefore, the hypothesis stated is rejected and can be restated; "there is a significant difference between the opinions of teachers about students taught by qualified teachers and those taught by non-experts". This is in agrees Oyebanji (2003) who stated that the performance of the students depends to a large extent on the competence of teachers. This means that highly qualified teachers certainly impact high standard of education and low qualified teachers certainly impact low standard of education.

There is no significant difference between the opinions of teachers about students taught using instructional materials and those taught without them.
From the table above, the finding shows that there is difference between the students taught using necessary instructional materials and those taught with them. Therefore, the hypothesis stated is rejected and can be restated as; "there is significant difference between the opinions of teachers about students taught using instructional materials and those taught with them". This is in line with Anyanwu (1999) who stated that if a teacher wants to be effective he/she is bound to make use of a variety of instructional materials like textbooks, student guide, pictures and so on. Lack of the instructional materials mentioned above has created problems in teaching of computer concepts. These computer concepts would have been easier for students to understand if visual materials have been used to concertize them.
There s no significant difference between the work coverage in a single period and that of double period allocation on the time table.

From table 3.2, the findings show that there is difference between the work coverage in a single period and that of double period allocation on the time table. Therefore, the hypothesis stated is rejected and restated as; "there is significant difference between the work coverage in a single period and that and double period allocation on the time table". This is in line with Okorie (2001) who stated that the time given to each teacher to teach a topic is too short and because the teacher cannot or has limited time to demonstrate, he chooses to use the lecture method. Also extra lessons are not offered to students to do more of practical work.

There are no significant differences between the methods of teaching computer science in schools receiving funds from Government and those not funded by Government.
From table 4.2, the findings show that there is difference between the method of teaching computer science in schools receiving fund from Government and those not funded by the Government. Therefore the hypothesis is rejected and restated as; "there is significant difference between the methods of teaching computer science in schools receiving fund from Government and those not funded by the Government". This is in line with Olaitan (1996) who stated that no educational program can be successful in face of inadequate funding. Educational funding in Nigeria has been dwindling in recent times due to either the principals or the top officials or proliferation of schools.

Conclusion

Having identified some of the problems facing the teaching of computer science in the secondary schools. Furthermore, the study implies that if these problems are solved, it will help in exposing the students to a better understanding of the scientific age because they are the future leaders of the nation.

Recommendations; the following recommendation are made:

1. The Government should provide funds to the secondary schools for building of computer science laboratory, purchasing of both computers and also computer textbooks that will be kept in the school libraries.
2. Seminars and workshops should be organized for the serving computer teachers. This will help to improve the quality of the teachers who are concurrently teaching computer science.

3. The teacher should be trained and retrained on different teaching methods that are available. These methods include discussion method, laboratory method, group method where the students will be given problem to solve or activities to carry out by themselves. Examples, using basic programming language to computer simple quadratic equation.
4. Adequate time should be allocated to the teaching of computer science.
5. Government should take practical steps to ensure that qualified computer teachers are employed and retained. Priority should be given to computer science graduates' during the employment of computer teachers.

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