**My PGDE Thesis Report**

**29th September, 2023**

**Utilization of Computer I.T, as a Tool for Changing the Face of Education.**

**“A Case Study of Kosofe Education Districts”**

**ABSTRACT**

The computer, internet and the ICT have changed our lives in many aspects. We live, surrounded by information, resources, experiences and knowledge that other people share with us through the internet. The internet facilities encourage students, professionals, programmers, and teachers to (search for and) build on other people’s experiences to tackle errors and problems encountered. Search to re-use or alter someone’s code instead of developing new code from scratch. Teachers and students can for instance, look for pedagogical demonstration, simulations, tutorials, explanations and exercises to improve the teaching and understanding of certain knowledge.

Then again, the advent of internet, however and in particular what we call “Web 3.0” , has so significantly changed our relationship to information and our own personal learning opportunities outside of formal education ,we are beginning to see a set of software tools emerge which profoundly alter both learning processes and outcomes. These tools allow us to see the start of a radical evolution in education that will bring such dramatic changes that will soon be at a point where we won’t be able to imagine education without them.

What makes this coming transformation both fascinating and so compellingly logical is the way in which the web has changed our personal learning opportunities. I could remember when I was a child riding my bike to the library or the bookstore so I could read about whatever topic was of interest to me at the time. And while it seemed that there was always more to read than I had the time for, that information landscape now seems amazingly limited in the light of internet’s ability to bring us so much information, almost regard for time, place or even cost.

The aim of this study is to identify the issues related to integrating computer technologies into a centralized education system. Data were collected from seventeen (17) principals, fifteen (15) coordinators of schools, and one hundred (100) secondary school students. The sources of data included an achievement test and a questionnaire. By using content analysis, the following was identified: infrastructures, personnel, curriculum, administration and supervision. By improving these areas, classroom experiences will be more effective.

# CHAPTER ONE

# INTRODUCTION

## BACKGROUND TO THE STUDY

The face of education is changing rapidly as a direct result of innovative computer technology. Gone are the days of studying repetitive exercises from old copies of books, an example is “the first aid in English”, while chalk dust floats on the air. The students of today are more likely to find themselves in front of the computer screen rather than a blackboard.

As the tool of education change, so too does the nature of learning and the acquisition of knowledge. Learning by drill and memorization replaced by more constructive learning methods that teach the students to be more enquiring and analytical driven. Indeed the new technology is striving to provide the tools which will best facilitate this type of collaborative learning. Thus the traditional classroom structure is changing for both the pupils and the instructors.

Furthermore, the future of computers has always played an important role in our lives because of the myriad tasks required of us. Today we can read online, find quotes from different plays and information on social media, movie and so on and so forth.

In recent times, the world has witnessed a rapid increase in technological innovations with educational institutions and homes spending considerable sums of money on computers, software, internet connections, and other technology for educational purposes (Education, U.S. Department of, 2012). These modern technologies promise to transform the traditional classroom into a digital classroom aimed at giving learners a more enjoyable learning experience (Garavaglia, Garzia, & Petti, 2013). The introduction of computers and their related technologies commonly known as Information and Communication Technologies (ICT) into education ushers learners into the information era and promises to broaden learners' experiences (Mandoga, Matswetu, & Mhishi, 2013). In most developed countries, the use of computer-related technology in education is a reality. In the USA for instance, in almost every public school, computers with internet access are available for instructional purposes (Education, U.S. Department of, 2012). This is because the introduction of computer-related technologies in education has improved both teachers' and learners' skills and knowledge of ICT, promoted knowledge sharing, and facilitated teaching and learning in schools (Danso & Kesseh, 2016). Computer-related technologies are very powerful technological tools and resources in the hands of the teachers and learners which take learning beyond the boundary of the physical classrooms, support and transform it positively (Peprah, 2016). With the use of technologies

In conclusion computer is very necessary in the lives of every individual especially as students, computer is an aid to knowledge and aids individualized instruction.

Globally, education is accepted as the most viable tool for effecting any desired change in the human society, based on the importance associated with education.  In recent years, there have been calls for the changes in educational curriculum in other to improve the quality of education to a sufficiently train teachers (Braathen & Robles, 2000; Brown, 2000). The process of teaching and learning ought to be logical and systematic as recommended by scholars (Johnson, 2005; Igbaria & Chakrabarti, 1990). This implies that the process of impacting knowledge ought to be characterized by diverse organized teaching methods which can lead to actualization of specific learning objectives.

Therefore, technology offers teachers the ability to transform the quality of instruction to achieve instructive aims and objectives. Teachers are required to become computer literate and integrate emerging computer technology into their teaching process. Thus, computers are seen as new phenomenon in education, it is important for educators to understand what level of impact teachers degrees of computer self-efficacy have on their teaching.

The use of computers in education has opens new areas of knowledge and skills that have the potentials to change some of the existing educational methods.  Teachers’ are the key to any effective integration of this resource in the educational system. As the use of computer continues to increase in the society, teachers’ can also prepare for the use of computers within their classroom. In a nutshell, it has become the responsibility of higher education to prepare teachers that are capable of using technology in effective and efficient ways to positively influence student achievement.

Tschannen-Moran, Woolfolk Hoy and Hoy (2000) stated that, the efficacy beliefs of teachers are related to their instructional practices and students’ achievement. For instance, research has shown that teachers’ attitudes towards modern technologies considerably influence their effective use of these technologies at school.  Technology can foster a shift in the teacher role from a traditional one to that of facilitator in the classroom. In addition, technology can impact students to become more active learners during the learning process (Ota, 2009).

Sam, Othman and Nordin (2005) noted that the current trends in instructional processes are undergoing immeasurable changes and transformation through the convergence of computer technology advancements and innovations. It is expected that teachers should possess a wide range of computer skills for teaching excellence.

Ololube (2005) stated that the quality of teachers is known in virtually all countries to be a key predictor of students learning. A report by Software and Information Industry Association (2000), sums up research into educational technology over the last 20 years, It is mentioned that teachers are more effective after receiving extensive training for integrating technology into school curriculum. In the same publication, it is also reported that teachers who have successfully used communication technologies such as e-mail, newsgroups and mailing lists to exchange ideas on educational matters, demonstrate greater progress in self-efficacy and confidence in their teaching abilities compared to teachers lacking access to such tool.

Kinzie, Delcourt, and Powers (1994) defined self-efficacy as an individual’s confidence in his/her ability to perform a task for producing specific outcome, which may impact personal engagement, effort, and persistence. Tschamnen-Moran and Hoy (2001) stated that only teachers who have strong sense of self-efficacy are more open to new ideas and they are more willing to experiment with new methods at the same time offering students new and different learning opportunities or experiences. Indeed, a teacher is one of the important reasons in contributing to the failure or success of integrating computer in teaching and learning (Lim &Khine, 2006).

Within this context, computer self-efficacy is a specific type of self-efficacy referring to a belief of one’s capability to use the computer ( Higgins, 1995). A strong sense of computer self-efficacy of school teachers can affect the extent as well as the way technology can be used in everyday instructional practices, significantly changing both the teacher’s and the student’s roles. Likewise, Seferoglu (2007) believes that computer selfefficacy enables teachers to approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Therefore, computer self-efficacy offers teachers the predisposed confidence in tackling complicated tasks, seeking ways to learn and mastering techniques to overcome instructive difficulties rather than shunning them.

Topkaya (2010) suggested that high computer self-efficacy can lead to more computer use in classroom. Consequently, it affects the student’s positively. Seeing the teachers’ capabilities in overcoming challenges in relation to classroom computer use can motivate them to behave likewise. Lawai (2011), indicates that computer skills can brings effective gathering, processing, storing and retrieval of necessary data in the school.

Computer literacy among teachers will help them to take full advantage of the potential of technology to enhance students’ learning as well as their professional growth. However, lessons and activities could be explored through the internet. Therefore, teacher computer self-efficacy might determine to a considerable extent the ability to develop such technologies which is an important educational skill.

For instance, PowerPoint could be used by the teachers to bring about step by step instructions with graphics designed to walk students through the creation of presentation. Also, PowerPoint can capture student’s attention and keep them interested. In the areas of visual poetry activity, students read a favorite poem and create a PowerPoint presentation depicting in a visual interpretation of the images in the poem. Furthermore, Internet such as e-mail has become an integral part of many instructional settings, particularly in large classes and courses toward information exchange than skill development. It is an highly effective skills which can aid learning, teachers can communicate to their students’ by sending information regarded to the goal of education. But if not used carefully, it may disengage students and actually hinder learning. Pierson (2001) stated that society does not simply need teachers who know how to use computers but rather exemplary teachers who know how to effectively use all tool at their disposal for the learning benefit of students.

Adesine (1987) recognized teachers as the heart of Nigeria’s educational system at all levels. Teachers continue to be the major determinants of quality education, be it at the primary, secondary or tertiary level. Federal Republic of Nigeria (FRN, 2013), revised national policy on education confirmed that, equal and adequate educational opportunities at all levels of education should be given to these who are willing to learn. Similarly, National Curriculum Association Conference that was held in 1969, described teachers as the key in the entire educational program. Ogoni, (2003) suggests that teachers need skills that can assist them to carry out their duties efficiently. Hence whenever there are loopholes in the educational processes teachers tend to receive more blame for these shortcomings than any other agent connected with educational activities. Moreover, teacher’s self- efficacy on computer skills will improve their quality of teaching.  Example, teachers’ confidence in their personal computer use could affect students through vicarious experience (Signer, 2004). For instance, teacher’s computer self- efficacy is measured by the performance of students in the classrooms. Moreover, it increased students sensitivity to the costs of seeking and giving help to teachers (Bandura,1999). So Odakand Podell (1998), stated that teachers with high self- efficacy are more likely to provide additional support for epics the difficult to teach student. Ashton, Webb and Doda (1983), stated high efficacy teacher is more likely to persist through obstacles, seeing these as temporary impediments rather than as evidence of an inability to accomplish professional goals.

In the previous years, classrooms were a cycle of memorization, repetition and note copying, but now, the world is increasingly shaped by ICT which is leading to radical reorganization of entire educational sector from olden days practice. Right from childhood, most privileged children are exposed to modern means of learning and information sharing such as television, computer game; smart phones cartoons, and other ICT related resources.  This is why Webster and Martocchio (1992) posited that the higher the computer selfefficacy, the better individuals are likely to be positively disposed in using computers skills.

Zhiwen and Jietian (1986) pointed out that students’ who interact with the computers’ had more favorable attitude toward learning than those who never had such opportunity. Therefore, it is expected that teachers should possess a wide range of computer skills for teaching excellence.

## 1.1 STATEMENT OF THE PROBLEM

It is believed that integrating computer technologies into the education system, effective knowledge and better communication will be the end –product in the changing, professional and personal circumstances of life especially after graduation. Hence this research sought to access the extent to which the integration of computer technologies will enable students to perform excellently their academic work and in the future.

## 1.2 SIGNIFICANCE OF THE STUDY

Life has been made simple and world has been made a pleasurable place by the advent of the computer. We could not imagine a day without computer.

PRLog (press Release) – May 22, 2010 “In today’s world computer has become an essential part of our lives and it is our best companion. Most of the time we spend with it where ever we are marketing, banking, educating, communication etc is done with the help of the computer”.

Furthermore, E- education also known as e-learning and online education in this competing world the student has to learn a lot. Everything cannot be taught by the teacher in school. To face big challenges in life, students take up extra learning which can be done through computers. Communication plays a pivotal role in life. Example, communicating with people overseas was a herculean task before the arrival of computers. Today just by a mere click we can communicate directly with people in any part of the globe. It has become very user friendly and so on; even a three-year-old kid can operate it. In today’s world we rarely find children playing on the grounds and parks. The birth of electronic gadgets and computer games have made the children stick to it. Kids have great zeal towards the arrival of new games in the market. Computers are ubiquitous. The laptops are very portable and can be taken wherever we go. It is use for recreational, purpose also like listening to music, chatting, browsing etc. Thus a day without computer is like a day without sunrise.

## 1.3 SCOPE OF THE STUDY

This research studies were carried out in some formal school settings in Kosofe local education district 11 area of Lagos state. It involves seventeen (10) principals, fifteen (8) coordinators and one hundred (100) students of various public secondary schools in the above local education district of Lagos State. The source of data includes; semi – structured interview and a survey.

## 1.4 PURPOSE OF THE STUDY

This research is being carried out in order to access the effect of integrating computers into schools. Thereby improving student’s ability in science and technology to develop the country and to specifically;

i. build a solid foundation science subjects in order to help learners build onto it for future challenges.

ii. to vigorously assist learners in their academic performance especially in all science courses.

iii. Lastly to encourage the use of computers in all schools and not just the theoretical aspect.

## 1.5 LIMITATION OF THE STUDY

Due to time factor and financial constrain amongst others, like inability of the researcher to cover a wide range and unavailability of materials, this study is limited to integrating computers into schools.

## 1.6 THEORITICAL DEFINITION OF TERMS

COMPUTER: An electronic contrivance which solves problems and does complicated calculations by processing data according to prescribed programmed instructions and then produces and /or retains the outcome of these processes.

TECHNOLOGY: this is the branch of knowledge that deals with the industrial arts and sciences; utilization of such knowledge, the knowledge and means used to produce the material necessities of a society; the terminology of arts and science, technical nomenclature etc.

EDUCATION: the process of imparting or acquiring skills for a particular trade or profession; a kind of schooling; instruction and discipline in general; erudition, the academic discipline dealing with teaching and learning methods in schools.

ICT: is an acronym for Information and Communication Technology. It is retrieve manipulation, transmission or receipt of digital data.

**COMPUTER SKILLS:**Refers to teachers’ competence in the use of computer application package for teaching and learning process.

**COMPUTER SELF-EFFICACY:**refers to the skills possessed by secondary schools teachers on the use computer application package for teaching and learning process.

**SELF-EFFICACY:**refers to self-confidence in one’s ability to make use of computer application package, specifically genetic software (MS word, Excel, PowerPoint and Internet).

**POWERPOINT:** refers to software that enables secondary schools teachers to create presentations, texts, graphics, pictures and sound in the presentation of information to the learners.

**MICROSOFT WORD**: refers to skills possessed by secondary schools teachers which they can use to create documents such as lesson note, lesson plan, letters, manuals and reports.  **Microsoft Excel**: is an electronic spreadsheet skills possessed by secondary schools teachers which can be used to organize data into rows and columns such as tabulation of examination results, class attendance, generate graphics

# CHAPTER TWO

# LITERATURE REVIEW

2.0 INTRODUCTION

The basic purpose of literature review is remains constant, it provides context for the research , justify the research and ensure the research meet the purpose for which it been written, also highlight the flaws in previous research, therefore, the following are the sub heading for other sub topics.

**2.1 The importance of computer and IT in education in the future**

**2.2 History of computers till 1900s**

**2.3 Computers in the 20th Century**

**2.4 ICT can play various roles in learning and teaching**

**2.5 Benefits from using Computer and IT in education**

**2.1 The importance of computer and IT in education in the future**

Computer and Information communication technology (ICT) has become an important part of most organizations these days (Zhang & Aikman, 2007). Computers began to be placed in schools in the early 1980s, and several researchers suggest that ICT will be an important part of education for the next generation as well (Bransford, Brown, & Cocking, 2000; Grimus, 2000 Yelland, 2001). Modern technology offers many means of improving teaching and learning in the classroom (Lefebvre, Deaudelin & Loiselle, 2006. Dawes (2001) is of the view that new technologies have the potential to support education across the curriculum and provide opportunities for effective communication between teachers and students in ways which has not been possible before. ICT in education has the potential to be influential in bringing about changes in Ways of teaching.

**2.2 History of computers till 1900s**

Computers are the result of a long history of mathematical explorations and innovations. They have their earliest roots in primitive systems of counting that relied on fingers and toes or stones to enumerate objects. Historically, the most pertinent early counting instrument is the abacus, which has been known and widely used for more than 2000years. It is simply a wooden rack holding parallel wires on which beads are strung. When these beads are manipulated, (moving along the wire) according to programming rules that is the user must memorize all ordinary arithmetic operations that can be performed. Another computing instrument astrolabe was also in use about 2000years ago, for navigation. Blaise Pascal is widely credited with building the first digital calculating machine in 1642, performed only the addition of numbers entered by dials and was intended to help his father who was a tax collector. In 1671, Gottfried Wilhelm von Leibniz invented a computer that was built in 1694. This machine could add, and successive adding and shifting , multiply, Leibniz invented a special stepped gear mechanism for introducing the added digits and this mechanism is still used. Also the machine of Leibniz was to some extent a forerunner of the mechanical desk calculator invented by Charles X de Comar in1820. The first real computer did not change the world. It was never built, it existed in the imaginative detail, in the mind of a grumpy English mathematics teacher by name Charles Babbage during the time of the civil war. He have flare for problems and puzzles, just like the computer people of today. He taught himself arithmetic and when he went to college, he understands algebra better than his teacher. He invented speedometers and a machine for playing tic-tac-toe. He later built an adding machine that could solve a particular kind of problem. Then he designed an analytical engine that could solve any kind of arithmetic problem. Charles Babbage put together the idea of instructions sorted in punched cards with the idea of a calculating machine. To set up the machine to solve a new problem, weave a new arithmetic pattern he could just change cards. The two ideas added up to a sum vastly greater than its parts. Babbage’s head hold the first true computer. His design was practical, but required cog wheels and gears and other parts which the mechanists of his time could not produce and as a result, the analytical engine had to wait a hundred years to be translated from a brilliant idea to working machine.

The next motivating invention was the census machine of Herman Hollerith. In the late nineteenth (19TH) century , census taking had become a major task, the tabulation of sucha vast amount of data was slow and problematical. In an effort to find a faster way to compile raw statistical data, the census Bureau sponsored a contest. Hollerith’s device was the most effective and practical chosen.

Hollerith designed a device that read data from punched cards and kept track of the count.

The keypunch system of data processing was popular for myriad years, although recently it has succumbed to faster and less cumbersome methods. Hollerith was so successful that he left the census Bureau in 1896 to form the IBM (International Business Machine) corporation, a recognized leader in the field of data processing technology of today. This concept led to systems using electromechanical devices, in which electric power provided mechanical motion such as, for turning the wheels of an adding machine. By modern standards, the punched cards was slow, however it were an enormous step forward.

**2.3 Computers in the 20th Century**

Vanesa Bush a professor at MITbuilt and demonstrated a differential analyzer in 1930. It was large and has many gears, but it used electric motors, it worked and could be programmed to perform many different types of calculating works. Bush’s machine was also the first to use titles. His machine could store numbers or quantities of electricity in part of the system. As a result of this, Bush was named the father of electronic computer. The day of the gear – driven computer was almost over when Konrad zuse, a German engineer and Howard Aiken, a Harvard math professor, both built hybrid (part mechanical and part electronic) machines in the period between 1930 and 1950. And both used binary arithmetic and electric relays to perform math operations.

Professor Aiken worked in conjunction with IBM and had discovered Babbage’s work, the ideas were so closed to Aiken’s that he thought that he had received a personal message from the past. Professor Aiken built a computer named Mark 1, instead of using punched cards he used rolls of punched paper to tell the machine what to do. . Electricity turned the wheelsand eight hundred thousand switches, buttons and other electrical parts filled the room.

In 1942, two men and their associates were at work at the Moore school of the university of Pennsylvania on a machine which, while embodying enormous advances 2n automatic computing , was less famed that the Mark 1 if only that it was not operational until two months after the Japanese surrender and did not get credit for helping to win world war 11. The co- inventors of ENIAC (electronic numerical integrator and calculator) which was the world’s first electric computer an d these inventors were Dr. J. Prosper Eckert, an electrical engineer, and Dr. John Mauchly, a physicist. It would have been possible for to build ENIAC twelve to fifteen years earlier as it would have been possible to build Mark 1, all of the components and theory, required were in-existence except for the fact that no- one put up the money or had the incentive to do so. The patron of ENIAC was the united state government, more specifically, the army. The most significant feature of ENIAC was that it introduced vacuum tube technology, in this case calculations and operations performed by moving mechanical parts becomes something of the past. And the feature led to a greater increase of speed performance.

The first generation of computers from 1951 to 1946 was characterized by vacuum tube technology, although they were amazing devices in their times, they were large and took up valuable space, expensive in operation and required almost constant maintenance to function properly**.**

**2.4 ICT can play various roles in learning and teaching**

Several studies argue that the use of new technologies in the classroom is essential for providing opportunities for students to learn to operate in an information age. It is evident, as Yelland (2001) argued that traditional educational environments do not seem to be suitable for preparing learners to function or be producible in the workplaces of today’s society. She claimed that organizations that do not incorporate the use of new technologies in schools cannot seriously claim to prepare their students for life in the twenty – first century. This argument is supported by Grimus (2000), who pointed out that “by teaching ICT skills from the base in schools the pupils are prepared to face future developments based on proper understanding” (p. 362). Similarly, Bransford et al. (2000), reported that “what is now known about learning provides important guidelines for uses of technology which can help students and teachers develop the competencies needed for the twenty – first century” (p. 206).

ICT can play various roles in learning and teaching processes. According to Bransford et al. (2000), several studies have reviewed the literature on ICT and learning have concluded that it has great potential to enhance student achievement and teacher learning. Wong et al. (2006) point out that technology can play a part in supporting face – to - face teaching and learning in the classroom. Many researchers and theorists assert that the use of computers can help students become knowledgeable, reduce the amount of direct instruction given to them, and give teacher an opportunity to help those students with particular needs (Iding, Crosby, & Speitel, 2002; Shmatha, Peressini, & Meymaris 2004; Romeo, 2006).

While new technology can help teachers enhance their pedagogical practice, they can also assist students in their learning. According to Grabe and Grabe (2007), technologies can play a role in student skills, motivation, and knowledge. They claim that ICT can be used to present information to students and help them complete learning tasks.

According to Becta (2003, p. 10,) five factors influence the likelihood that good ICT learning opportunities will develop in schools: ICT resourcing, ICT leadership, ICT teaching, school leadership and general teaching. Becta (2003) indicated that the success of the integration of new technology into education varies from curriculum to curriculum, place to place, and class to class, depending on the way in which it is applied. In science education for example, there are some areas where ICT has been shown to have a positive impact.

Science education and ICT

In the past few decades, science curriculum has changed to match the new aims of science education and it will continue to change (Osborne & Hennessy), (2003) state that the latest move towards “teaching about science rather than teaching its content will require a significant change in its mode of teaching and an improved knowledge and understanding in both the teachers and the learners” (p. 4) They emphasize t6hat along with the changes in views on the nature of science and the role of science education, the increase in the number of ICTs offers a challenge to science teaching and learning.

Potential benefits from the use of ICT for science learning have been reported in several research studies. One of these potential benefits is the encouragement of communication and collaboration in science research activities. According to Gillespie (2006), new technologies can be used in primary science education to enable students to collect science information and interact with resources, such as images and videos, and encourage communication and collaboration. Murphy (2006) reviewed the impact of ICT on the teaching and learning of science in secondary schools. She indicated that “ the internet is used in science both as a reference source and as a means of communication” (p. 24).New technologies may also help to increase students ’motivation (Osborne & Collins, 2000)

Facilitate clearer thinking, and develop interpretation skills with data ( Newton & Rogers, 2003).

**2.5 Benefits from using Computer and IT in education**

Some benefits from using computer and IT in educational managements is that it expands the pedagogical resources available to all teachers (Al-Alwani, 2005). Pickersgill (2003)explored effective ways of using internet when teaching . He found that the case of internet access allows teachers to help students to become experts in searching for information rather than receiving facts. He claimed that it could “increase their students’ awareness of the importance of the world around them, of citizenship and of a scientifically literate community” (p. 86). Kelleher (2000) reviewed recent developments in the use of ICT in science classrooms. While he wrote that ICT cannot replace normal classroom teaching, the review indicated that ICTs could be positive forces in the classrooms for a deeper understanding.

The new ICTs have other potential benefits as tools for enhancing science teaching and learning in schools (\*Skinner & preece2003).These tools include those for data capture, multimedia software for stimulation, publishing and presentation tools, digital recording equipment, computer projection technology, and computer controlled microscopes (Osborne & Hennessy, 2003).

However, although the use of educational technologies in classroom has many advantages, current research would suggest that it is not appropriate to simply assume that the use of ICT will necessarily transform science education.

CHAPTER THREE

RESEARCH METHODOLOGY

INTRODUCTION

This research chapter considers the methods employed in carrying out the study. It describes the population, the sample and sampling techniques, research instrument, administration of instrument, the method of data collection and analysis.

RESEARCH DESIGN

This is a survey research which used ex – post facto design to examine the study, “computer changing the face of education”. An ex – post facto design is the type in which the researcher attempts to link the already existing effects or observations to some variables as causal agents. In order word, data collected after events or phenomenon under investigation has taken place .The researcher is only interested in establishing the cause effect relationship.

SAMPLING

The respondent of this study include the following : seventeen (17) principals, fifteen (15) coordinators of schools and one – hundred (100) students from twenty (20) schools selected for sampling, in formal secondary schools in Oshodi /Isolo local education district area of Lagos state.

INSTRUMENTS

The tools used to gather the data in this study are achievement test and questionnaires. This achievement test contained only one section in which the computer skills achievement test was administered. Each of the achievement tests administered to the junior and senior secondary school students consisting of twenty (20) and fifteen (15) items respectively. While the questionnaire is used to obtain data from the teachers based on the relevance of computer to teaching and learning in secondary schools .The achievement test is used to test the null hypothesis.

PROCEDURE

The researcher seeks for permission from the head of each school in order to administer the questionnaires which was administered to the respondents in their various schools. Thirty questionnaires were given out to the senior secondary school chosen while twenty (20) questionnaires were given to the junior secondary school chosen as well.

DATA ANALYSIS

The data was analyzed by using frequency correction co – efficient test, T – test and chi – square at the significant of 5% (0.05).

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

This chapter is concerned with the discussions of the data collected.

RESULTS

Is there any significant difference between the academic performance of students in the past and in the present?

1A: TABLE SHOWING THE FREQUENCY OF STUDENTS ACADEMIC PERFORMANCE IN THE PAST.

|  |  |
| --- | --- |
| MARKS (X) | FREQUENCY (F) |
| 0 | 0 |
| 1 | 3 |
| 2 | 6 |
| 3 | 8 |
| 4 | 10 |
| 5 | 8 |
| 6 | 10 |
| 7 | 7 |
| 8 | 6 |
| 9 | 5 |
| 10 | 2 |

TOTAL 65

**CHAPTER FOUR**

in the past in computer science

Table 1A: showing the frequency of the performance of students in computer science.

|  |  |
| --- | --- |
| **MARKS** | **FREQUENCY** |
| **(X)** | **(F)** |
| **0** | **0** |
| **1** | **3** |
| **2** | **6** |
| **3** | **8** |
| **4** | **10** |
| **5** | **8** |
| **6** | **10** |
| **7** | **7** |
| **8** | **6** |
| **9** | **5** |
| **10** | **2** |
| **TOTAL** | **65** |

To determine the mean and standard deviation from the above table

Table 1B: Table showing MEAN and STANDARD DEVIATION of performance of students in the past in computer science

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Marks (x)** | **F** | **Fx** | **(x-x)** | **(x-x)²** | **F(x-x)²** |
| **0** | **0** | **0** | **5.25** | **27.56** | **0** |
| **1** | **3** | **3** | **4.25** | **18.06** | **54.18** |
| **2** | **6** | **12** | **3.25** | **10.56** | **63.36** |
| **3** | **8** | **24** | **2.25** | **5.06** | **40.48** |
| **4** | **10** | **40** | **1.25** | **1.56** | **15.6** |
| **5** | **8** | **40** | **0.25** | **0.06** | **0.48** |
| **6** | **10** | **60** | **0.75** | **0.56** | **5.60** |
| **7** | **7** | **49** | **1.80** | **3.24** | **22.68** |
| **8** | **6** | **48** | **2.75** | **7.56** | **45.36** |
| **9** | **5** | **45** | **3.75** | **14.06** | **70.30** |
| **10** | **2** | **20** | **4.75** | **22.56** | **45.12** |
| **TOTAL** | **65** | **341** |  |  | **363.16** |

MEAN (X) = Ƹfx/Ƹf

X = 341/65

= 5.246 ~ 5.25

Standard Deviation (SD) = √Ƹfx(x-x)²/Ƹf

SD= √363.16/65

SD = √5.5871

SD = 2.364

SD = 2.36

Table 4.2: Table showing the frequency of the performance of female students in computer science

|  |  |
| --- | --- |
| **MARKS** | **FREQUENCY** |
| **0** | **2** |
| **1** | **2** |
| **2** | **5** |
| **3** | **6** |
| **4** | **12** |
| **5** | **8** |
| **6** | **7** |
| **7** | **5** |
| **8** | **3** |
| **9** | **3** |
| **10** | **12** |
| **TOTAL** | **65** |

To determine the mean and standard deviation from the above table

Table showing the mean and standard deviation if female students in computer science

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MARKS** | **F** | **FX** | **(X-X)** | **(X-X)²** | **F(X-X)²** |
| **0** | **2** | **0** | **5.63** | **31.69** | **63.38** |
| **1** | **2** | **2** | **4.63** | **21.44** | **42.88** |
| **2** | **5** | **10** | **3.63** | **13.18** | **65.90** |
| **3** | **6** | **18** | **2.62** | **69.17** | **415.02** |
| **4** | **12** | **48** | **1.63** | **2.66** | **31.92** |
| **5** | **8** | **40** | **0.63** | **0.39** | **3.12** |
| **6** | **7** | **42** | **1.63** | **2.66** | **18.62** |
| **7** | **5** | **35** | **2.63** | **6.92** | **34.60** |
| **8** | **3** | **24** | **3.63** | **13.18** | **39.54** |
| **9** | **3** | **27** | **4.63** | **21.44** | **64.32** |
| **10** | **12** | **120** | **5.63** | **31.69** | **380.28** |
| **TOTAL** | **65** | **366** |  |  | **1,593.68** |

Mean (X) = Ƹfx/Ƹf

X = 366/65

X = 5.63

Standard Deviation (SD) = √Ƹfx(x-x)²/Ƹf

SD = √1,593.68

SD = √24.518

SD = 4.95

T-test = X1-x2

Y = √1/N1+ 1/N2

Where Y = √N1S² + N2S²/N1 + N2 – 2

Y = √65\*5.569 + 65\*24.503/65 + 65 – 2

Y = √361.985 + 1,592.695/65 + 63

Y = √1,954.68/128

Y = √15.2709375

Y = 3.908

Y = 3.91

Table 4.2: Table showing the response of computer science with adequate methods and instructional facilities:-

|  |  |  |
| --- | --- | --- |
| Option | Number of Response | Percentage |
| Yes  No  Undecided |  | 61.25  20.25  18.25 |
| Total |  | 100 |

From the table above, the result deduced that the computer teachers used adequate methodology and instructional materials to teach the students. The result of this study also indicates that very high and positive significant relationship exists between the teachers’ method of teaching and availability of instructional materials.

Determine the mean and standard deviation from the above table.

**CHAPTER FIVE**

**Summary of findings**

**The research found that:**

i. The students in the past performed less than the current or present students due to the lack or non availability of technology ICT facilities etc then which means that there is significant difference in academic performance of students in the past and the current or present students of the total population study in computer studies.

ii. Students who are exposed to computer usage performed better in computer studies than their other counter parts.

iii. The academic performance of students selected from a school with computer assess were better than the academic performance of students who have little or no assess to computer in the school

**Educational Implication**

The findings of this study being a survey end experimental research have meaningful implication for classroom computer students, teacher and curriculum planner.

i Computer concepts taught in the classroom (theories should be linked to the computer practical or practical concepts present in the society for students to easily decipher that is too much theories with little or no practical must be avoided, rather it should less theory more practical. As people are used to recall physical events than abstracts.

ii In order to make teaching computer meaningful to students, there should be facilities, equipments, tools of various kinds available in all schools.

iii The students, teachers, school and local education district should also be involved in making computer real, since we are now in a global world and major activities of man require the knowledge of computer.

iv Also, the language of the community should used so that computer will not be seen as something far fetched but rather what they encounter in their daily activities.

v. Thus with the above educational implication, the students will move from the unknown to known, such that learning will be concretized.

**Recommendation**

The following are recommended to improve performance of students in computer studies.

**Limitation of the study**

The limitation of the study was that is was carried out in few selected schools in Oshodi Isolo Local Education District (vi) Area of Lagos state which does not give liberty for one to generalize that as it is been expected.

**Conclusions**

As humanities, student’s computers have always played a significant role in our lives, we must have many essays, write ups and assignments required of us. Today we can read a lot such as biographies, a journals reports/ news papers, magazines sports, novels like shakes spears etc, and as equally study online, find quotes and information on any field. With all of this technology present at our fingertips, we must acknowledge the facts that computer has indeed changed the face of education

Then again, student’s had little or no classes to attend because they will view their lectures via CD-ROM disks or obtain subject information via the internet.

Imagine nor even having to write your own subject papers. It is possible that with the advancements technology is making, all that students would have to do is turn on their computers, thereby all the students need to do is to ensure is make sure that the paper is handed in on time. And once the paper was finished and proofread, a copy could be sent to the professor’s computer, on time and with little effort on students’ parts

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