RELATIONSHIP BETWEEN TEACHERS SELF- EFFICACY APPLICATION PACKAGE AND CLASSROOM PRACTICE IN SENIOR SECONDARY SCHOOLS TEACHERS IN ZARIA METROPOLIS, KADUNA STATE NIGERIA

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF MASTER'S DEGREE IN EDUCATION (INSTRUCTIONAL TECHNOLOGY), DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND CURRICULUM, FACULTY OF EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA

JANUARY, 2018

DECLARATION

I hereby declare that this dissertation entitled: Relationship between teachers' self-efficacy application packages and classroom practices among senior secondary schools in Zaria, Kaduna state was written by me in the Department of Education, Instructional Technology section, under the supervision of Dr. A. I. Gambari and Dr. **S.** A. Zubairu. The information derived from the literature has been dully acknowledged in the text and a list of references provided in accordance with the rules of project presentation.

Beatrice Ovrawah PATRICK **Date**

CERTIFICATION

This Dissertation, titled: written by Patrick Ovrawah Beatrice meets part of the regulations governing the award of master degree in Education (Instructional Technology), in the Department of Educational Foundation and Curriculum, Ahmadu Bello University Zaria.

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DEDICATION

I hereby dedicate this dissertation to God Almighty, my parents Mr. and Mrs. Patrick Ovrawah for their constant prayers and provision towards the success of my study.

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ABSTRACT

This research focused on the relationship between teachers' self-efficacy application package and classroom practices in senior secondary school in Zaria zone, Kaduna state. Four objectives with corresponding research questions and hypotheses were formulated to guide the study. Survey research design was employed. The study revived related literature on teachers self-efficacy application packages and how it been used in classroom practice. The population of the study consist of 293 male and 203 female (494) senior secondary schools teachers' in Zaria zone. A sample size of 214 teachers were randomly sampled using Kreejie and Morgan sampling procedure. Questionnaire on teachers' self-efficacy application packages and classroom practices was used for data collection, it was validated by four experts from three Departments in ABU, Zaria. Thereafter, instrument was pilot tested at Government Girls Day Senior Secondary School Samaru Zaria, a reliability coefficient of .956 on teachers' self-efficacy application package was established, while Cronbatch Alpha of classroom practices is .968. Questionnaire was administered and data collected thereafter were analyzed using descriptive statistics of frequency and simple percentage for analyzing demographic data, while mean and standard deviation were used to answer the research questions. Hypotheses were tested using Spearman rank-order. The findings revealed that there is a positive relationship between teachers' computer application package self-efficacy in Microsoft Word, Microsoft Excel, PowerPoint, and Internet in classroom practices. Moreover, the research found that those teachers with high levels of self-efficacy application package do not necessarily use it. Therefore, there is a positive relationship between teachers' self-efficacy application package on the three variables and classroom practices. Based on these findings it is recommended that teachers should be given in-service professional development training on the use of computer application package to improve their classroom practices.

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CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

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 self-efficacy 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 re-organization 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 self-efficacy, 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.

Technology is changing the world around us at an unbelievable rate, these changes around the world have brought about changes in educational goals (Adeyemi, 2012). Therefore, schools are challenged not only to equip the learner with basic knowledge of concepts as far as the curriculum is concerned, such knowledge should characterizes their way of life. Robles (2000) stated that for instance, the quality of education in the pass in particular, could not be compromised with the modern days of science and technology explosion. Although some teachers are enthusiastic about using computers, other may be more apprehensive. Oden and Asim (2002) noted that any nation that ignores scientific literacy may find it difficult to fit into the world affairs, therefore, Nigeria should not be an exception. As a result all efforts must be put in place to meet up with the challenges that teaching in modern times entails as a nation. Therefore, the study investigates the relationship between computers self-efficacy and classroom practices among senior secondary schools teachers in Zaria Kaduna State.

1.2. Statement of the Problem

The problems of integration of computer into teaching and learning in Nigeria schools include: lack of adequate computers in schools, poor knowledge of computer skills by teachers, lack of infrastructure etc. In teachers' competence, teachers in Nigeria secondary schools are not competent in basic computer operation and in the use of generic software could be a major challenge. It was observed that teachers who have strong ability of self-efficacy are more open to new ideas and they are more willing to experiment with new methods in teaching and learning. It has also been observed that individual factors related to the teachers' personality, such as self-concept, motivation, computer self-efficacy and negative attitudes could also be a hindrance to successful integration and development of modern technologies in educational practice. Few schools that are equipped with computers in Nigeria lack modern software that facilitates learning in modern schools. In fact, if modern technology is been traduced into Nigeria schools, this could give teachers a good opportunity to relate theoretical knowledge to practical experiences in the classroom prompted. Moreover, Teachers will now be able to adapt to the demands and challenges of using any of the newly introduces technology into classroom practices. Therefore, with the help of curriculum planner, government agents and administrators which can create more effective staff developmental programmer can be introduced hinders prepare integrating technology in classroom practices. This research, sought to investigate the relationship between teachers self-efficacy application package and their classroom practices in senior secondary school within this region.

1.3 Objectives of the Study

The relationship between teachers' self-efficacy application package and their classroom practice in senior secondary schools in Zaria, Kaduna State.

(i) Assess the relationship between teachers' self-efficacy in using Microsoft Word and classroom practices in teaching at senior secondary schools in Zaria.

(ii) Find out the relationship between teachers' self-efficacy in using Microsoft Excel and classroom practices in teaching at senior secondary schools in Zaria.

(iii) Determine the relationship between teachers' self-efficacy in using PowerPoint and classroom practices in teaching at senior secondary schools in Zaria.

(vi) Find out the relationship between teachers' self-efficacy in using Internet and classroom practices in teaching at senior secondary schools in Zaria.

1.4 Research Questions

The following questions are formulated to guide the study:

(i) What is the relationship between teachers' self-efficacy in use of Microsoft Word application and their classroom practice in Senior Secondary Schools in Zaria?

(ii) What is the relationship between teachers' self-efficacy in the use of Microsoft Excel application and their classroom practice in Senior Secondary schools in Zaria?

(iii) What is the relationship between teachers' self-efficacy in the use of Microsoft PowerPoint application and their classroom practice in Senior Secondary schools in Zaria?

(vi) What is the relationship between teachers' self-efficacy in the use of Internet application and their classroom practice in Senior Secondary schools in Zaria?

1.5 Hypotheses

The following hypotheses were postulate for this study:

(i) There is no significant relationship between teachers' self-efficacy in using Microsoft Word and their classroom practice at Senior Secondary Schools in Zaria.

(ii) There is no significant relationship between teachers' self-efficacy in using Microsoft Excel their and classroom practice at Senior Secondary Schools in Zaria.

(iii) There is no significant relationship between teachers' self-efficacy in using PowerPoint and their classroom practice at Senior Secondary Schools in Zaria.

(iv) There is no significant relationship between teachers' self-efficacy in using Internet browsing and their classroom practice at Senior Secondary Schools in Zaria.

1.6. Significance of the Study

This study benefited both teachers, students, policy makers, curriculum planners and text books writers. The clear understanding of the impact of computer literary or computer education on educational practices would help teachers who lack the knowledge or skills in computer to engage in computer training in order to enhance their teaching skills. It can encourage the use of computers in teaching their various courses.

This study benefits and assists teachers to realize that competence is the best quality of teaching and learning process. Therefore, it serves as a reference material for further studies in integrating computer self-efficacy into classroom practice in Nigeria educational system in all the schools levels. Therefore, educational policy-makers could also introduce educational technology skills that would improve fundamentally or change it. Also the introduction of computer self-efficacy strategies in place of conventional teaching strategies would makes learning process and activities to become more easy, faster and desirable to students. The study can benefit and source of encouragement to curriculum planner to design curriculum that content aspect that will aim in producing computer literary among students.

1.7 Scope of the Study

The study is strummed to the relationship between teachers' self-efficacy and classroom practice among senior secondary schools in Zaria Educational Zone, Kaduna State. The study was limited to government senior secondary schools teachers in urban and rural areas. Teachers' self-efficacy such as the use of internet, PowerPoint skills, Microsoft excel skills and Microsoft word skills are the variables that are consider.

1.8 Operational Definition of Terms

The following terms were defined as used in this study:

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.

Internet Skills: it refers to skills possessed by secondary schools teachers which enable them to upload and download lecture material, transfer files, communicate with students and colleagues online.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter focuses on the review of related literature under the following headings: Conceptual framework, education, computer, types of computer, objective of the use of computer, the role of computer in teaching and learning process, computer in education, computer self-efficacy, factors that influenced the development of teachers computer self-efficacy, functions of computer self-efficacy in teaching and learning process, advantages and disadvantages of computer self-efficacy, implication of the use of computer self-efficacy in classroom practices, impact of computer self-efficacy towards teaching and learning, relationship between teachers computer self-efficacy and classroom practice, factors that motivate teachers self-efficacy on utilization of PowerPoint, Microsoft word, Internet and Microsoft excel, teachers opinion on how to promote the utilization of teachers self-efficacy, teachers self- efficacy on academic performance, summary.

2.2 Conceptual Frameworks

Education is a broad word with various meaning. For instance, Ema and Ajayi (2008) pointed out that, it was translated from its Latin root, 'Educo or Educare' which means to lead'. They further stated that, education implies showing the way. Abdulkareem (2013) stated that, education is the process whereby an individual would be able to develop skills to help him earn a living, improve his life and prepare him to cope with the problem of life; increase his or herself awareness so that he or she is able to understand the cause of event. Rousseau, (2006) stressed that 'schooling is a system within a society that teaches students to learn the knowledge needed to become functional members of the society as adults'. It is a process by which students gain knowledge through modalities of teaching, management of environment and the use of specific practices that allows for the best learning experiences.

Education is one of the most important single instruments of change in any society, and the main instrument of delivering such education in the school. The school has been recognized as an enduring human institution. Changes in schools, in most cases have been on physical structure rather than the condition of teachers and their students.

Olowo and Onasanga (2007) define education as the instruction or training by which people learn to develop and use their mental, moral and opportunity to acquire knowledge, skills as well as status that will enable him to escape from dull unpleasant life. According to oxford English Dictionary (2006), education is a process of teaching, training and learning, especially in schools or colleges to improve knowledge and develop skills. However it is regarded as that which is given to an individual to make him or her socially, morally sound in the community in which he/she finds himself. Education is seen as a purposive activity which should be passed on from one generation to the other; the sum total of skills and knowledge in our society (Taneja, 1990).

2.2.1 History of Computer

The first use of the word computer was recorded in 1613, which was referring to a person who carried out calculation which continued to be used until the middle of 20th century. Since civilization began, many advances made by science and technology depended on the ability to process large amounts of data and perform complex mathematical calculations. Therefore, the first generation computer was characterized by the invention of what is considered to be computer machine from (1945-1958).

The machine is very big which occupy a block of building with the number of vacuum tubes. The second generation of computer came up from (1958-1964) with transistor which revolutionized not only the industry but zrather the entire electronic engineering. It goes on from (1964-1971) came up with the third generation computers which are characterized by technological innovation of an integrated circuits (ICT) and this made computers faster, cheaper and smaller than the ones they replaced.

However, other features were the replacement of the magnetic core and magnetic drum. For instance, memories of the previous generation computers with cheap metal oxide semi coordinator with the room of fast memory access, from 1971-1982, the development of microprocessor which is a central processing unit consisting of a very large scale integration Junaidu (2013).

At this time, a wide variety of software such as data base management software and processing packages etc. are the prominent features of this generation computer. Finally, from 1983-1988, that was when the fifth generation computer was invented. The most important features is the technological advancement which witnessed the large scale integration parallel processing and artificial intelligence together with speed and power.

Computer is a machine that can program to manipulate symbols. In recent times, the use of computers in education has gained more ground. Computer use encapsulates elements like the amount of hardware and software available. Smith (2001), however reported that an individuals with computer experience determines the level of belief in their skills and confidence about using computers to accomplish tasks.

Smith (2001), Torkadesh and Dwyer (1994) stated that students level of interaction with computers are sometimes dependent on variables like gender, self-efficiency, self-concept and computer confidence. Thomas (1987) and Shavinina (1997) share the view that computer as educational technology provides productive teaching and learning in order to increase people creative and intellectual resources especially in today's information society. Consequently, computer is used by pupils to learn reading, Mathematics, social studies, Art, Science, music and so on.

Chapin and Messick (1992) stated that computer facilitates the storage, editing, retrieval and presentation of data. However, computers are not only used as means of helping schools to analysis data, they have become pervasive tools towards optimizing student's learning. For example, students are regularly using the internet to gather and assimilate information for use in research assignments. Traynos (2003) is of a view that computer are used in preparing 'electronic' presentations, using computer presentation programs and projectors. He was also of the view that many schools have incorporated interacted computer-assisted instruction into program to provide students opportunities to master specific educational objectives or standards.

Anyaogu, (1991) stated that computer simulation has also helped in business to eliminate the need for costly scale model while in engineering and sciences.

2.2.2 Types of Computer

Computer are categorized in there various types and sizes which are listed below Oliver (1993). Analogue computer; Digital computer; and Hybrid computer.

Size: (i) Micro computer, (ii) Mini computer, (iii) Mainframe computer.

2.2.3 Objectives of the use of Computer

It serves as a problem solving tool, this can be done when student use the computer to solve mathematical problem in designing. Furthermore, computer can serve as a slide-rule or a desk calculator particularly when trying to erect concrete wall. It serve as a teaching machine. This is mere sophisticated application where computer interacts tutorially with a student enabling him/her to move through the course materials at a rate and in questions contained in the materials. However, it individualized instruction.

Automated Library and information Retrieved System: Is a process of removing any obstacle between students and information making. It is possible to bring class room learning and inquiry together as one integrated process Benedict, (1995). In this way, the learner is now brought directly a wide variety of reference materials. It is postulated, (Christensen, 2004) that perception of the potential usefulness of the computer could influence attitude towards information technology. The amount of confidence a teachers possess in using information technology may greatly influence their effective implementation in the classroom. Positive teacher attitude towards computers are widely recognized as a necessary condition for effective use of information technology in the class room (Suleiman, 2012).Class room information system for teachers where the access to computer by individual students is not possible, the teacher can now link up the computer as an aid in the individual monitoring and management of student progress. Here the computer keeps the basic information on a particular student which included performance progress and so on, The teacher can have access to such information whenever the need arises.

2.2.4 Role of Computers in Teaching and Learning Process

Computer is now an integral part of human life where its plays a significant role in many aspects of the field of education. Odili (2008), identifies three key areas that computer can play in teaching and learning process of the learner's

(i) Objective of instruction are involved in preparing students to use computers on their own.

(ii) Vehicle for instruction where they are used as resource materials.

(iii) Assists students in understanding themselves with a view in solving personal problems as it relates to guidance and counseling services were it is used as a way to interact with students away from school environments as an aid to homework and assignments that have been set during holiday periods.

2.2.5 Computer Use in Education

School is a micro society within the micro setup of human society and endeavors. Computer has its origin in the training afforded in the school. Therefore, services rendered by the different types of computer in the society are what are being used in the school. It has been used in education for years but up till 1980's; it is localized to institutions where computer science is taught. It is used to drill work which is now an indispensable part of traditional education as an endless patient tutor which is usually individualized and students can progress at their own pace. Furthermore, computer can be well adapted in immersing a child in a great works of analysis and problem solving to shape the mind of the learners using a mechanical super-toy called a Turtle and computer language called logo. It serve as a production of great work, programming, learners to work with tight, colors and secures intellectual and emotional self-reliance (price, 1984). Therefore, it served the purpose of retooling education (Howl, 1978).

In the classroom, computers can be used for drill and practice for tutorials, for games and simulations. Computers are useful in analyzing research data, for managing learning and other vocational education and training activities. They create rooms for interactive teaching and learning process with various software packages which are flexible and maximize learner's control. Students are taught the skills needed to perform a specific job. Hence, each learner has different interpretation to the phenomenon depending on some variables such as sex, age, education, economics, social or cultural factors (Dike, 2002).

Audu, (1995) maintains that computer Education is a complex integrated process where problems connected with all aspects of learning are conceptualized, analyzed, established and resolve through interaction between people, techniques, ideas and resources within an organizational frame works. Studies including Hadley and Sheingold (1992), MC Daniel, Melnerney and Armstrong, (1993) Hannafin and Saverye, (1993) have indicated that computer Education technology has the potential for enhancing student learning.

End tolling the importance of technology in the instructional process, Chapin and Messick (1992) asserted that the role of technology in teaching and learning is rapidly becoming one of the most important and widely discussed issues in contemporary education policy. To this extent, developed countries of Europe and America have made legislature provisions on the imperative use of technology in the instructional process (Britain, 1988). Consequently, there has been a staggering amount of research and publication related to the use of technology for educational purposes in these advanced industrialized nations.

However, learning is a more effective process, when it occurs in an interactive setting that is mostly promoted through the use of educational technology. The active involvement of the students in the generation of their own knowledge in this process will certainly produce active rather than inert knowledge characteristics of the teacher – dominated pedagogy, such students will be better equipped with vital skills of the problem solving and living (Bell - Gam & Iyamu, 2000). Chapin and Messick (1992) distinguished between interactive and non–interactive dimensions of technology for teaching any subject. By nature non–interactive media like, film strips, television, radio, videos cassettes promote passive learning because viewers cannot easily change the presentation (Ticktons, 1970).

Furthermore, the most distinctive feature of modern society is its science based technology, because most African countries are faced with the problems of “knowledge explosion”. Thus technology education is being developed with the aim of improving the quality of education.

2.3 Computer Self-Efficacy

According to Bandura,1986 of a view that self-efficacy is an individual judgment about one’s own capabilities to organize himself/herself in order to get into action in alignment with desired goals. Self-efficacy is an individual’s conviction in his capability to organize and complete a course of actions in order to accomplish a specific task (Eggen & Kauchak, 2007). Bandura (1982) stated that, it is not related to one’s skills, more accurately but self-perception of one’s ability to perform.(Albion, 2001) pointed out those individuals’ ideas, be it positive or negative, about behavior affects their course of action. Thus, self-efficacy influences teacher goals, amount of efforts and time willingly spent on persevering and rising hurdles and difficulties (Khorrami-Arani, 2001). Specifically, computer self-efficacy is stated as a judgment of one's ability to use computer (Higgins, 1995).

Studies by Albion (2001) and Wang, Ertmer, and Newby (2004) suggest that computer self-efficacy is a determining factor in predicting the effectiveness of teacher in utilizing computers for instruction. Osakwe, (2010) stated that this computer skill deepens student content knowledge and supports the development of complex thinking skills. Safritetal (1988) and Bowman (1995) provide evidence that this skills helps in fostering higher order learning such as critical thinking and problem solving. Research strongly shows that self-efficacy can influence behavior.

Bandura (1992), Delcourt and Kinzie (1993), Maitland (1996), Miura (1987) show that a person's self-efficacy towards a task will influence the decision to take on a task, the amount of effort used on the task and the persistence in accomplishing the task. It has a positive impact on the quality of teaching and research (Lehman et al, 2013). However, computer skill is likely to grow in the next few years, as an outcome of the utilization of technology in Physical Education. Alabi (2011) pointed out that computer skill helps teachers' delivery of information to learner. it also make teachers to have accurate students' data. In addition, Kinzie, Delcourt, and Powers (1994) stated that computer self-efficacy is associated with self- confidence. The perceived computer self-efficacy of teachers will have an influence on their attitudes toward computers Lawal (2012) indicate that computer skills brings effective gathering, processing, storing and retrieval of necessary data in the schools.

Smith (2001) however reported that an individual's computer experience based on computer usage determines the level of belief in their skills and confidence about using computers to accomplish tasks. Etejere and Ogundele (2008) also agreed that effective utilization of computers skills in the school bring about school discipline, effective teacher job performance, curriculum delivery, research and publication.

However, self-efficacy makes learning faster, interesting and accessing retrieving information quickly (Gahala, 2007; Salle, 2006). Ogwu and Ogwu (2010) are of the view that computer skills prepares students for innovative and productive activity. However, Bhukuvhani et al (2011) noted that despite the abundance of the skills, effective use of them is a critical issue. Ezeani and Ishaq (2013) stated that poor performance of students in any subjects could be as a result of teachers' non utilization and application of appropriate ICT tools in classroom instruction. Pierson 2001 stated 'our society does not simply need teachers who know how to use computer but rather exemplary teachers who know how to effectively use all tools at their disposal for the benefit of students.

Zucker and Hug (2007) stated that teaching with computer in the classroom opens up new opportunities for teaching and learning. But opportunities for more sophisticated pedagogy also pose challenges for the teacher. However, learners construct new knowledge and understandings based on what they already know and believe. Student learning is shaped by developmental level, experience and socio-cultural background knowledge of reality and create novel and Situation-specific understandings. Computer skill is a design that facilitates change by leveraging technology to reinsert the human element (Christianson, 2003).

However, the key to this change is providing support for the teachers and students, its support the teachers for class preparation, classroom management, for personalization and for assessment support for the student for an open-ended exploration, for twenty first century skills and collaboration. Ajayi (2008) posited that with the aid of computer skills, teachers can take students beyond traditional limits, ensure their adequate participation in teaching and learning process, its create vital environments to experiment and explore.

Therefore, the application for expensive hardware and software as becomes a bigger obligation for schools and parents. It is also necessary that both teachers and learners should have basic technology knowledge before they apply skills. Unfortunately, most teachers today do not have technological training to guide their students in the use of computers to enhance their learning achievement.

Bank (2002) emphasizes that computer self-efficacy is a concept of learning portals. He postulated that e-learning is critical to the success of individuals, organizations, communities and economic. Computer self-efficacy is also a new educational series of products designed to operate in a classroom which offers new teach-centric approach in to learning process and classroom planning. Its approach contrasts with ideas and techniques used in the 1950s to prepare students for careers in factory and also it's designed to provide the tools and resources the teacher needs to ensure smooth operation of the class. The use of computer self-efficacy provided the teacher with interesting and compelling conveying information since they motivate learners to learn more.

Further the teacher is assisted in overcoming physical difficulties that could have hundred his effective presentation of a given topic. Larson (2001) quoted Kinzie (1994) who noted that the use of electronically mediated instruction to duplicate the traditional face to face classroom has resulted in a shift from teacher to student centered classes. In this situation, the responsibility for learning is shifted to the students. The teacher facilitates the learning by acting as a coach, resource guide and companion in learning.

Most teachers depended mostly on textbooks and chalkboard as instructed materials. Teaching with computer skills is not complete until knowledge has been successfully transferred which in most cases may not just be tied to teacher effectiveness or teaching skill used in the learning process.

2.3.1 Factors that Influenced the Development of Teachers' Computer Self-Efficacy

Wallace (1999) stated the main factors that can influence students learning process include: Computer anxiety, computer confidence, computer liking, and computer knowledge.

2.3.2 Functions of Self-Efficacy in Teaching and Learning Process

(i) It serves as a classroom instruction which is relevant only when there is a clear understanding and definition of its purpose.

(ii) It offers new tech-centric approach to the learning process and classroom planning.

(iii) It is also designed to function as the instructional environment in today's technology intensive classrooms.

(iv) It provides a full digital curriculum and supports the teachers' skills for curriculum planning, classroom management and students assessment.

2.3.3 Advantages of Computer Self-Efficacy in Learning

Ofsted (2002) stated out some advantages of computer self-efficacy which can influence both teachers and their learners. Such as it enables highly differentiated learning instruction and supports collaborative learning and interdisciplinary techniques. However, it facilitates larges group multimedia presentation, small group projects, individualized practice and assessment. The teachers here are in full control of student's activities by making assignment, monitoring individuals, leading discussion and providing feedback.

Suleiman, 2012 pointed out, that positive teacher self-efficacy towards application package is widely recognized as a necessary condition for effective use of information delivery in classroom practices. Thereafter, It gave room for classroom flexibility and adaptability to differentiated learning, As a result of that, there is encouragement of independent active learning and self-responsibility for learning. Were development of higher level of learning styles is being created by the teachers' and opportunities to address problems in the present of all the learners.

2.3.4. Disadvantages of Teachers Self-Efficacy Application Packages in Teaching and Learning

Mc Cannon and Creios (2000) stated same of the disadvantages of self-efficacy application packages such as inadequate computer technology support could affect the used such as hardware and software in the process of teaching. Akande, (2005) stated that lack of commitment by government and individuals concern. Therefore, the amount of confidence a teachers possess in the used of application package can greatly influence their effective implementation in the classroom practices. Moreover, Packages will not be appreciated unless it has a perceived goal and will not be considered important unless it is integrated into a course to the extent of being assessed by teacher.

2.3.5 Implication of the use of Computer Application Packages in Education

There is the need for more and qualified teachers in our secondary schools; the need for qualified teachers is highly needed in integrating such application packages. The need to introduces existing silks for teachers is necessary in order to shape the unqualified among the system. Beyond that those teachers who are skillful and knowledge are no longer fixed. .Teachers therefore needs more opportunities than before to go on their learning careers.

Although national policy pronouncement have continued to talk about the professionalization of teaching this in practice can be possible only when there is specialization in teacher education (NKOM, 2012).

The basic requirement of every teachers is sufficient qualification and confident in the subjects area. To do such a teachers must be well trained in operating the computer and be aware of the needs and feelings of the students and the society as well .The attention given to teachers education and their continuing professional development in many cases is lagged behind at given to other parts of the educational system, UNESCO (2001).Teachers need to be provided with new strategies in coping with varied learning situation (NKOM, 2000).

The quality of teaching in secondary schools system will improve appreciably and the product of the schools would be better prepared for entry into higher institutions (Baikie, 2001). Teachers on training should be sensitized on the need to update their knowledge and skills for effective teaching. One of the methods is by using multimedia besides learning, and then teachers' can attracts student's interest in learning process (Lubism Embi, Yunus & Wekke, 2009).

However, it can also assists teachers in teaching process such as illustrate some points as well as to support long distance educational system. Furthermore, it promotes students retention and facilitate the simulation and recovery phases.

2.3.6 Impact of Comuter towards Teaching and Learning

If more skillful teachers are available it could improve secondary education because it is the essential to the creation of effective human capital in any country (Evoh, 2007). The need for ICT in Nigerian secondary schools cannot be over emphasized. In this technology driven age, everyone requires ICT competence to survive. Organizations are finding it very necessary to train and re-train their employees to establish or increase their knowledge of computers and other ICT facilities (Adomi & Anie, 2006; Tyler, 1998).

The development in Nigeria education sector which indicate some level of ICT application in the secondary schools has brought about National Policy on Education. (Federal Republic of Nigeria, 2013) recognizes the prominent role of ICT into education in Nigeria. To actualize this goal, the document states that government will provide basic infrastructure and training at the primary, secondary schools, computer education has be made a pre- vocational elective and is a vocational elective at the senior secondary school. It should be notes that 2004 was not the first attempt the government made to introduce computer education in schools.

Although efforts have been made to ensure that ICT are available and used in Nigerian secondary schools, level of up take is still low. It has been observed by Goshit, (2006) that most schools, both private and government do not offer ICT training programmers.

2.4. Relationship Between Teachers' Self-Efficacy and Classroom Practices

One of the significant concerns of all teachers is how to deal with student's mental abilities and backgrounds. This type of students requires special opportunities to utilize their sensory organs in learning effectively.

Teachers owe their students best efforts in providing meaningful learning experiences by adopting the new methods of teaching which emphasize the use of different types of media in teaching such as power point, internet etc.

Abdullahi (2010) noted that, when effectively used in teaching and learning process, computers application packages make different concepts clear to students, help them to gain knowledge best through experiences of seeing what is being display. The utilization of whatever learning materials available and utility depend on the ability of the teachers. Teachers need to provide opportunities for learners to demonstrate their newly acquired knowledge and skills. This can enable learners to learn more and effectively among different types of learning environment. Kinder (1959) stated that, ''a variety teaching materials used in proper balance produced best learning results.

Passey (1999) stated or proves that students who used educational technology felt more successful in school, they are motivated to learn more and have increased self-confidence and self-esteem. Albion (2001), Wang, Ertmer and Newby (2004) suggest that computer self-efficacy is a determining factor in predicting the effectiveness of teacher in utilizing computers for teaching and learning. Likewise, teachers' attitudes towards computers can also affect the computers can also affect the computer use in classroom (Ajzen, 1999).

Zoraini, Wati and Abas (1995) also note that teachers with positive attitudes and confidence can use computers effectively. Moreover, Kiridis, Drossos, and Tsakiridou (2006) stated that teachers' needed to be confident in their computer use in order to be successful in their teachings. On the other hand, Cassidy and Eachus (2002) suggest that computer self-efficacy plays a major role in determining the regularity and success of computer use. It is suggested that the manner of computer experiences, be it positive experience or otherwise, may possibly affect one's computer self-efficacy.

It is not the duration of one's experience with the computer; it is the quality of the experience that later affects his or her computer self-efficacy. Likewise, Seferoglu (2007) believes that computer self-efficacy enables teachers to approach difficult tasks as challenges to be mastered rather than as threats to be avoided.

Therefore, computer application packages offers teachers the predisposed confidence in tackling complicated tasks, seeking ways to learn and mastering techniques to overcome the difficulty rather than shunning it. Topkaya (2010) suggests that high computer self-efficacy can lead to more computer use in classrooms. Consequently, it also affects the students positively, seeing the teachers' capabilities in overcoming challenges in relation to classroom computer use shall motivate them to behave likewise.

Hong and Koh (2002) and Mumtaz (2000) pointed out, that there may be other important determinants of computer use in the classroom such as school support, technical support, teaching experiences and past experiences with computers. With that, teachers' can have positive attitudes towards computer tend to use computers effectively for teaching and learning purposes. It is noted that positive attitudes towards computers correlate with higher rate of usage.

According to Baylor and Ritchie (2002), stated that, teachers' attitudes toward computer can affect the degree and significance of classroom computer use. Likewise, (Ajzen,1991) stated that teachers' computer self-efficacy can also affect classroom practice. Fakeye (2010) and Latio,(2009), reported that generally only few teachers are actively integrating computers in their classroom practice. Teachers who are confident in their capabilities of using computers will be more likely to utilize the tools more often in performing classroom tasks (Potosky, 2002; Ozcelik & Kurt, 2007).

Research showed that, intellectual process involves perpetual and conceptual teaching which the words of mouth alone cannot easily stimulate learners to learning activity effectively. However, teachers should form a habit of developing themselves because of technology existence in our present world in other to take their students beyond classroom limits by allowing them to explore and learn by discovering. Moreover, the use of technology such as ICT and others in teaching can change the way teachers teach and the way learners perceive knowledge. Though, Ogunsola (2005) stated that the diffusion of ICT into Africa is at a snail speed. This could be to the fact that learners may not have access to a computer either at work place or at home as well as poor electricity supply in Nigeria.

2.4.1 Use of Internet in Classroom Practices

The Internet allows cost-effective information delivery services, collaborative and distance education, more than has ever been imagined (Clyde, 1995; Todd, 1997).The internet has myriad websites to help teachers develop or improve lesson plans, exchange ideas, obtain information, and find free animations and simulations to enliven their lessons.

According to Awotua-Efebo (1999), most Internet-based collaborative learning projects include teacher support and training, and conference proceedings are published regularly on the Web. Chat rooms or forums may become a laboratory for new ideas. Online study resources can also provide interactive tools for teachers to access feedback from students. Teachers may also have internal barriers that prevent them from utilizing technology in the classroom. Internal barriers could be from teachers' personal experiences with technology, as well as their own biases, and teachers may not be aware that they exist (Ertmer, 1999). Internal barriers are much more personal, more deeply ingrained, and may require a pedagogical change in the individual over time in order to overcome them.

2.4.2 PowerPoint in Classroom Practices

Azi, J. I. (2014) stated that software organized lecture content and indicated which points where mostly important, most students' find out that PowerPoint has no measurable influence on course performance and minimal effect on grades. Was it helping the teacher to overt simplify the material? What students need to know is reduced to a bulleted list of five items described in five words or less. It can be graphically impressive which add a great deal of interest and without question make it easier to listen and follow along. It can promote each learner to critical thinking; possibly but often make them to have discussions more difficult.

Therefore, PowerPoint improves teaching help with organization and with keeping teachers on track. However, new innovations that can help teachers to get their points across better and help students learn more efficiently. Microsoft PowerPoint program enables teachers and students to prepare presentations when used effectively.

It enhances teacher's presentations and the overall comprehension of student. Where teachers are allows presenting their lessons in a more dynamic way than simply lecturing and writing on the blackboard. It provides the ability to equip one presentation with different types of media including images, animations and much more. This enhances the students' abilities to retain what they're being taught, especially those who are visual learners.

Teachers can focus on the class and interacting with the students instead of writing on a board, because the text and the entire presentations is already there in the form of PowerPoint file. Students are taught how to create their own presentations. It creates interactive presentations containing text, art and communication between teachers and learners.

2.4.3 Microsoft Excel in Classroom Practices

The process of integrating Microsoft excel as technology in the classroom is becoming more and more prevalent in schools. Teachers can use excel to have students practice their addition skills. Therefore, it give teachers the ability to think of creative ways to incorporate technology into the classroom (Invest in tech,2018).

- ❖ Teachers can use excel for the purpose of grading rubric sheets for class grades.
- ❖ Used as interactive map that can be sent to students in electronic fashion.
- ❖ Build a virtual timeline which is an ideal way to show significant events to students.
- ❖ Create posters that can be used in classrooms as visual aids when teaching a lesson.
- ❖ Used to establish a seating chart for all he learners in the classroom.
- ❖ Create small note-cards that students can use in reports that require bibliographical information.
- ❖ Create a nutritional worksheet that keeps track of what students eat and drink every day.

- ❖ Create charts and graphs that display already obtained information like earthquake data, to analyze in a more orderly fashion.
- ❖ Teachers used it to show their students what the periodic table is all about by re-creating the table on a spreadsheet with additional side-note.
- ❖ Create money games that teach their students about counting the correct change in a transaction.
- ❖ Create posters that can be used in classrooms as visual aids when teaching a lesson.

2.4.4 Microsoft Word Skill in Classroom Practices

Azi, J. I. (2014) pointed out that Microsoft word is one of the most popular word processing programs in use, which allows teachers to create wide variety of text documents including essays and class projects to brochures and greeting cards, teacher's guide's learner on how to practice writing skills, editing process easier with tools like copy and paste, word count, spell check and grammar check. It also serves as a visible alternative to writing traditional, handwritten notes and assignment.

However, both teachers and learners could use it to update and keep track of homework, exam dates. In the process of teaching and learning is a kind of skills which can be used for creating and editing work, creating out lines, fixing spelling and sentence structure. It can be used in writing digitally both for academic assignments and creative projects. Furthermore, it gives the ability to easily make edits, undo mistakes and check over spelling. While multiple drafts of work can be saved, as well, which allows teachers and learners to safely develop as piece of writing, compare drafts.

2.5. Factors that Demotivate Teachers Self- Efficacy

The low rate of computer skills adoption and application in Nigeria secondary schools is attributable to several factors.

(i) Limited or poor information infrastructure which confirms that ICT development and application are not well established in Nigeria (Adomi, 2006).

(ii) Lack of inadequate ICT facilities in schools which is corroborated by Ndiku (2003) cited by Wims and Lawier (2007) who discovered that insufficient numbers of computers and peripheral devices inhibit deployment of ICT by teachers.

(iii) Lack of frequent electricity interruption failure has been a persistent problem militating against ICT application and use in Nigeria schools (Adomi, 2005; Otole, 2004; Ruteyan, 2003).

(iv) Inadequate ICT manpower in the schools is one of the problem facing Nigeria schools and its ICT Programmed is work force training (Goshit, 2006).This is because teaching as a profession in Nigeria is considered to be for poor peoples, therefore, the few professional that are available prefer to work in companies and industries where they can earn better salaries. With this deplorable condition, teachers are not motivated to go the extra mile in assisting the students to acquire computer education (Oduroye, n.d).

(vii) Lack of interest in ICT application use on the part of teachers and students.

2.5.1. Opinion on How to Promote Teachers Utilization of application packages

Technology has failed to transform our schools because the education governance system insulates them from the disruptions that technology creates in other organizations. Furthermore, the diffuse system of governance creates numerous veto points to limit innovation. To overcome these obstacles, we must persuade teachers that technology would empower them and help their students learn. Peter (2013) stated the following ways in promoting teachers utilization of computer self-efficacy in learning process. Schools must use technology that empowers teachers such as communication platforms like Twitter and Facebook dynamic communication with students. Teacher- empowering technologies include mobile apps that grade written students work and provide lesson plan data base. Therefore, school systems need to aggressively on the important works for their teachers and put all other unworkable technologies aside, also teachers should be encouraged to treat the adoption of technology as part of lesson planning. For instance, teachers can incorporate technology directly into their practice and insulate their students from the deleterious effects of policy chum.

This could create more interest in teachers and they should not fear open-source technologies, many mistakenly believe that education technologies are expensive and complicated to use open-source technologies, use online education portfolios to evaluate students and embrace the common core standards because it make teaching simpler. This would suggest that one's choice, effort and persistence in the use of computer technology is influenced by one's level of computer self-efficacy.

Teachers should use online education portfolios to evaluate students', however; educators have to know about the benefits of paper based portfolios for generations. Portfolios allow students to express creativity for difficult to assess subjects. Moreover, teachers can choose from a variety of online portfolio because its serve as a platforms for students to demonstrate learning process. According to Kyriacou, (1995) stated that they should embrace the common core state standards because it makes teaching simpler not only that, by writing lessons that comply with district, state and national standards example (NCTM or NCTE). In a not shall, teachers must have a single set of standards eliminates redundancy and conflicting guidelines, universal should adopt a common standards which will support future technological innovations that aid teachers technical perspective and facilitate the development of new technologies. The in-service training of teachers will also help tremendously in improving the quality of teachers and eliminate the shortage of training and qualified teachers in secondary schools.

2.5.2 Teachers Efficacy in Teaching and Learning Process

Teaching is essentially concerned with how best to bring about desired learning by some educational activity (Kyriacou, 1995). According to Adesine (1987), recognized teachers as the heart of Nigeria's educational system at all levels. For this purpose teachers continue to be the major determinants of quality education, be it at primary, secondary or tertiary level. The revised national policy on education (1998) confirms that, 'No educational system can rise above the quality of its teachers. Similarly, the National Curriculum Association Conference held in 1969 described teachers as the 'key man in the entire educational programmer. Moreover, it helps people to acquire the knowledge which they need to become responsible citizens, to earn a living and to become responsible citizens, to earn a living and to lead useful rewarding lives.

In a not nutshell, is a vehicle for transferring knowledge from one generation to the next. Teaching is not a monologue but a dialogue in which one partner is vocal, but the other partner may, by simple participation in the form of a query, partake in the dialogue. According to Bruner (1994), teaching is the ability to impart knowledge to a group of people, or it's to show the way to something or a process. The world Book Encyclopedia 2001 explains teaching as 'helping other people to enquire knowledge. This makes teaching one of the most important ways that enable people to relate to one another as far as knowledge and skills acquisition are concerned.

Alaezi (2001) describes teaching as the business of all those involved in the act of changing human behavior and transformation of society in respectable and recognizable to others because of the consequences' they accomplish and their unique manner. Alexander (2004), holds the view that lack of teaching structure can undermine the most carefully planned lesson. Obviously, even the best methodology and subject matter background need the support of adequate physical environment.

Ross (1998) pointed out that teacher efficacy contributes to achievement because high efficacy teachers try harder, use management strategies that stimulate student autonomy, attend more closely to low ability student needs and modify student ability perceptions. 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. Mcdonald and Bloom (1983) stated that teacher's efficacy contributes to achievement because high efficacy teachers try harder.

2.5.3 Teachers in Academic Performance

Academic performance is the outcome of education, the extent to which a student, teacher or institution has achieved their educational goals. Abioye (2006) stated that students' academic performance is commonly measured by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important procedural knowledge such as skills or declarative knowledge such as facts.

Academic performance can be influenced by parents' socio-economic status and teacher efficacy. Highly educated parents tend to have more stimulating learning environments. Students first few years of life are crucial to the development of language and social skills. School preparedness in these areas help students adjust to academic expectancies.

Tella and Tella (2003) reported that teachers’ self -efficacy is a better predictor of academic performance, while Gist, Schwoerer and Rosen (1989) reported that computer use and efficacy positively relates to higher learning performance. Meanwhile, Kasten and Roth (1998) found that computer use and computer efficacy positively correlates with performance in introductory courses. Another very important of students’ academic performance is the presence of physical activity. Studies have shown that physical activity can increase neural activity in the brain. Exercise specifically increases executive brain functions such as attention span and working memory (source: fbt.globa.com/ACCA).

Epunnah (1999) defined performance as the learning outcome of students which include knowledge, skills, Ideas acquired and retained through their course of studies within and outside the classroom situation. Moreover, academic performance is the quality and level of retained memory.

Mbah (2002) remarked that achievement is dependent upon several factors among which are instructional techniques, the learning environment, motivation for stimulating students’ interest in learning and the learners. Therefore, the academic achievement also depends on the interest of the students. Shapley, et al (2010) also found that teacher buy in and shared commitment to transforming students learning which led to successful implementation.

Spence (2014) found no significant influence of gender on the performance of college students when they were exposed to courses on online and traditional learning environment. Okakuro (2000) affirmed that, students attitude affect their performance in senior secondary schools. Though the relationship between performance and qualification was statistically not significant, indicates that students taught by holders of Nigerian certificate in Education (1998).

The Federal Ministry of Education (2000) has observed that the persistent poor academic achievement and low interest of students and other technical subjects is as a result of in appropriate teaching methods (that do not incorporate proper techniques/ adopted by teachers). Okonkwo (2000) pointed out some factor that affect students' performance in Nigeria schools such as Parental guardian influence attitude by learners, lack of well-equipped library, instructional materials and time allocation, lack of students or teachers interest can affect the learners.

2.6 Review of Empirical Studies

Kazan and El daou (2016) explored the relationship of the perceived teacher's self-efficacy related to ICT usefulness and attitudes after training and the students' science education performance results. It also, examined the impact of using technology on the science learning process, the students' interaction with their teacher and colleagues, their concentration, and participation in the class. To collect data on self-evaluation, qualitative and quantitative methods which helped eleven science teachers to rate their self-efficacy, knowledge, and attitudes were used. Consequently, measurements of teachers' attitudes with using computer technology by means of open and closed ended questionnaires and The Computer Technology Integration Survey (CTIS) took place in 2014 - 2015 academic year. Also, special needs students' performance results were collected pre-and post ICT training. This study identified possible influences on self-efficacy beliefs, perceived usefulness of computer technology, and ratings of self-efficacy beliefs toward technology integration. Findings of this study revealed that teachers' self-efficacy in the level of technology use, and attitudes have significant effects on the grades and interaction of students with special needs. The results indicated that participants of group one, who were trained, were able to better define and apply technology in the science classroom than group two which was not being trained. The findings suggest that knowledge and beliefs can influence teachers' intent to use technology in the classroom, especially as evidenced by the integration of ICT in their lesson plans. Moreover, results indicate a significant positive Pearson correlation r=.6 between teachers' self-efficacy, knowledge.

Downey and Kher (2015) carried out a longitudinal study of the effects of computer self-efficacy growth on performance during technology training. Technology training in the classroom is critical in preparing students for upper level classes as well as professional careers, especially in fields such as technology. One of the key enablers to this process is computer self-efficacy (CSE), which has an extensive stream of empirical research. Despite this, one of the missing pieces is how CSE actually changes during training, and how such change is related to antecedents and performance outcomes. Measuring change requires repeated data gathering and the use of latent growth modeling, a relatively new statistical technique. This study examines CSE (specifically general CSE or GCSE) growth over time during training, and how this growth is influenced by anxiety and gender and influences performance, using a semester-long lab course covering three applications. The use of GCSE growth more accurately models how students actually learn in a technology classroom. It provides novel clarity in the interaction of gender, anxiety, GCSE, specific CSEs, and performance during training. The study finds that the relationship between anxiety and self-efficacy decreases over time during training, becoming non-significant; it clarifies the significant role gender plays in influencing GCSE at the start of and during training. It finds GCSE influences application performance only through specific CSEs.

Hong, Chai, Tan, Hasbee, and Ting (2014) carried out a study on ESL teachers' computer self-efficacy, attitudes toward computer and classroom practice at university of Malaysia. The studies examine the attitudes of self-efficacy of teachers in enhancing computers integration in teaching and learning of English Language. A survey method was used. The target population for this study consists of ESL teachers in government aided urban secondary schools in Kuching division, Sarawak Malaysia. Ten of the 24 government aided secondary schools were randomly selected to participate in the study. In use, 102 ESL teachers from the ten secondary schools with male ESL teachers. Instrument used consists four sections like teachers demographic information, teachers' self-efficacy, attitudes toward computers and classroom computer use. Therefore, 5-point likert scale was used to measure the teachers responses on their use of classroom computers for teaching purposes, computer self-efficacy and attitudes toward classroom. Pearson Product Moment Correlations was used to determine the significance of the relationship between the two variables. The findings indicate that the ESL teachers have moderate level of computer self-efficacy and attitudes towards computer use. The results also indicate that male teachers have the higher computer self-efficacy than the female teachers.

Korumaz and Karabiyik (2014) investigated the effects of teachers' self efficacy level on their perceptions of computer assisted teaching. This is a quantitative and descriptive study. In this study 131 teachers from different branch of science and level were selected by random sampling. In the study, Self-Efficacy Perception Instrument developed by Gülebağlan (2003) and Computer Assisted Teaching Perception Instrument developed by Arslan (2006) were used. Independent Sample t-test, One-way ANOVA, Kruskal Walls-H, Mann Whitney U and Pearson Correlation tests were used to analyze data. As a result of the study there is a significant and positive relationship between perception of teachers' who study in different branch of science and teachers' computer use level. Additionally, there is a significant difference according to the type of institution in which teachers work.

Sandholtz and Ringstaff (2014) conducted a longitudinal study that examined the extent to which teachers' participation in a 3-year professional development program enhanced their self-efficacy and prompted changes in science instruction in the early elementary grades. The study used a mixed-methods design, and included 39 teachers who taught in kindergarten, first grade, or second grade classrooms in rural school districts. Data sources, administered pre-program and at the end of each year, included a self-efficacy assessment and teacher survey. Interviews and classroom observations provided corroborating data about teachers' beliefs and science instruction. Results showed significant increases in teachers' overall self-efficacy in teaching science, personal efficacy, and outcome expectancy efficacy during the 3 years. Gains in self-efficacy were correlated with changes in reported instructional practices, particularly student participation activities. However, changes in self-efficacy tended not to be correlated with changes in instructional time. Contextual factors beyond teachers' direct control, such as curricular and testing requirements in mathematics and language arts influenced time allotted to science instruction.

Ellis (2014) conducted a mixed methods program evaluation study to investigate the ways in which one public school district and its teachers implemented a Bring Your Own Technology (BYOT) initiative. This study also measured teachers' computer self-efficacy, as measured by Cassidy and Eachus' (2002) Computer User Self-Efficacy Scale, and investigated the relationship between the teachers' computer self-efficacy and use of BYOT. The study sought to discover the successes and challenges the teachers in the district faced with implementation in their schools and classrooms. Participants included teachers in the four high schools in the district. The study used the CIPP model of program evaluation to guide data collection on the context, input, process, and products of the BYOT program. Both quantitative and qualitative data was collected using teacher surveys, extant student surveys conducted by the district, teacher interviews, and classroom observations. The successes teachers had included student engagement, ease of classroom research, and productivity uses of student-owned technology. The challenges teachers faced included students' inappropriate use of technology, difficulty accessing the district's wireless network, and the task of monitoring students using BYOT. The teachers in the district had high computer self-efficacy, but its relationship to successful integration of technology was unclear.

Skoretz and Childress (2013) conducted an evaluation study to determine the impact of a school-based, job-embedded professional development program on elementary and middle school teacher efficacy for technology integration. Participant bi-weekly journal postings were analyzed using Grappling's "Technology and Learning Spectrum" to determine the change in levels of technology integration in classroom practice. The "Computer Technology Integration Survey" was used to determine differences in efficacy levels for technology integration between the experimental and comparison groups. Study findings indicated there was no statistically significant change in levels of technology integration after experimental group participation in a school-based, job-embedded professional development program. Statistically significant differences in levels of efficacy for technology integration between the experimental and comparison groups were found with moderate effect sizes. Additionally, findings indicated statistically significant differences in the experimental group's levels of efficacy for technology integration based on years of teaching experience, whether teachers taught in an elementary or middle school and whether teachers taught multiple subjects or a single subject, with effect sizes ranging from moderate to large. The relationship between efficacy for technology integration for the experimental group and technology integration in classroom practice was not statistically significant.

Southall (2012) carried out a mixed-method study to investigate digital native pre-service teachers' self-efficacy beliefs regarding their technology experiences and skills at the beginning and at the end of their field placement semester. The study used pre- and post-surveys, face-to-face interviews with a portion of the respondents, and a document review of course materials and lesson plans. Twenty-one pre-service students, enrolled in the second to last semester of a teacher preparation program, at a small mid Atlantic university during the fall, 2011 semester participated. The quantitative portion involved the online administration of the Technology Integration Survey at the beginning and at the conclusion of the field placement experience. For the qualitative portion, nine participants were purposefully selected for interviews in an effort to more fully understand participants' experiences and how these experiences impacted their self-efficacy beliefs about technology integration during the semester. In order to triangulate the data, results of the quantitative phase of the study were then compared with the results from the qualitative phase of the study. The findings of this mixed-method study suggested that digital native pre-service teachers' self-efficacy beliefs to integrate technology into their teaching improved slightly over the course of the semester. In addition, a strong relationship was found between participants' post-test technology skills scores and post-test self-efficacy scores, indicating that an increase in technology skills corresponded with an increase in self-efficacy. Qualitative results pointed to mentor support, time, and access to technology during their field placement experiences as factors for integrating technology into their instruction. Additionally, results indicated that participants had access to and spent a considerable amount of time on computers every day. They were proficient with basic technologies but reported lower proficiency with more difficult technologies. Yet, results also suggested that, while this group of digital native pre-service teachers has grown up in the digital age, their practice and, more importantly, their fundamental understanding of integrating technology into their instructional practices was limited.

Uzuna, Özk and Aysan (2010) conducted a study to analyze the teacher self-efficacy beliefs of the teacher candidates by some variables such as gender and general academic achievement. Twenty nine students participated to this study. Teacher self-efficacy scale and educational software development self-efficacy scale were used as instruments. No significant difference was found between teacher self-efficacy perceptions of teacher candidates according to their gender. There was weak relationship between teacher self-efficacy perception of teacher candidates and their general academic achievement. Also there was a high positive relationship between teacher self-efficacy perception and educational software development self-efficacy.

Alaba, Agbatogun, and Banjo (2010) worked on computer efficacy, use and phobia contribution to Nigerian undergraduate academic performance in a computer graphics course. Their objective is to investigate the extent to which computer efficacy, computer use and computer phobia could predict the level of students' academic performance in a computer graphics course. A total of 189 undergraduates of Olabisi Onabanjo University, Nigeria served as the sample size. Descriptive research design was adopted to find out the prediction of the criterion variables on the students' performance in computer graphics course. The instrument was completed within the last five teaching days in the first semester. Data were analysis using Pearson Product Moment Correlation, multiple regression and analysis of variance. The findings revealed that the three independent variables, when taken together, were effective in predicting students' academic performance in computer graphics course. Meanwhile, each of the independent variables contributed to the prediction of dependent variable.

Magliaro and Ezeife (2007) investigated pre-service teachers' preparedness to integrate computer technology into the curriculum. For Canada to compete effectively in the digital world, beginning teachers need to play an important role in integrating computer technology into the curriculum. Equipment and connectivity do not guarantee successful or productive use of computers in the classroom, but the combination of the teaching style and technology use has the potential to change education. In this research, the computer self-efficacy beliefs of 210 pre-service teachers after their first practice teaching placements were examined. First, the quantitative component of the study involved the use of

Computer User Self-Efficacy (CUSE) scale where students' previous undergraduate degree, licensure area, experience and familiarity with software packages were found to have statistically significant effects on computer self-efficacy. Second, the qualitative data indicated that society and school were the most positive factors that influenced pre-service teachers' attitudes towards computers, while the family had the highest percentage of negative influence. Findings reveal that although pre-service teachers had completed only two months of the program, those with higher CUSE scores were more ready to integrate computers into their lessons than those with lower scores.

Hakverdi, Gücüm and Korkmaz (2007) examined the factors influencing pre-service teachers' perceptions of computers' self- efficacy. Participants in the study were 305 pre-service science teachers at a four-year public university in Turkey. Two instruments were used for this study: the Turkish version of the Microcomputer Utilization in Teaching Efficacy Beliefs Instrument in a Science Setting (MUTEBI) and a questionnaire for collecting demographic information. A multiple regression analysis was conducted to examine the degree of association between the outcome variables (perception of personal self-efficacy in teaching with computers; perceptions of outcome expectancy) and the explanatory variables (personal use of computers, educational use of computers, level of computer use, grade level, school year, number of computer-related courses taken, age and gender). The findings of this study revealed that level of computer use and educational use of computers are closely related to the outcome measure of pre-service science teachers' personal self- efficacy in teaching with computers. Such findings can help researchers, teacher educators and education programs in assisting pre-service teachers to develop their personal efficacy and their outcome expectancies.

Milbrath and Kinzie (2000) investigated the computer attitudes and perceived self-efficacy for prospective teachers. To be effective users of computer technologies and be models for students' computer use, teachers must have positive computer attitudes and feel self-efficacious in using them. The computer training that teachers receive through their teacher education program is likely to foster positive computer affect, yet the change may require time and development. This longitudinal study examined prospective teachers' changes in perceived anxiety/discomfort with and usefulness of computer technology, frequency of using word processing, e-mail, spreadsheets, database management, statistical packages, and CD-ROM databases, and perceived self-efficacy with the six selected computer technologies over three years of study. Statistical analyses of data involved three time periods and two student teacher cohorts. Significant time effect, cohort effect, and time by cohort interaction effect are discussed.

2.7 Summary of the Review of Related Literature

This chapter reviewed the related literature which it provided an insight into general, theoretical and conceptual background on the important of integrating teachers' self-efficacy into classroom practices. How it affects or improves their performance in their various subjects, based on the importance of the use of application packages when teaching any other subject or not as emphasis on the national policy on education (N.P.E) to the Senior Secondary School syllabus. Technology has effect on every aspect of human life. It has been agree by several authors that application packages and teachers' efficacy is a very good method that can be used or employed in teaching any subject in schools which can affect the academic performance of the students. It has also reviewed that most basic problem that affect teaching method and academic performance is teacher’s self- efficacy in using application packages.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on research methodology that is used in carrying out this study under the following subheadings: Research design, population for the study, sample and sampling technique, instrumentation, procedure for data collection, and data analysis technique.

3.2 Research Design

This study adopted a survey design method using a structured questionnaire. A research design is a plan that guides the researcher in conducting a study for collection of evidence that either supports or refutes claims about an educational phenomenon (Nworgu, 2005). In this survey, samples were drawn using stratified random sampling technique which is concerned with the collection of data from the population in order to make genuine judgements. This design is appropriate because of the nature and scope of the problem being investigated and it help the researcher to achieve the study.

3.3 Population of the Study

The study population comprises of all the senior secondary schools teachers in Zaria Educational Zone in Kaduna State. The target population for this study is 496 male and female.

3.4 Sample Size and Sampling Techniques

The sample size for this study was determined by using stratified random sampling technique which was used to select 20% from each of the 15 schools and was arranged alphabetically. Therefore, teachers were given balloting (use of slips of paper) in other to give them equal chance to exercise their ability in given genuine information needed by the researchers.

Table 3.2: Distribution of Questionnaire in the Sample Schools

S/N	Sample schools	No. of Teachers	No. of retrieve
1	Alhudahuda College Zaria	61	23
2	Government Girls SCH PADA Senior Zaria	41	19
3	Government Girls Secondary School Kofan Gayan	28	11
4	Government Girls Secondary School Zaria	38	15
5	Government Secondary School Bogari	11	10
6	Government Secondary School Dakace	17	13
7	Government Secondary School Gyallesu Zaria	15	12
8	Government Secondary School KofarKuyambana Zaria	31	12
9	Government Secondary School Kugu	9	3
10	Government Secondary School Magajiya (Senior)	31	14
11	Barewa College Zaria	77	28
12	Government Secondary School TudunJukun	31	14
13	GSS Zaria (SNR)	48	21
14	GSSS Kaura (SNR)		
	Sheik Ibrahim Arab Special Secondary School Karau-	32	10
15	KarauB	26	14
	Total	496	214

Source: Field Survey 2016

3.5 Research Instrument

The research instrument for this study is questionnaire which consists of three sections: part one is the demographic information, items in part two focus on teachers' self-efficacy such as Microsoft word, Microsoft Excel, PowerPoint and Internet skills processed by teachers. Moreover, certain statements in the questionnaires indicated as No skill, highly skilled, Undecided, Low skilled and Moderate Skill. Part three concentrated on classroom practice with the option of Always Use, Intermittently Use, Rarely Use and Undecided. Therefore, the instrument has 20 items each.

3.5.1 Validity of the Instrument

The questionnaire was validated both in face and content by four professional experts in Ahmadu Bello University Zaria, but from different departments, one of the lectures is from Instructional Technology Section, one from Department of English and two lectures from curriculum section. They all made observations content coverage, such as clarity, simplicity of the language used, grammatical errors such as spelling errors and the suitability of the instrument for the level of respondents, after that it was accepted for the purpose which it was meant for. Thereafter, it was free from ambiguities, could measure what it was meant to measure.

3.5.2 Pilot Testing

The questionnaire was administered to 31 randomly selected Senior Secondary School teachers in Government Girls Secondary Schools Samaru Zaria, which is not part of the population. The teachers were made-up of male and female teachers' selected by the researcher with the assistance of the vice principal in that school.

3.5.3 Reliability of the Instrument

The reliability of computer self-efficacy and classroom practice (CSECP) was established through the analysis of the data that was obtained from the administration of the 40 items in each part of the items in the questionnaire. Thus, the instrument was found highly reliable through Cronbach Alpha which gave a reliability of coefficient of .956 on teachers' self-efficacy application packages. While, Cronbach Alpha of classroom practices is .968. This was also in line with the proposition of Mukherjee (1980) that the average value of the correlation coefficient must be high.

3.6 Procedure for Data Collection

The process of gathering genuine data for this study, commenced with the collection of letter of introduction from the office of the Head of Department of Educational Foundation and Curriculum, Ahmadu Bello University, Zaria. The letter was taken to Ministry of Education of Kaduna State and to the sampled schools in Zaria Zone to seek for a permission of access to the teachers. The permission was graded to the researcher and the research assistants who was introduce by various school principals to their vice principals. Thereafter, 230 questionnaires were administered to the teachers.

Two weeks interval was given to the respondents to fill in the necessary correct information needed in the questionnaire. On collection of questionnaire, 16 copies were found invalid, while 214 copies were retrieved. This was in line with Kreejie and Morgan (1970) that the sample size should not be equal with the population size. Therefore, the researcher also previews the questionnaire to ascertain if it was properly filled according to the instruction.

3.7 Procedure for Data Analysis

Frequency count and percentage were also used to analyze the demographic data. Descriptive statistics (mean and standard deviation) are used to analyze the data obtained from the respondents. The correlation analysis included computation of correlation coefficient and significance of relationship. The nonparametric correlation analysis method (Spearman rank-order) was used to determine the relationship. The value of correlation coefficients ranges from +1 to -1.The value of correlation coefficient closure to +1 showed significant positive relationship and its value closer to -1 showed significant negative relationship. If there was no relationship between the variables of interests, then the value of correlation coefficient would be near zero.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter present the analysis of the data collected from the sample used in the study. The chapter includes general discussion from the result of the data collected supported by the theoretical framework on the research. The analysis of the data is based on the objectives of the study, research questions, hypothesis testing, results and discussion.

4.2 Demographic Data

Demographic characteristics of the teachers were selected along their responses on teachers' self-efficacy application packages and their classroom practices in the Senior Secondary Schools in the selected Educational zone.

Table 4.1: Distribution of Responses by Schools

S/N	Sample Schools	No. Teachers
1	Alhudahuda College Zaria	23
2	Government Girls SCH PADA Senior Zaria	19
3	Government Girls Secondary School Kofan Gayan	11
4	Government Girls Secondary School Zaria	15
5	Government Secondary School Bogari	10
6	Government Secondary School Dakace	13
7	Government Secondary School Gyallesu Zaria	12
8	Government Secondary School KofarKuyambana Zaria	12
9	Government Secondary School Kugu	3
10	Government Secondary School Magajiya (Senior)	14
11	Barewa College Zaria	28
12	Government Secondary School TudunJukun	14
13	GSS Zaria (SNR)	21
14	GSSS Kaura (SNR)	10
15	Sheik Ibrahim Arab Special Secondary School Karau-Karau B	14
Total		**214**

Source: Field Survey 2016

4.3. Research Questions

4.3.1 Research Question One

What is the relationship between teachers' self-efficacy on the use of Microsoft Word application package and classroom practice in Senior Secondary schools in Zaria?

To determine the teachers' self-efficacy application packages on Microsoft Word and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question one as presented in Table 4.3.1a and 4.3.1b.

Table 4.3.1a: Teachers' Self-efficacy on the use of Microsoft Word Application Package

S/N	Items	Mean	SD	Decision
1.	Types, edit, copy and paste a block of text or selected object	3.22	0.881	Agree
2.	Use undo/redo function	3.11	0.857	Agree
3.	Save print and preview	3.38	0.812	Agree
4.	Use spell check grammar and thesaurus to edit and review document	3.13	0.892	Agree
5.	Create and use table functions (boarder, merge/split cell)	3.02	1.043	Agree
6.	Select and change font size and type	3.21	0.855	Agree
7.	Select and change styles e.g boldface italics, underlining	3.13	0.955	Agree
8.	Set line spacing e.g single space double spacing	3.13	1.012	Agree
9.	Set paragraph alignment e.g left right centre justification	2.95	1.062	Agree
10.	Insert and remove	2.98	1.048	Agree
	Aggregate mean score	**3.13**	**0.756**	**Agree**

From the cumulative mean score of 3.13 for the table, the teachers could be said to have adequate knowledge on the use of the Micro-Soft Word processing package for effective teaching of the application in the Senior Secondary Schools. This is based on the fact that the mean score is higher than the midpoint average of 2.5 and from the level of the responses, it could be said that most teachers were of the view that they were efficient in the use of the package and therefore could effectively teach is utilization to the Senior Secondary School students. The actual practice of the teachers of this acclaimed self-efficacy in the use of the Software is shown in Table 4.3.1b.

Table 4.3.1b: Teachers' self-efficacy on the Use of Microsoft Word Application and Classroom Practice

S/N	Items	Mean	SD	Decision
1.	I can open Microsoft word from my computer and use it effectively in my class	2.97	1.044	Agree
2.	Ask students to submit their types work in soft copy	2.64	1.078	Agree
3.	Request the students to typed work	2.99	1.024	Agree
4	Inform the students to produce their timetable using MS word	2.89	.966	Agree
5	Type the students list using insert menu	2.89	.959	Agree
6	Teach students how to select different clip arts	2.76	.998	Agree
7	Teach students how to edit typed document	2.83	.978	Agree
8	Teach students how to use formatting tools to format the typed document	2.80	.959	Agree
9	Request students to copy a typed work and paste it in another document	2.82	.956	Agree
10	I typed my students result using MS Word	2.96	1.025	Agree
	Aggregate mean scores	**2.86**	**0.820**	**Agree**

The cumulative mean score of 2.86 for the table shows that the teachers were of the view that they put their knowledge of the software into practice for teaching and learning in the classroom situation in the secondary schools involved in the study. The aggregate mean score is however lower than the score for their knowledge of the use of the software as obtained in Table 4.2.1. The actual level of significance of the relationship between the two variables is tested in the related hypothesis of the study.

4.3.2 Research Question Two

What is the relationship between teachers' self-efficacy on the use of Microsoft Excel application package and their classroom practice in Senior Secondary schools in Zaria?

To determine the teachers' self-efficacy application package on Microsoft Excel and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question two as presented in Table 4.3.2a and 4.3.2b.

Table 4.3.2a: Teachers' Self-efficacy on the use of Microsoft Excel Application Package

S/N	Items	Mean	SD	Decision
1	Create a new word book	2.90	1.110	Agree
2	Opening creating and saving a word book	2.88	1.039	Agree
3	Enter and edit data	2.90	0.978	Agree
4	Edit and format cells rows and columns	2.88	0.993	Agree
5	Insert a picture clip and shapes and smart art	2.90	0.014	Agree
6	Preview and print workbook/worksheet	2.82	1.074	Agree
7	Creating and modifying charts	2.98	1.182	Agree
8	Importing and exporting data	2.79	1.147	Agree
9	Apply simple formulae such as SUM, Average and STDEV (Standard deviation)	2.73	1.159	Agree
10	Insert header and footer, wordart, Symbol, etc	2.63	0.997	Agree
	Aggregate mean score	**2.80**	**0.923**	**Agree**

The table revealed that the teachers could be said to have adequate knowledge of the Microsoft Excel spread sheet. This is indicated with the cumulative mean score of 2.80 for the table which is higher than the midpoint average of 2.5. The actual practices of this acquired knowledge in terms of practices in the teaching and learning of the software application in a classroom situation in the senior secondary schools is shown in Table 4.3.2b.

Table 4.3.2b: Teachers' Self-efficacy on the Use of Microsoft Excel Computer Application for Classroom Practice

S/N	Items	Mean	SD	Decision
1	I calculate my students CA and assignment using MS Excel	2.88	1.029	Agree
2	I use MS Excel to arrange my students name in ascending or descending order	2.83	1.074	Agree
3	I teach my students how to creates charts using MS Excel	2.74	1.087	Agree
4	I teach my students how to use MS Excel for basic calculation	2.59	1.051	Agree
5	I teach my students how to use MS Excel to insert symbol into their work	2.64	1.060	Agree
6	I teach my students how to use MS Excel to produce the list of their group members	2.76	1.039	Agree
7	I teach my students how to preview and print work book/worksheet from MS Excel	2.70	1.018	Agree
8	I teach my students how to edit and format cells, rows and columns in MS Excel different	2.77	1.091	Agree
9	I teach my students how to create presentation using wizards design template or blank layouts	2.74	1.048	Agree
10	I teach my students how to use standard layout and designing for their presentation	2.69	1.142	Agree
	Aggregate mean score	**2.70**	**0.942**	**Agree**

The cumulative mean score for the table is 2.70 and it is higher than the midpoint average of 2.5 for agreement on the practices of the self-efficacy of the software in the actual classroom situation. It could therefore be said that the teachers actually put their knowledge into practice in the teaching and learning of the software utilization in the senior secondary schools. The level of the relationship between the two variables is tested in the related hypothesis of the study.

4.3.3 Research Question Three

What is the relationship between teachers' self-efficacy application packages on the use of PowerPoint and their classroom practice in Senior Secondary schools in Zaria?

To determine the teachers' self-efficacy application package on Microsoft PowerPoint and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question three as presented in Table 4.3.3a

Table 4.3.3a: Teachers' Self-efficacy on Microsoft PowerPoint Application Package

S/N	Items	Mean	SD	Decision
1	Create presentation using wizards, design templates or blank layouts	2.66	1.159	Agree
2	Modify standard layouts and design	2.71	.997	Agree
3	Use slide master to create consistent presentations	2.68	1.015	Agree
4	Edit, insert slides from other presentation and reorganize slides	2.63	1.003	Agree
5	Change text fonts and bullets or numbers to slide contents	2.65	1.050	Agree
6	Add objects (clip arts, pictures, video clips, sound to your presentations)	2.68	1.023	Agree
7	Add animations and transitions to slides	2.73	1.093	Agree
8	Include table and charts in presentation	2.76	1.051	Agree
9	Navigate between slides and switch between different views (slide outline, notes)	2.70	1.027	Agree
10	Use navigation buttons, sound, dissolve, graphics and text fields	2.63	1.117	Agree
	Aggregate mean score	**2.69**	**0.938**	**Agree**

The cumulative mean score on self-efficacy of the teachers in the knowledge of the PowerPoint as indicated in the table which is higher than the midpoint average score of 2.5. This is therefore a clear indication that the teachers considered themselves adequately knowledgeable in the use of the software. Their practices of the acquired knowledge for teaching and learning of the software in the classroom is scored in mean and standard deviation in Table 4.3.3b.

Table 4,3.3b: Teachers' Self-efficacy on the Use of Microsoft PowerPoint Application Packages for Classroom Practice

S/N	Items	Mean	SD	Decision
1	Teach my students how to create presentation	2.41	1.289	Disagree
2	Teach my students how to use standard layout and designing their power point presentation	2.36	1.320	Disagree
3	My student present their assignment using PowerPoint presentation	2.28	1.361	Disagree
4	I teach my student how to change Text fonts	2.29	1.292	Disagree
5	How to insert clip arts pictures Symbols	2.43	1.283	Disagree
6	I add animation and transition To my slides while teaching	2.38	1.238	Disagree
7	teach my students how to create Tables and charts in presentation	2.36	1.232	Disagree
8	Teach my students how to link Their presentation with internet	2.47	1.232	Disagree
9	Teach my students how to use appropriate use navigation buttons graphics and text field in their presentation	2.44	1.240	Disagree
10	Teach my students how to use Internet	2.48	1.327	Disagree
	Aggregate mean score	**2.39**	**1.164**	**Disagree**

In term of practices in teaching and learning with the software, the cumulative mean score of 2.39 did not support agreement with adequate practice. The cumulative mean score (2.39) is lower than the midpoint average for agreement with adequacy of practices of the software for teaching and learning in the classroom among the Senior Secondary Schools. This would imply that Power Point Software was not adequate used by the teachers in their teaching in the Senior Secondary School. The test of significance between the two variables is carried out in the related hypothesis.

4.3.4 Research Question Four

What is the relationship between teachers' self-efficacy on the use of Internet application and their classroom practice in Senior Secondary schools in Zaria?

To determine the relationship between teachers' self-efficacy on Internet application packages and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question four as presented in Table 4.3.4a.

Table 4.3.4a: Teachers' Self-efficacy Opinion on Internet Application Package

S/N	Items	Mean	SD	Decision
1	Use the browser e.g internet explorer basic commands to surf the interest	2.64	1.185	Agree
2	Send and Receive mails via yahoo. Gmail etc	2.79	1.034	Agree
3	Download research materials to the hard drives (flash, disc, CD)	3.27	.889	Agree
4	Clear my browser cache/history	3.11	1.005	Agree
5	Send document paper through e-mail attachment file	3.10	1.043	Agree
6	Download and install a plug-in (eg real player, adobe acrobat)	3.07	1.016	Agree
7	Participate an international conference through teleconferencing/video conferencing	2.94	1.075	Agree
8	View source code and modify them for my use	2.93	1.004	Agree
9	Use internet to chart	2.55	1.115	Agree
10	Can evaluate the design of existing web pages	2.52	1.145	Agree
	Aggregate mean scores	**2.89**	**1.051**	**Agree**

From the cumulative mean score of 2.89 which is higher than the midpoint average of 2.5, it could be concluded that the teachers were of the view that they were proficient in the use of Internet. This is based on the midpoint average of 2.5 for deciding the level of response to the items in the table which were measured on the four point interval scale. Table 4.3.8 shows the opinions of the teachers on the practices of the Internet browsing skills in a classroom situation for teaching and learning in the Senior Secondary Schools involved in the study.

Table 4.3.4b: Teachers' Self-efficacy on the Use of Internet Application for Classroom Practice

S/N	Items	Mean	SD	Decision
1	I teach my students how to use the internet	2.69	1.245	Agree
2	I send and receive mails from my students	2.70	1.247	Agree
3	I download teaching materials from the internet	2.71	1.261	Agree
4	I teach my students how to get additional Information from the internet	2.59	1.266	Agree
5	I receive class assignments through Email attachment file	2.36	1.262	Disagree
6	I teach my students how to download relevant materials from the internet	2.44	1.257	Disagree
7	I support my teaching with the use of Tube video	2.29	1.270	Disagree
8	I teach my students how to chart with their colleagues via the internet	2.48	1.295	Disagree
9	I chart with my students via Facebook, 2go etc	2.52	1.359	Agree
10	I teach my students how to use different search machine	2.47	1.848	Disagree
	Aggregate mean score	**2.53**	**1.331**	**Agree**

The Table shows that the teachers were of the view that they actually put into practices their acquired Internet skills in their classroom teaching and learning in the senior secondary schools. The cumulative mean score is equivalent to the set midpoint average of 2.5. It could therefore be concluded that the teachers put into practices their acquired skill in Internet usage in their practices in classrooms of the Senior Secondary Schools. The relationship between the variables is tested for significance in the related hypothesis.

4.4 Testing of hypotheses

Four hypotheses were formulated and tested at 0.05 level of significance as presented.

4.4.1 Hypothesis One: There is no significant relationship between teachers' self-efficacy in Microsoft Word application package and classroom practice at Senior Secondary Schools in Zaria.

To test this hypothesis, Spearman rank-order was used as shower in Table 4.8.1.

Table 4.8.1: Correlation between Teachers' Self-efficacy in Microsoft Word Processing Software and Classroom Practice in Senior Secondary Schools

Variables	N	Mean	S.D	Df	R	p-value
Self-efficacy in Microsoft Word	214	3.13	0.756	212	0.500	0.000*
Classroom practice	214	2.86	0.820			

*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation r=.5 between teachers' self-efficacy in Microsoft Word application package and classroom practices in the Senior Secondary Schools in Zaria. This indicates an observed correlation coefficient of 0.500 obtained at 212 degree of freedom. The observed probability level of significance for the test is 0.000 ($P < 0.05$). With these observations there is sufficient evidence to reject the hypothesis. The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft Word application package and classroom practice in Senior Secondary Schools in Zaria is therefore rejected.

4.4.2 Hypothesis Two: There is no significant relationship between teachers' self-efficacy in Microsoft Excel application packages and classroom practice at Senior Secondary Schools in Zaria.

Table 4.4.2: Correlation between Teachers' Self-efficacy in Microsoft Excel and Classroom Practice in the Senior Secondary Schools

Variable	N	Mean	SD	Df	R	p-value
Self-efficacy in Excel	214	28.00	9.233	212	0.620	0.000*
Classroom Practice	214	26.97	9.416			

*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation r= .62 between teachers' self-efficacy in Microsoft Excel application package and Microsoft Excel application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.620 at 212 degree of freedom is significance at 0.000 ($P < 0.05$). The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft Excel application package and classroom practice in Senior Secondary Schools in Zaria is therefore rejected.

4.4.3 Hypothesis Three: There is no significant relationship between teachers' self-efficacy in Microsoft PowerPoint application packages and classroom practice at Senior Secondary Schools in Zaria.

Table 4.4.3: Correlation between Teachers' Self-efficacy in PowerPoint Presentation and Classroom Practice in Senior Secondary Schools

Variable	N	Mean	SD	df	r	p-value
Self-efficacy in PowerPoint	214	2.69	0.938	212	0.513	0.000*
Classroom practice	214	2.39	1.164			

*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation r= .513 between teachers' self-efficacy in Microsoft PowerPoint application package and Microsoft PowerPoint application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.513 at 212 degree of freedom is significance at 0.000 ($P < 0.05$). The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft PowerPoint application packages and classroom practice in Senior Secondary Schools in Zaria is therefore rejected.

4.4.4 Hypothesis Four: There is no significant relationship between teachers' self-efficacy in Internet application and classroom practice at Senior Secondary Schools in Zaria.

Table 4.8.10: Correlation between Teachers' Self-efficacy on Internet Usage and Classroom Practice in the Senior Secondary Schools

Variables	N	Mean	SD	df	r	p-value
Self-efficacy in Internet Usage	214	2.89	1.051	212	.468	0.000*
Classroom practice	214	2.53	1.331			

*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation r= .47 between teachers' self-efficacy in Internet application and Internet application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.468 at 212 degree of freedom is significance at 0.000 ($P < 0.05$). The hypothesis that there is no significant relationship between teachers' self-efficacy in Internet application and classroom practice in Zaria Secondary Schools is therefore rejected.

4.5 Summary of Major Findings

The major findings of this research are as follows:

(i) Significant relationship was found between teachers' self-efficacy in Microsoft Word application package and classroom practice at Senior Secondary Schools in Zaria.

(ii) Significant relationship was found between teachers' self-efficacy in Microsoft Excel application package and classroom practice at Senior Secondary Schools in Zaria.

(iii) Significant relationship was found between teachers' self-efficacy in Microsoft PowerPoint application package and classroom practice at Senior Secondary Schools in Zaria.

(iv) Significant relationship was found between teachers' self-efficacy in Internet application and classroom practice at Senior Secondary Schools in Zaria.

4.6 Discussion of the Findings

The findings revealed that there was significant positive relationship between teachers' self-efficacy in Microsoft Word application package and classroom practice at Senior Secondary Schools in Zaria. This finding agrees with Kazan and ELDaou (2016) who explored the relationship of the perceived teacher's self-efficacy related to ICT usefulness and attitudes after training and the students' science education performance results. The findings revealed that teachers' self-efficacy in the level of technology use, and attitudes have significant effects on the grades and interaction of students with special needs. Korumaz, and Karabiyik (2014) who investigated the effects of teachers' self efficacy level on their perceptions of computer assisted teaching and found that there is a significant and positive relationship between perception of teachers' who study in different branch of science and teachers' computer use level. It also agrees with that of Tschannen-Moran and WoolfolkHoy (2001) who reported that teachers with strong sense of self-efficacy are more open to new ideas and more willing to experience with new method. This finding is in line with Lim and Khine (2006) who reported that teachers' self-efficacy contributes to the failure or success of integrating computers in teaching and learning. For teachers, this means that they must be aware of the vast array of technology available and they must be able to identify when it is suitable to use which technology in their classes.

Findings also indicated a significant positive relationship between the teachers' self-efficacy in Microsoft Excel application package and their classroom practice in Senior Secondary Schools. It also agrees with that of Hong, Chai, Tan, Hasbee, and Ting (2014) who carried out a study on ESL teachers' computer self-efficacy, attitudes toward computer and classroom at university of Malaysia and reported that the ESL teachers have moderate level of computer self-efficacy and attitudes towards computer use. The finding of this study is in agreement with that of Ellis (2014) who investigated the relationship between the teachers' computer self-efficacy and use of BYOT and found that the teachers in the district had high computer self-efficacy, but its relationship to successful integration of technology was unclear. The results of this study also share common boundaries with Hoffman, Kalsbeek and Novak (1999) cited in Hunley, Evans, Delgado-Hackey, Krise, Rich and Schell (2005) who found strong relationship between computer use and higher educational aspiration. The finding agrees with the reports of Topkaya (2010), Cassidy and Eachus (2002) who respectively reported that levels of computer self-efficacy corresponded to increased performance in computer courses.

Teachers' self-efficacy in Microsoft PowerPoint application package was significantly positive correlation with their classroom practices of teaching and learning of the application in the Senior Secondary Schools. This finding agrees with similar result reported by Sandholtz and Ringstaff (2014) who conducted a longitudinal study that examined the extent to which teachers' participation in a 3-year professional development programme enhanced their self-efficacy and prompted changes in science instruction in the early elementary grades. It found a significant increases in teachers' overall self-efficacy in teaching science, personal efficacy, and outcome expectancy efficacy during the 3 years. From the study, gains in self-efficacy were correlated with changes in reported instructional practices, particularly student participation activities. However, changes in self-efficacy tended not to be correlated with changes in instructional time. Skoretz and Childress (2013) conducted an evaluation study to determine the impact of a school-based, job-embedded professional development program on elementary and middle school teacher efficacy for technology integration and found no relationship between efficacy for technology integration for the experimental group and technology integration in classroom practice was not statistically significant. Furthermore, the finding is in agreement with earlier study conducted by Delcourt and Kinizie (1993), Maittland (1996) Oliver and Shapiro (1993) who respectively establish significant relationship between acquired knowledge of teachers and their teaching skills in the classroom. In a similar study by Potosky, (2002), Ozeelic and Hurt, (2007) it was reported that a high level of computer self-efficacy will enable teachers to approach difficult tasks rather than avoid them.

A positive significant relationship between the teachers' self-efficacy in Internet application and classroom practices among Senior Secondary Schools in Zaria. The result this study supports the findings of Southall (2012) who found that an increase in technology skills corresponded with an increase in self-efficacy among native pre-service teachers. The finding also agree with that of Uzuna, Özk and Aysan (2010) conducted a study to analyze the teacher self-efficacy beliefs of the teacher candidates and found weak relationship between teacher self-efficacy perception of teacher candidates and their general academic achievement. Also, there was a high positive relationship between teacher self-efficacy perception and educational software development self-efficacy. It also agrees with that of Magliaro and Ezeife (2007) who investigated pre-service teachers' preparedness to integrate computer technology into the curriculum and found with higher scores were more ready to integrate computers into their lessons than those with lower scores. It also agrees with that of Hakverdi, Gücüm and Korkmaz (2007) who examined the factors influencing pre-service teachers' perceptions of computers' self-efficacy and found that level of computer use and educational use of computers are closely related to the outcome measure of pre-service science teachers' personal self-efficacy in teaching with computers. Furthermore, the study also agrees with that of Jegede (2007) and Topkaya (2010) who found that a significant and positive relationship existed between teachers' self-efficacy in Internet and their practices of classroom teaching.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study into the relationship between teachers' self- efficacy application packages and their classroom practice in senior secondary schools in Kaduna state. Among others, it presents the conclusions, and some recommendations based on the findings of the study.

5.2 Summary of the Study

Among problems of integrating computer into teaching and learning in Nigeria schools include: poor knowledge of computer skills by teachers. It is often reported that teachers in Nigeria secondary schools are not competent in basic computer operation and in the use of generic software which is considered to pose a major challenge teaching and learning in Senior Secondary Schools. This study, therefore, investigated the level of relationship between teachers' self-efficacy and classroom practice in senior secondary schools in Zaria, Kaduna State.

For the investigation, the researcher designed a structured questionnaire with components for demographic characteristics of the teachers and concepts of the different Application Packages, specifically Microsoft word, Microsoft Excel, PowerPoint, and Internet. The sections on the application packages were measured on a four point interval scale. The designed questionnaire was vetted by the supervisor and other professionals in the Faculty of Education, Ahmadu Bello University, Zaria. The recommendations were then included into the final copy used for the study. The designed questionnaire was then subjected to a pilot study to establish its reliability and internal consistency index. The result of the test with the Cronbach Alpha gave a reliability coefficient of 0.720 with same value as the internal consistency index for the intra-class coefficient. For the study population, a total of 214 teachers selected from 15 Senior Secondary Schools through the stratified random sampling procedure were used for the study.

The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS). Statistical procedures used included summary statistics of mean and standard deviation. The hypotheses were tested with the Spearman rant-order. Four hypotheses were tested and all were rejected. The study revealed a significant relationship between teachers' self-efficacy in all the four stated variables and their classroom practices.

5.3 Conclusion

From the analysis of the data and test of the study's hypotheses, the researcher wish to conclude as follows: Teachers self-efficacy in application packages is very important to their practices in the classroom situation in Senior Secondary Schools. Among others, a high and positive significant relationship exists between teachers self-efficacy in Microsoft Word Processing Package and classroom practices. Teachers' Self-efficacy in Microsoft Excel computer application package has significant impact on their classroom practices in the Senior Secondary Schools. Significant relationship was found between teachers' self-efficacy in PowerPoint application Package and classroom practices but in actual practice, from the obtained mean scores, the computers application packages were not adequately translated into practices in the classroom situation. This could be attributable to factors outside the scope of this study. Teachers' self-efficacy on Internet application was found to have significant impact on their classroom practices.

5.4 Implication of the Findings

The findings of this study have implications for teachers in Senior Secondary Schools in terms of technological skills development. The aim of achieving vision 2020, includes the ability to successfully integrate application packages into classroom practice would play a crucial role in the development of self-efficacy in both teachers and learner's. Moreover, teachers' active integration of computers in classroom practice will not only enhance the learning environment but will also assist students to be familiar with using technology in other aspects of their lives.

The education policy makers as well as the school authorities need to look into the findings of this study when designing Work Skill programmer to promote positive learning experiences and enhance the teachers' confidence.

The findings of the study, if properly implemented will create more advantages for mass awareness among Senior Secondary School teachers across the nation. This will enable educators to decide quickly on how computers will affect classroom practice and what kind of skills teachers will need to use in any new technologies effectively as instructional and teaching tools.

5.5 Recommendations

Based on the findings of this study, the following recommendations were made:

(i) Teachers should be trained and re-trained through workshop, seminars and conferences to acquire more skills in computer applications.

(ii) Teachers should be encouraged to use computers packages in classroom practices.

(iii) Government at all levels especially states and local government should invest more in education by providing ICT fealties to schools.

5.6 Contribution to Knowledge

The study being an assessment of the relationship between teachers' self-efficacy in application package and classroom practices

(i) The research design an instrument in the questionnaires which was used for the study and it generated the needed data for the study. This instrument can be adapted by other researchers who are interested in this area of study.

(ii) The study also established the relationship that teachers perceived self-efficacy in application package is the main determined of the use of such application in classroom.

5.7 Suggestion for Further Research

(i) New studies should be carried out to explore effective training strategies to overcome poor usages and increase teachers' self-efficacy and classroom practices.

(ii) Further study should be conducted to examine if there are infrastructures and equipment which can enhances practical teaching and learning process with computer application packages.

(iii) Furthermore, in view of that fact that the present study only utilizes the survey method, future studies may possibly consider using a mixed approach of combining quantitative data from questionnaires and qualitative data such as observations and interviews to enhance the understanding of the issue and problems related to use of computer for teaching.

5.8 Limitation of the Study

Data collection was limited to public senior secondary schools in Zaria, therefore generalizing the obtained result to the primary or junior secondary schools within and outside Zaria without further investigation may be misleading.

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APPENDIX(A)

QUESTIONNAIRE ON TEACHERS SELF-EFFICACY APPLICATION PACKAGE AND CLASSROOM PRACTICE

Dear Sir/Madam,

I, PATRICK, O, Beatrice (P16EDFC8517) of Instructional Technology Section, Department of Educational Foundations and Curriculum, Faculty of Education, Ahmad Bello University, Zaria is carrying out a research on Relationship between computer application packages self-efficacy and classroom practice senior secondary schools teachers in Kaduna State. Kindly provide appropriate information by ticking the box provided below. All information shall be treated confidentially. Thank you.

BIO-DATA

Status: Teacher ( )

PART TWO: QUESTIONNAIRE ON COMPUTER SELF-EFFICACY

This part consists of four sections (A-D) with each section having ten (10) Questionnaire items. For each item, please Tick (√) the portion that mostly applies to you. **Response options:** Highly Skill (HS = 4); Moderate Skill (MS =3); Lower Skill (LS =2); No Skill (NS – 1); Undecided (UN = 0)

Section A: Level of **word processing skills** possessed by teachers in secondary schools in Kaduna north zone

S/No	**I perform the following word processing operations:**	**HS (4)**	**MS (3)**	**LS (2)**	**NS (1)**	**UN (0)**
1.	Type, edit, copy, cut and paste a block of text or selected objects					
2.	Use undo/redo functions					
3.	Save, print and preview documents					
4	Use spell checker, grammar and thesaurus to edit and review document					
5.	Create and use table functions (boarder, merge/split cells)					
6.	Select and change fonts size and types					
7.	Select and change styles e.g. boldface, italics, underlining					
8.	Set line spacing e.g. single space, double space, etc					
9.	Set paragraph, alignment e.g. left, right, centre, justification					
10	Insert and remove, clip Art, headers, footers, page numbers, foot-notes etc.					

Section B: Level of **Microsoft Excel processing skills** possessed by teachers in secondary schools in Zaria

S/No	**I can perform the following word processing operations:**	**HS (4)**	**MS (3)**	**LS (2)**	**NS (1)**	**UN (0)**
11.	Create a new workbook					
12.	Opening, creating, and saving a workbook					
13.	Enter and edit data in a worksheet					
14	Edit and format cells, rows and columns					
15.	Insert a Picture, Clip Arts, Shapes and SmartArt					
16.	Preview and print workbook / worksheet					
17.	Creating and modifying Charts					
18.	Importing and exporting data					
19.	Apply simple formulae such as SUM, AVERAGE and STDEV (Standard Deviation)					
20	Insert Header and Footer; WordArt; Symbol, etc					

Section C: Level of **PowerPoint presentation skills** possessed by teachers in secondary schools in Zaria

S/No	I know how to	HS (4)	MS (3)	LS (2)	NS (1)	UN (0)
21.	Create presentation using wizards, design templates or blank layouts					
22.	Modify standard layouts and designs					
23.	Use slide master to create consistent presentations					
24.	Edit, insert slides from other presentations and reorganize slides					
25.	Change text fonts and bullets or numbers to slide contents					
26.	Add objects (clip arts, pictures, video clips, sound to your presentations					
27.	Add animations and transitions to slides.					
28.	Include table and charts in your presentations					
29.	Navigate between slides and switch between different views (slide outline, notes)					
30.	Use navigation buttons, sound, dissolves, graphics and text fields					

Section D: Level of Internet skills processed by teachers

S/No	I can perform the following internet operations:	**HS (4)**	**MS (3)**	**LS (2)**	**NS (1)**	**UN (0)**
31	Use the browser e.g. Internet Explorer basic commands to surf the interest					
32	Send and Receive mails via Yahoo, gmail, etc					
33	Download research materials to the hard drives (flash, disc, CD)					
34	Clear my browser cache/history					
35	Send document paper through e-mail attachment					
36	Download and install a plug-in (e.g. real player, adobe acrobat)					
37	Participate in international conference through teleconferencing/videoconferencing					
38	View source code and modify them for my use					
39	Use Internet to chart					
40	Can evaluate the design of existing web pages					

PART THREE: QUESTIONNAIRE ON CLASSROOM PRACTICE

Response options: Always Use (AU = 4), Intermittently Use (IU = 3), Rarely Use (RU = 2), Undecided (UD = 1)

Section A: Use of Microsoft Word for Classroom Practice

S/No	Item	**AU (4)**	**IU (3)**	**RU(2)**	**UD (1)**
1.	I can open Microsoft word from my computer and use it effectively in my classroom practices				
2.	Ask students to submit their typed work in soft copy				
3.	Request the students to print their typed work				
4	Inform the students to produce their Timetable using MS word				
5.	Type the students' list using MS word				
6.	Teach students how to draw shapes using Insert Menu				
7.	Teach students how to select different Clip Arts				
8.	Teach students how to Edit typed document				
9.	Teach students how to use formatting tools to format the typed document				
10	Request students to copy a typed work and paste it in another document				

Section B: Level of Microsoft Excel for Classroom Practice

S/No	**Item**	**AU (4)**	**IU (3)**	**RU (2)**	**UD (1)**
11.	I typed my students results using MS Excel				
12.	I calculate my students CA and Assignment using MS Excel				
13.	I use MS Excel to plot the graph of my students performance				
14	I use MS Excel to arrange my students' name in Ascending or Descending order				
15.	I teach my students how to create charts using MS Excel				
16.	I teach my students how to use MS Excel formula for basic calculation				
17.	I teach my students how to use MS Excel to insert symbols into their work				
18.	I teach my students how to use MS Excel to produce the list of their group members				
19.	I teach my students how to preview and print workbook/worksheet from MS Excel				
20	I teach my students how to Edit and format cells, rows and columns in MS Excel				

Section C: Level of PowerPoint for classroom practice

S/No	**I know how to:**	**AU (4)**	**IU (3)**	**RU (2)**	**UD (1)**
21.	Teach my students how to create presentation using wizards, design templates or blank layouts				
22.	Teach my students how to use standard layouts and designing their power point presentation				
24.	Teach my students how to hyperlink audio and video into their presentation				
25.	Teach my students how to change text fonts and bullets or numbers to slide contents				

D: Level of **Internet use** for classroom practice

S/No	I can perform the following internet operations:	**AU (4)**	**IU (3)**	**RU (2)**	**UD (1)**
31	I teach my students how to use the Internet				
32	I send and receive mails from my students				
33	I download teaching materials from the Internet				
34	I teach my students how to get additional information from the Internet				
35	I receive class assignment through e-mail attachment file				
36	I teach my students how to download relevant materials from the Internet				
37	I support my teaching with use of Tube video				
38	I teach my students how to chart with their colleagues via the Internet				
39	I chart with my students via face book,2go e.t.c				
40	I teach my students how to use different search machine				

APPENDIX B

Descriptive Statistics of Item Responses on Computer Self-Efficacy Scale Survey

S/No.	Item	HS	MS	LS	NS	UN	Mean	SD
1.	Types, edit, copy and paste a block of text or selected object	127	93	41	13	0	3.22	.881
2.	Use undo/redo function	102	119	43	6	4	3.11	.857
3.	Save print and preview	150	91	24	8	1	3.38	.812
4.	Use spell check grammar and thesaurus to edit and review document	120	96	48	9	1	3.13	.892
5.	Create and use table functions (boarder, merge/split cell)	110	96	48	14	0	3.02	1.043
6.	Select and change font size and type	117	99	51	6	1	3.21	.855
7.	Select and change styles e.g boldface italics, underlining	121	87	55	7	4	3.13	.955
8.	Set line spacing e.g single space double spacing	113	83	51	22	5	3.13	1.012
9.	Set paragraph alignment e.g left right centre justification	113	83	51	22	5	2.95	1.062
10.	Insert and remove	109	87	50	25	3	2.98	1.048
11.	Create a new word book	102	82	54	33	3	2.90	1.111
12.	Opening creating and saving a word book	90	105	50	26	3	2.88	1.039
13.	Enter and edit data	91	96	62	25	0	2.90	1.014
14.	Edit and format cells rows and columns	74	121	49	27	3	2.82	1.074
15.	Insert a picture clip and shapes and smart art	103	87	62	21	1	2.98	1.182
16.	Preview and print workbook/worksheet	82	108	51	23	10	2.79	1.147
17.	Creating and modifying charts	83	94	54	29	14	2.73	1.159
18.	Importing and exporting data	69	95	59	43	8	2.63	1.109
19.	Apply simple formulae such as SUM, Average and STDEV (Standard deviation)	80	83	65	36	10	2.66	1.159
20.	Insert header and footer word art, symbol etc.	77	76	93	27	1	2.71	.997
21.	Create presentation using wizards, design templates or blank layouts	67	78	93	32	4	2.68	1.058
22.	Modify standard layouts and design	59	80	99	35	1	2.63	1.003
23.	Use slide master to create consistent presentations	63	80	96	30	5	2.65	1.050
24.	Edit, insert slides from other	59	97	79	35	5	2.63	1.023

	presentation and reorganize slides							
25.	Change text fonts and bullets or numbers to slide contents	86	64	83	38	3	2.73	1.093
26.	Add objects (clip arts, pictures, video clips, sound to your presentations)	76	82	77	38	1	2.76	1.051
27.	Add animations and transitions to slides	71	73	95	35	0	2.70	1.027
28.	Include table and charts in presentation	76	70	89	31	8	2.63	1.117
29.	Navigate between slides and switch between different views (slide outline, notes)	78	64	82	40	10	2.64	1.185
30.	Use navigation buttons, sound, dissolve, graphics and text fields	76	84	80	30	1	2.79	1.034
31.	Use the browser e.g internet explorer basic commands to surf the interest	127	100	34	12	1	3.27	.889
32.	Send and Receive mails via yahoo. Gmail etc	111	101	44	13	5	3.11	1.005
33.	Download research materials to the hard drives (flash, disc, CD)	119	86	45	21	3	3.10	1.043
34.	Clear my browser cache/history	108	97	46	20	3	3.07	1.016
35.	Send document paper through e-mail attachment file	105	83	53	30	3	2.94	1.075
36.	Download and install a plug-in (eg real player, adobe acrobat)	87	105	58	22	2	2.93	1.004
37.	Participate an international conference through teleconferencing/video conferencing	55	113	59	38	9	2.55	1.115
38.	View source code and modify them for my use	58	93	72	42	9	2.52	1.145
39.	Use internet to chart	93	104	48	25	4	2.94	1.005
40.	Can evaluate the design of existing web pages	63	106	61	35	9	2.65	1.069

APPENDIX C

Descriptive Statistics of Item Responses on Classroom Practice Scale Survey

S/No	Item Statement	AU	IU	RU	UD	MEAN	S.D
1.	I can open Microsoft word from my computer and use it Effectively in my class	112	67	62	33	2.74	1.087
2.	Ask students to submit their typed work in soft copy	103	52	86	33	2.59	1.051
3.	Request the students to typed work	88	84	71	31	2.64	1.060
4	Inform the students to produce Their timetable using MS word	65	98	81	30	2.76	1.039
5	Type the students list using insert menu	70	93	83	28	2.70	1.018
6	Teach students how to select different clip arts	71	91	85	26	2.77	1.091
7	Teach students how to edit typed document	89	89	72	23	2.74	1.048
8	Teach students how to use formatting tools to format the typed document	80	93	75	26	2.69	1.142
9	Request students to copy a typed work and paste it in another document	80	92	67	35	2.41	1.289
10	I typed my students result using MS excel	78	79	81	36	2.36	1.320
11	I calculate my students CA and assignment using MS excel	67	70	94	39	2.28	1.361
12	I use MS excel to arrange my students name in ascending or descending order	76	63	96	36	2.29	1.292
13	I teach my students how to creates charts using Ms excel	86	54	107	24	2.43	1.283
14	I teach my students how to use Ms excel for basic calculation	80	63	100	27	2.38	1.238
15	I teach my students how to use Ms excel to insert symbol into their work	83	78	83	27	2.36	1.232
16	I teach my students how to use MS excel to produce the list of their group members	65	98	81	30	2.47	1.232
17	I teach my students how to preview and print work book/worksheet from MS excel	79	69	90	32	2.44	1.240
18	I teach my students how to edit and format cells, rows and columns in MS excel different	81	72	86	24	2.48	1.327
19	I teach my students how to create presentation using wizards design template or blank layouts	72	60	78	37	2.62	1.279

20	I teach my students how to use standard layout and designing for their presentation	72	60	78	37	2.70	1.261
21	Request students to copy a typed work and paste it in another document	80	92	67	35	2.36	1.266
22	I typed my students result using MS excel	78	79	81	36	2.44	1.257
23	I calculate my students CA and assignment using MS excel	67	70	94	39	2.29	1.270

APPENDIX E

COMPUTER PRINT OUT OF SPSS OUTPUT

Descriptives

Descriptive Statistics

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
type edit copy and paste a block of text or selected objects	214	3.22	.060	.881
use undo/redo functions	214	3.11	.059	.857
save print and preview	214	3.38	.056	.812
use spell checker, grammar and thesaurus to edit and review document	214	3.13	.061	.892
create and use table functions (boarder, merge/spell cells)	214	3.02	.071	1.043
select and change fonts size and types	214	3.21	.058	.855
select and change styles e.g. boldface, italics, underlining	214	3.13	.065	.955
set line spacing e.g. single space double space etc	214	3.13	.069	1.012
set paragraphy, alignment e.g. left right centre justification	214	2.95	.073	1.062

insert and remove clip art, headers footers page numbers foot notes etc	214	2.98	.072	1.048
create a new word book	214	2.90	.076	1.111
opening creating and saving a workbook	214	2.88	.071	1.039
enter and edit data in a worksheet	214	2.90	.067	.978
edit and format cells rows and columns	214	2.82	.068	.993
insert a picture, clip arts, shapes and smart art	214	2.98	.069	1.014
preview and print workbook/ worksheet	214	2.79	.073	1.074
creating and modifying charts	214	2.73	.081	1.182
importing and exporting data	214	2.63	.078	1.147
apply simple formulae such as SUM, average and STDEV (standard deviation	214	2.66	.079	1.159
insert header and footerr word art; symbol etc	214	2.71	.068	.997
create presentation using wizards, design templates or blank layouts	214	2.68	.072	1.058
modify standard layouts and designs	214	2.63	.069	1.003
use slide master to create consistent presentations	214	2.65	.072	1.050

edit insert slides from other presentations and reorganize slides	214	2.68	.070	1.023
change text fonts and bullets or numbers to slide contents	214	2.73	.075	1.093
add objects clip arts, pictures video clips, sound to your presentation	214	2.76	.072	1.051
add animations and transitions to slides	214	2.70	.070	1.027
include table and charts in your presentation	214	2.63	.076	1.117
navigate between slides and switch between different views (slide outline, notes)	214	2.64	.081	1.185
use navigation buttons sound dissolves, graphics and text fields	214	2.79	.071	1.034
use the brower e.g. internet explorer basic commands to surf the interest	214	3.27	.061	.889
send and reciever mails via yahoo, gmail etc	214	3.11	.069	1.005
downlaod research materials to the hard drives (flash, disc, CD)	214	3.10	.071	1.043
clear my browser cache/history	214	3.07	.069	1.016

send document paper through e-mail attachment file	214	2.94	.073	1.075
download and install a plug in (e.g. real player, adboe acrobat)	214	2.93	.069	1.004
participate in international conferene thorugh tellecooomferecing/videoconfereencing	214	2.55	.076	1.115
view source code and modify them for my use	214	2.52	.078	1.145
use internet to chart	214	2.97	.073	1.063
can evaluate the design of existing web pages	214	2.64	.075	1.098
i can open microsoftword from my computer and use it effecitively in my class	214	2.99	.071	1.044
ask students to submit their typed work in soft opy	214	2.89	.074	1.078
request the students to print their typed work	214	2.89	.070	1.024
inform the students to produce their timetbale using MS word	214	2.76	.066	.966
type the students list using ms word	214	2.83	.066	.959
teach students how to draw shapes using insert menu	214	2.80	.068	.998
teach students how to select different clip arts	214	2.82	.067	.978

teach students how to edit typed document	214	2.96	.066	.959
teach students how to use formating tools to format the typed document	214	2.88	.065	.956
request students to copy a typed work and paste it in anothr document	214	2.83	.070	1.025
i typed my students result using MS excel	214	2.74	.070	1.029
i calculate my students CA and assignment using MS excel	214	2.59	.073	1.074
i use MS excel to plot the graph of my students performance	214	2.64	.074	1.087
i use MS excel to arrange my students name in asending or desending order	214	2.76	.072	1.051
i teach my students how to creates charts using Ms ecel	214	2.70	.072	1.060
i teach my students how to use MS excel formula for basic calculation.	214	2.77	.071	1.039
i teach my students how to ise MS excel to insert symbols into their work	214	2.74	.070	1.018
i teach my students how to use MS excel to produce the list of their group members	214	2.69	.075	1.091

i teach my students how to preview and print oworkbook/ worksheet from MS excel	214	2.66	.072	1.048
i teach my students how to edit and format cells, rows and olumns in MS excel.	214	2.69	.078	1.142
teach my students how to create presentation using wizards design template or blank layouts	214	2.41	.088	1.289
teach my students how to use standard laouts and designing their power point presentation	214	2.36	.090	1.320
my students present thir assignment using power point presentation	214	2.28	.093	1.361
teachmy students how to hyperlink audio and video into their presentation	214	2.29	.088	1.292
teach my students how to change text fonts and bullets or numbers to slide contents	214	2.43	.088	1.283
teach my students how to insert clip arts pictures symbols etc to their presentations	214	2.38	.085	1.238
i add animations and transitions to my slides while teaching my students	214	2.36	.084	1.232

teach my students how to create tables and charts in the presentations	214	2.47	.085	1.240
teach my students how to link their presentation with internet	214	2.44	.091	1.327
teach my students how to use appropriate use navigation buttos, sound dissolves graphics and text fields in thier presentation	214	2.48	.086	1.251
i teach my students how to use the internet	214	2.62	.085	1.245
i send and recieve mails from my students	214	2.70	.085	1.247
i download teaching materials from the internet	214	2.71	.086	1.261
i teach my students how to get additional information from the internet	214	2.59	.087	1.266
i recieve class assignments through email attachment file	214	2.36	.086	1.262
i teach my students how to download relevant materials from the internet	214	2.44	.086	1.257
i support my teaching with the use of tube video	214	2.29	.087	1.270
i teach my students how to chart with their collegaues via the internet	214	2.48	.089	1.295

i chart with my students via facebook 2go etc	214	2.53	.093	1.359
i teach my students how to use different search machine	214	2.4766	.09219	1.34859
Valid N (listwise)	214			

Frequency Table

type edit copy and paste a block of text or selected objects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NS	10	4.7	4.7	4.7
	LS	34	15.9	15.9	20.6
	MS	68	31.8	31.8	52.3
	HS	102	47.7	47.7	100.0
	Total	214	100.0	100.0	

use undo/redo functions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	6	2.8	2.8	4.2
	LS	32	15.0	15.0	19.2
	MS	97	45.3	45.3	64.5
	HS	76	35.5	35.5	100.0
	Total	14	100.0	100.0	

save print and preview

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	7	3.3	3.3	3.7
	LS	18	8.4	8.4	12.1
	MS	71	33.2	33.2	45.3
	HS	117	54.7	54.7	100.0
	Total	214	100.0	100.0	

use spell checker, grammar and thesaurus to edit and review document

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	9	4.2	4.2	4.7
	LS	40	18.7	18.7	23.4
	MS	76	35.5	35.5	58.9
	HS	88	41.1	41.1	100.0
	Total	214	100.0	100.0	

create and use table functions (boarder, merge/spell cells)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	6	2.8	2.8	2.8
	NS	13	6.1	6.1	8.9
	LS	39	18.2	18.2	27.1
	MS	69	32.2	32.2	59.3
	HS	87	40.7	40.7	100.0
	Total	214	100.0	100.0	

select and change fonts size and types

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	6	2.8	2.8	3.3
	LS	36	16.8	16.8	20.1
	MS	75	35.0	35.0	55.1
	HS	96	44.9	44.9	100.0
	Total	214	100.0	100.0	

select and change styles e.g. boldface, italics, underlining

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	NS	7	3.3	3.3	5.1
	LS	40	18.7	18.7	23.8
	MS	69	32.2	32.2	56.1
	HS	94	43.9	43.9	100.0
	Total	214	100.0	100.0	

set line spacing e.g. single space double space etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	NS	12	5.6	5.6	7.5
	LS	37	17.3	17.3	24.8
	MS	60	28.0	28.0	52.8
	HS	101	47.2	47.2	100.0
	Total	214	100.0	100.0	

set paragraphy, alignment e.g. left right centre justification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	2.3	2.3	2.3
	NS	19	8.9	8.9	11.2
	LS	39	18.2	18.2	29.4
	MS	70	32.7	32.7	62.1
	HS	81	37.9	37.9	100.0
	Total	214	100.0	100.0	

insert and remove clip art, headers footers page numbers foot notes etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	21	9.8	9.8	11.2
	LS	38	17.8	17.8	29.0
	MS	67	31.3	31.3	60.3
	HS	85	39.7	39.7	100.0
	Total	214	100.0	100.0	

create a new word book

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	28	13.1	13.1	14.5
	LS	41	19.2	19.2	33.6
	MS	57	26.6	26.6	60.3
	HS	85	39.7	39.7	100.0
	Total	214	100.0	100.0	

opening creating and saving a workbook

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	24	11.2	11.2	12.6
	LS	39	18.2	18.2	30.8
	MS	77	36.0	36.0	66.8
	HS	71	33.2	33.2	100.0
	Total	214	100.0	100.0	

enter and edit data in a worksheet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NS	21	9.8	9.8	9.8
	LS	51	23.8	23.8	33.6
	MS	71	33.2	33.2	66.8
	HS	71	33.2	33.2	100.0
	Total	214	100.0	100.0	

edit and format cells rows and columns

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	23	10.7	10.7	12.1
	LS	41	19.2	19.2	31.3
	MS	90	42.1	42.1	73.4
	HS	57	26.6	26.6	100.0
	Total	214	100.0	100.0	

insert a picture, clip arts, shapes and smart art

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	20	9.3	9.3	9.8
	LS	46	21.5	21.5	31.3
	MS	63	29.4	29.4	60.7
	HS	84	39.3	39.3	100.0
	Total	214	100.0	100.0	

preview and print workbook/ worksheet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	3.7	3.7	3.7
	NS	21	9.8	9.8	13.6
	LS	39	18.2	18.2	31.8
	MS	86	40.2	40.2	72.0
	HS	60	28.0	28.0	100.0
	Total	214	100.0	100.0	

creating and modifying charts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	12	5.6	5.6	5.6
	NS	24	11.2	11.2	16.8
	LS	41	19.2	19.2	36.0
	MS	69	32.2	32.2	68.2
	HS	68	31.8	31.8	100.0
	Total	214	100.0	100.0	

importing and exporting data

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	3.7	3.7	3.7
	NS	33	15.4	15.4	19.2
	LS	48	22.4	22.4	41.6
	MS	67	31.3	31.3	72.9
	HS	58	27.1	27.1	100.0
	Total	214	100.0	100.0	

apply simple formulae such as SUM, average and STDEV (standard deviation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	10	4.7	4.7	4.7
	NS	28	13.1	13.1	17.8
	LS	48	22.4	22.4	40.2
	MS	67	31.3	31.3	71.5
	HS	61	28.5	28.5	100.0
	Total	214	100.0	100.0	

insert header and footerr word art; symbol etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	24	11.2	11.2	11.7
	LS	67	31.3	31.3	43.0
	MS	65	30.4	30.4	73.4
	HS	57	26.6	26.6	100.0
	Total	214	100.0	100.0	

create presentation using wizards, design templates or blank layouts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	NS	27	12.6	12.6	14.5
	LS	59	27.6	27.6	42.1
	MS	67	31.3	31.3	73.4
	HS	57	26.6	26.6	100.0
	Total	214	100.0	100.0	

modify standard layouts and designs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	30	14.0	14.0	14.5
	LS	66	30.8	30.8	45.3
	MS	68	31.8	31.8	77.1
	HS	49	22.9	22.9	100.0
	Total	214	100.0	100.0	

use slide master to create consistent presentations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	2.3	2.3	2.3
	NS	25	11.7	11.7	14.0
	LS	63	29.4	29.4	43.5
	MS	68	31.8	31.8	75.2
	HS	53	24.8	24.8	100.0
	Total	214	100.0	100.0	

edit insert slides from other presentations and reorganize slides

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	NS	27	12.6	12.6	14.5
	LS	52	24.3	24.3	38.8
	MS	82	38.3	38.3	77.1
	HS	49	22.9	22.9	100.0
	Total	214	100.0	100.0	

change text fonts and bullets or numbers to slide contents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	29	13.6	13.6	15.0
	LS	59	27.6	27.6	42.5
	MS	55	25.7	25.7	68.2
	HS	68	31.8	31.8	100.0
	Total	214	100.0	100.0	

add objects clip arts, pictures video clips, sound to your presentatio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	31	14.5	14.5	15.0
	LS	51	23.8	23.8	38.8
	MS	67	31.3	31.3	70.1
	HS	64	29.9	29.9	100.0
	Total	214	100.0	100.0	

add animations and transitions to slides

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NS	29	13.6	13.6	13.6
	LS	67	31.3	31.3	44.9
	MS	57	26.6	26.6	71.5
	HS	61	28.5	28.5	100.0
	Total	214	100.0	100.0	

include table and charts in your presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	3.7	3.7	3.7
	NS	26	12.1	12.1	15.9
	LS	61	28.5	28.5	44.4
	MS	61	28.5	28.5	72.9
	HS	58	27.1	27.1	100.0
	Total	214	100.0	100.0	

navigate between slides and switch between different views (slide outline, notes)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	4.2	4.2	4.2
	NS	31	14.5	14.5	18.7
	LS	55	25.7	25.7	44.4
	MS	52	24.3	24.3	68.7
	HS	67	31.3	31.3	100.0
	Total	214	100.0	100.0	

use navigation buttons sound dissolves, graphics and text fields

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	27	12.6	12.6	13.1
	LS	54	25.2	25.2	38.3
	MS	66	30.8	30.8	69.2
	HS	66	30.8	30.8	100.0
	Total	214	100.0	100.0	

use the brower e.g. internet explorer basic commands to surf the intereest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	NS	10	4.7	4.7	5.1
	LS	27	12.6	12.6	17.8
	MS	68	31.8	31.8	49.5
	HS	108	50.5	50.5	100.0
	Total	214	100.0	100.0	

send and reciever mails via yahoo, gmail etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	2.3	2.3	2.3
	NS	11	5.1	5.1	7.5
	LS	34	15.9	15.9	23.4
	MS	69	32.2	32.2	55.6
	HS	95	44.4	44.4	100.0
	Total	214	100.0	100.0	

downlaod research materials to the hard drives (flash, disc, CD)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	18	8.4	8.4	9.8
	LS	34	15.9	15.9	25.7
	MS	58	27.1	27.1	52.8
	HS	101	47.2	47.2	100.0
	Total	214	100.0	100.0	

clear my browser cache/history

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	NS	17	7.9	7.9	9.3
	LS	34	15.9	15.9	25.2
	MS	68	31.8	31.8	57.0
	HS	92	43.0	43.0	100.0
	Total	214	100.0	100.0	

send document paper through e-mail attachment file

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.9	.9	.9
	UD	25	11.7	11.7	12.6
	RU	43	20.1	20.1	32.7
	IU	58	27.1	27.1	59.8
	AU	86	40.2	40.2	100.0
	Total	214	100.0	100.0	

download and install a plug in (e.g. real player, adboe acrobat)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	2	.9	.9	.9
	UD	19	8.9	8.9	9.8
	RU	47	22.0	22.0	31.8
	IU	71	33.2	33.2	65.0
	AU	75	35.0	35.0	100.0
	Total	214	100.0	100.0	

participate in international conferene thorugh tellecooomferecing/videoconfereencing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	4.2	4.2	4.2
	UD	33	15.4	15.4	19.6
	RU	49	22.9	22.9	42.5
	IU	77	36.0	36.0	78.5
	AU	46	21.5	21.5	100.0
	Total	214	100.0	100.0	

view source code and modify them for my use

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	3.7	3.7	3.7
	UD	37	17.3	17.3	21.0
	RU	56	26.2	26.2	47.2
	IU	61	28.5	28.5	75.7
	AU	52	24.3	24.3	100.0
	Total	214	100.0	100.0	

use internet to chart

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	UD	21	9.8	9.8	11.7
	RU	37	17.3	17.3	29.0
	IU	68	31.8	31.8	60.7
	AU	84	39.3	39.3	100.0
	Total	214	100.0	100.0	

can evaluate the design of existing web pages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	8	3.7	3.7	3.7
	UD	29	13.6	13.6	17.3
	RU	45	21.0	21.0	38.3
	IU	81	37.9	37.9	76.2
	AU	51	23.8	23.8	100.0
	Total	214	100.0	100.0	

i can open microsoftword from my computer and use it effecitively in my class

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	25	11.7	11.7	11.7
	RU	42	19.6	19.6	31.3
	IU	57	26.6	26.6	57.9
	AU	90	42.1	42.1	100.0
	Total	214	100.0	100.0	

ask students to submit their typed work in soft opy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	27	12.6	12.6	12.6
	RU	56	26.2	26.2	38.8
	IU	45	21.0	21.0	59.8
	AU	86	40.2	40.2	100.0
	Total	214	100.0	100.0	

request the students to print their typed work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	25	11.7	11.7	11.7
	RU	50	23.4	23.4	35.0
	IU	63	29.4	29.4	64.5
	AU	76	35.5	35.5	100.0
	Total	214	100.0	100.0	

inform the students to produce their timetbale using MS word

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	24	11.2	11.2	11.2
	RU	59	27.6	27.6	38.8
	IU	75	35.0	35.0	73.8
	AU	56	26.2	26.2	100.0
	Total	214	100.0	100.0	

type the students list using ms word

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	20	9.3	9.3	9.3
	RU	59	27.6	27.6	36.9
	IU	72	33.6	33.6	70.6
	AU	63	29.4	29.4	100.0
	Total	214	100.0	100.0	

teach students how to draw shapes using insert menu

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	24	11.2	11.2	11.2
	RU	60	28.0	28.0	39.3
	IU	65	30.4	30.4	69.6
	AU	65	30.4	30.4	100.0
	Total	214	100.0	100.0	

teach students how to select different clip arts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	UD	20	9.3	9.3	9.8
	RU	59	27.6	27.6	37.4
	IU	71	33.2	33.2	70.6
	AU	63	29.4	29.4	100.0
	Total	214	100.0	100.0	

teach students how to edit typed document

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1	.5	.5	.5
	UD	15	7.0	7.0	7.5
	RU	51	23.8	23.8	31.3
	IU	71	33.2	33.2	64.5
	AU	76	35.5	35.5	100.0
	Total	214	100.0	100.0	

teach students how to use formating tools to format the typed odcument

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	19	8.9	8.9	8.9
	RU	55	25.7	25.7	34.6
	IU	73	34.1	34.1	68.7
	AU	67	31.3	31.3	100.0
	Total	214	100.0	100.0	

request students to copy a typed work and paste it in anothr doument

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	28	13.1	13.1	13.1
	RU	49	22.9	22.9	36.0
	IU	68	31.8	31.8	67.8
	AU	69	32.2	32.2	100.0
	Total	214	100.0	100.0	

i typed my students result using MS excel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UD	30	14.0	14.0	14.0
	RU	58	27.1	27.1	41.1
	IU	64	29.9	29.9	71.0
	AU	62	29.0	29.0	100.0
	Total	214	100.0	100.0	

i calculate my students CA and assignment using MS exccel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	UD	32	15.0	15.0	16.8
	RU	65	30.4	30.4	47.2
	IU	60	28.0	28.0	75.2
	AU	53	24.8	24.8	100.0
	Total	214	100.0	100.0	

i use MS excel to plot the graph of my students performance

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	UD	32	15.0	15.0	16.4
	RU	65	30.4	30.4	46.7
	IU	54	25.2	25.2	72.0
	AU	60	28.0	28.0	100.0
	Total	214	100.0	100.0	

i use MS excel to arrange my students name in asending or desending order

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	UD	19	8.9	8.9	10.3
	RU	75	35.0	35.0	45.3
	IU	47	22.0	22.0	67.3
	AU	70	32.7	32.7	100.0
	Total	214	100.0	100.0	

i teach my students how to creates charts using Ms ecel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	UD	22	10.3	10.3	12.1
	RU	72	33.6	33.6	45.8
	IU	53	24.8	24.8	70.6
	AU	63	29.4	29.4	100.0
	Total	214	100.0	100.0	

i teach my students how to use MS excel formula for basic calculation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	UD	22	10.3	10.3	11.7
	RU	61	28.5	28.5	40.2
	IU	63	29.4	29.4	69.6
	AU	65	30.4	30.4	100.0

i teach my students how to use MS excel formula for basic calculation.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	UD	22	10.3	10.3	11.7
	RU	61	28.5	28.5	40.2
	IU	63	29.4	29.4	69.6
	AU	65	30.4	30.4	100.0
	Total	214	100.0	100.0	

i teach my students how to ise MS excel to insert symbols into their work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	3	1.4	1.4	1.4
	UD	22	10.3	10.3	11.7
	RU	61	28.5	28.5	40.2
	IU	69	32.2	32.2	72.4
	AU	59	27.6	27.6	100.0
	Total	214	100.0	100.0	

i teach my students how to use MS excel to produce the list of their group members

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	4	1.9	1.9	1.9
	UD	28	13.1	13.1	15.0
	RU	62	29.0	29.0	43.9
	IU	56	26.2	26.2	70.1
	AU	64	29.9	29.9	100.0
	Total	214	100.0	100.0	

i teach my students how to preview and print oworkbook/ worksheet from MS excel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	5	2.3	2.3	2.3
	UD	24	11.2	11.2	13.6
	RU	63	29.4	29.4	43.0
	IU	68	31.8	31.8	74.8
	AU	54	25.2	25.2	100.0
	Total	214	100.0	100.0	

i teach my students how to edit and format cells, rows and olumns in MS excel.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	4.2	4.2	4.2
	UD	23	10.7	10.7	15.0
	RU	60	28.0	28.0	43.0
	IU	56	26.2	26.2	69.2
	AU	66	30.8	30.8	100.0
	Total	214	100.0	100.0	

teach my students how to create presentation using wizards design template or blank layouts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	21	9.8	9.8	9.8
	UD	33	15.4	15.4	25.2
	RU	53	24.8	24.8	50.0
	IU	52	24.3	24.3	74.3
	AU	55	25.7	25.7	100.0
	Total	214	100.0	100.0	

teach my students how to use standard laouts and designing their power point presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	24	11.2	11.2	11.2
	UD	34	15.9	15.9	27.1
	RU	53	24.8	24.8	51.9
	IU	48	22.4	22.4	74.3
	AU	55	25.7	25.7	100.0
	Total	214	100.0	100.0	

my students present thir assignment using power point presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	25	11.7	11.7	11.7
	UD	44	20.6	20.6	32.2
	RU	49	22.9	22.9	55.1
	IU	39	18.2	18.2	73.4
	AU	57	26.6	26.6	100.0
	Total	214	100.0	100.0	

teachmy students how to hyperlink audio and video into their presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	21	9.8	9.8	9.8
	UD	43	20.1	20.1	29.9
	RU	54	25.2	25.2	55.1
	IU	46	21.5	21.5	76.6
	AU	50	23.4	23.4	100.0
	Total	214	100.0	100.0	

teach my students how to change text fonts and bullets or numbers to slide contents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	19	8.9	8.9	8.9
	UD	33	15.4	15.4	24.3
	RU	58	27.1	27.1	51.4
	IU	45	21.0	21.0	72.4
	AU	59	27.6	27.6	100.0
	Total	214	100.0	100.0	

teach my students how to insert clip arts pictures symbols etc to their presentations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	18	8.4	8.4	8.4
	UD	32	15.0	15.0	23.4
	RU	67	31.3	31.3	54.7
	IU	45	21.0	21.0	75.7
	AU	52	24.3	24.3	100.0
	Total	214	100.0	100.0	

i add animations and transitions to my slides while teaching my students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	20	9.3	9.3	9.3
	UD	30	14.0	14.0	23.4
	RU	64	29.9	29.9	53.3
	IU	53	24.8	24.8	78.0
	AU	47	22.0	22.0	100.0
	Total	214	100.0	100.0	

teach my students how to create tables and charts in the presentations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	18	8.4	8.4	8.4
	UD	25	11.7	11.7	20.1
	RU	67	31.3	31.3	51.4
	IU	46	21.5	21.5	72.9
	AU	58	27.1	27.1	100.0
	Total	214	100.0	100.0	

teach my students how to link their presentation with internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	23	10.7	10.7	10.7
	UD	29	13.6	13.6	24.3
	RU	55	25.7	25.7	50.0
	IU	44	20.6	20.6	70.6
	AU	63	29.4	29.4	100.0
	Total	214	100.0	100.0	

teach my students how to use appropriate use navigation buttos, sound dissolves graphics and text fields in thier presentation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	19	8.9	8.9	8.9
	UD	25	11.7	11.7	20.6
	RU	62	29.0	29.0	49.5
	IU	50	23.4	23.4	72.9
	AU	58	27.1	27.1	100.0
	Total	214	100.0	100.0	

i teach my students how to use the internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	6.5	6.5	6.5
	UD	26	12.1	12.1	18.7
	RU	59	27.6	27.6	46.3
	IU	43	20.1	20.1	66.4
	AU	72	33.6	33.6	100.0
	Total	214	100.0	100.0	

i send and recieve mails from my students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	6.5	6.5	6.5
	UD	24	11.2	11.2	17.8
	RU	52	24.3	24.3	42.1
	IU	47	22.0	22.0	64.0
	AU	77	36.0	36.0	100.0
	Total	214	100.0	100.0	

i download teaching materials from the internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	16	7.5	7.5	7.5
	UD	23	10.7	10.7	18.2
	RU	45	21.0	21.0	39.3
	IU	54	25.2	25.2	64.5
	AU	76	35.5	35.5	100.0
	Total	214	100.0	100.0	

i teach my students how to get additional information from the internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	17	7.9	7.9	7.9
	UD	21	9.8	9.8	17.8
	RU	67	31.3	31.3	49.1
	IU	36	16.8	16.8	65.9
	AU	73	34.1	34.1	100.0
	Total	214	100.0	100.0	

i recieve class assignments through email attachment file

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	21	9.8	9.8	9.8
	UD	33	15.4	15.4	25.2
	RU	58	27.1	27.1	52.3
	IU	53	24.8	24.8	77.1
	AU	49	22.9	22.9	100.0
	Total	214	100.0	100.0	

i teach my students how to download relevant materials from the internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	18	8.4	8.4	8.4
	UD	30	14.0	14.0	22.4
	RU	64	29.9	29.9	52.3
	IU	44	20.6	20.6	72.9
	AU	58	27.1	27.1	100.0
	Total	214	100.0	100.0	

i support my teaching with the use of tube video

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	27	12.6	12.6	12.6
	UD	30	14.0	14.0	26.6
	RU	51	23.8	23.8	50.5
	IU	67	31.3	31.3	81.8
	AU	39	18.2	18.2	100.0
	Total	214	100.0	100.0	

i teach my students how to chart with their collegaues via the internet

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	21	9.8	9.8	9.8
	UD	27	12.6	12.6	22.4
	RU	56	26.2	26.2	48.6
	IU	48	22.4	22.4	71.0
	AU	62	29.0	29.0	100.0
	Total	214	100.0	100.0	

i chart with my students via facebook 2go etc

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	26	12.1	12.1	12.1
	UD	22	10.3	10.3	22.4
	RU	49	22.9	22.9	45.3
	IU	47	22.0	22.0	67.3
	AU	70	32.7	32.7	100.0
	Total	214	100.0	100.0	

i teach my students how to use different search machine

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	.00	25	11.7	11.7	11.7
	UD	26	12.1	12.1	23.8
	RU	51	23.8	23.8	47.7
	IU	46	21.5	21.5	69.2
	AU	66	30.8	30.8	100.0
	Total	214	100.0	100.0	