INFLUENCE OF CURRICULUM, FACILITIES AND TEACHER COMPETENCIES ON SKILL ACQUISITION OF OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS IN POLYTECHNICS IN SOUTH-WESTERN NIGERIA

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14/27/PBE009

DEPARTMENT OF BUSINESS AND ENTREPRENEURSHIP EDUCATION
COLLEGE OF EDUCATION
KWARA STATE UNIVERSITY, MALETE

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD) DEGREE IN BUSINESS EDUCATION

DECEMBER, 2019

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A DISSERTATION SUBMITTED TO THE DEPARTMENT OF BUSINESS AND ENTREPRENEURSHIP EDUCATION
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IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DOCTOR OF PHILOSOPHY (PhD) DEGREE IN BUSINESS EDUCATION

DECEMBER, 2019

CERTIFICATION

This dissertation titled "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition of Office Technology and Management Students in Polytechnics in South-Western Nigeria" by Shuaibu YUSUF meets the regulations governing the award of Doctor of Philosophy (Ph.D.) degree in Business and Entrepreneurship Education, Kwara State University, Malete, Nigeria and is approved by the undersigned for its contribution to knowledge and literary presentation.

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DECLARATION

I hereby declare that the work in this dissertation titled "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition of Office Technology and Management Students in Polytechnics in South-Western Nigeria" was carried out by me in the Department of Business and Entrepreneurship Education, Kwara State University, Malete, Nigeria. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation has been presented for another degree or diploma in this institution or any other institution.

…….. ……..

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14/27/PBE009

DEDICATION

This dissertation is dedicated to my wife and children.

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ABSTRACT

The study examined influence of curriculum, facilities and teacher competencies on skill acquisition of office technology and management students in polytechnics in South-Western Nigeria. The study adopted descriptive survey research design. The population for the study consisted of 152 lecturers and instructors in all accredited polytechnics in South-Western Nigeria. Four research questions guided the study and four null hypotheses were tested at 0.05 level of significance. No sample was drawn, the entire population was studied. The data for the study was collected through questionnaire titled OTM Curriculum, Facilities and Teacher Competencies on Students' Skill Acquisition in Polytechnics which was duly validated by three experts in Kwara State University, Malete. The reliability co-efficient calculated for the instrument was found to be 0.868 which indicated that the instrument for the study was reliable. Mean and standard deviation were the tools used to analyze the research questions while the hypotheses were tested using independent t-test statistics at 0.05 level of significance. The instrument found that the quality of the OTM curriculum had significant impact on the acquisition of skills among OTM students in polytechnics in South-Western Nigeria. To a large extent, teaching facilities has impact on the acquisition of skills among OTM polytechnic students in South-Western Nigeria. Based on these findings, it was concluded that if properly implemented and used, the current curriculum and facilities would contribute to the acquisition of relevant skills. It was also concluded that the lecturers are competent in teaching relevant skills to the students in the polytechnics. To this end, it was recommended among others that the curriculum of office technology and management should be constantly reviewed, revised and adjusted in order to meet the challenges brought about by information and communication technology. Lecturers could be trained and retrained in order to keep them abreast and competent with the current trends in curriculum and instruction of Office Technology and Management courses and for effective service delivery.

Keywords: Curriculum, Facilities, Teacher Competencies, Skill Acquisition, Office Technology and Management.

CHAPTER ONE

INTRODUCTION

Background of the Study

The advent of Information and Communication Technology (ICT) has brought about great changes in the facilities and equipment used in contemporary offices. This, in turn, has facilitated considerable transformation in the duties and responsibilities of modern secretaries. In response, secretarial curricula in Nigerian polytechnics have in recent years tried to catch up with the new realities of the modern office, which is being continually transformed by the vagaries of the ICT age.

The Nigerian polytechnic system is regulated by the National Board for Technical Education (NBTE). The NBTE designs all polytechnics' curricula and is empowered to approve all polytechnics' programmes. The old National Board for Technical Education (NBTE) Secretarial Studies curriculum was no longer valid for today. The curriculum was dominated by Shorthand and Typewriting with five and four credit units respectively, in addition to some management courses. According to the NBTE (1989), the course outline was divided into four special areas namely: General Studies/Education, Supervised Industrial Work Experience Scheme (SIWES), Foundation Courses, and Professional Courses. The General Studies/Education contains Arts and Humanities – English Language, Communication, Literary Appreciation and Oral Composition, History, Mathematics, Citizenship, Sociology, Philosophy, and Psychology which are all compulsory for the students to offer. The Foundation courses consist of Mathematics, Pure Science, Technical Drawing, Economics and Descriptive Geometry Statistics. Professional Courses include Shorthand (60wpm, 80wpm, 90wpm, 100wpm, 110wpm and 120wpm), Advance Transcriptions I and II, Typewriting (25wpm,

35wpm, 40wpm, 50wpm, 55wpm and 60wpm), Office Practice , Secretarial Duties, Word Processing I and II, Personnel Management, Business Law, Office Information System, Business Communication, Office Administration and Management, Data Processing and the Supervised Industrial Work Experience Scheme (SIWES).

While the 1989 curriculum was probably ideal for its time, it has proved inadequate for a secretary to function effectively in a modern office (Agbongiasede, 2014). Agbongiasede further revealed that it took the NBTE fifteen years, to draw up the Office Technology and Management (OTM) curriculum for ND and HND programmes which was declared in February 2004. The NBTE (2004) course outline contains many new ICT-related subjects including Word Processing, Advanced Word Processing, Desktop Publishing, Web Page Design, Data Base Management System, ICT Office Applications I and II, Advanced Desktop Publishing, Advanced Web Page Design, and Modern Office Technology.

The Office Technology and Management Curriculum as approved by NBTE in 2004 is a considerable improvement on the old OTM Curriculum, since it reflects the realities of the modern office. Mbaezue and Theresa (2012) admit that the information technology has turned the world into a computerized global village resulting in a largely paperless office. Evidently, manual office competencies and skills are gradually disappearing from workplace giving way to office technology facilities such as computer and electronic telecommunications equipment used for the collection, manipulation, storage and transmission of texts, numbers, sound and images. Components of office technology facilities, according to Azuka (2009) include word processor/computers with or without sharing facilities, interactive whiteboard, audio-visual media, projector machine, e-mail facilities, video/teleconferencing machines and others.

The goal of Business Education programme at all levels is to provide training in business skills and to develop the ability to use these skills in the work environment (Azuka, 2009). However, the success or failure of any classroom interaction depends to a large extent on the availability and utilization of instructional equipment and facilities, highly skilled teachers and appropriate curriculum from which the learner can draw experience, especially on the practical skills. In recent times, issues of why and how teachers themselves can become highly skilled and competent in the use of office technology facilities in teaching and learning have been made a priority (Omeje, 2009). Beaumont (2009) and Byrnside (2010) agree that teachers should use proper instructional strategies to make learners acquire the skills required for employment. They note that teachers can only help students to acquire the skills if they themselves recognize which of the methods are used in mastering the skill.

There is no question that the success of commercial teaching can be influenced by the research of commercial teachers to teach OTM students the skills as well as knowledge of technology. The need for commercial teachers to study current office technology skills cannot, therefore, be over-emphasised, as this is essential if instructors are to converse these services to students so that they can be effectively equipped for the demands of present technological improvements in today's commercial offices. Commercial educators are similarly supposed to be capable of applying ICT to learning as well as teaching office education skills courses, if they are to suggest suitable direction to most of the students.

Polytechnics are designed to produce middle level manpower in Technical and Vocational education offerings for national development. The premier polytechnic in Nigeria is Yaba College of Technology which was founded in 1948. The dire need of middle level manpower to operate the National Development Plan in the 1970s compelled the federal

government to establish more polytechnics, leading to increase in the number of polytechnics and Colleges of Technology. The polytechnics in Nigeria are either owned by the federal government, state government, private organizations or Individuals. It is generally believed that federal polytechnics are better funded than state and private ones.

There are two types of educators in Nigerian polytechnics; instructors as well as lecturers. The lecturers are university graduates with a university background. Teachers are primarily concerned with philosophical aspects of pedagogy; educators are teachers with a polytechnic or academic history. We are primarily concerned with the technical/practical part of teaching. Although instructors pride themselves on knowledge of practical and secretarial skills, lecturers frequently mock their lack of theoretical knowledge; thus, the relationship between instructors and lecturers is always conflict-prone.

There is always a degree of gender balance among teachers of OTM in Nigerian polytechnics since Secretarial Profession was seen as a feminine occupation. Female teachers consequently dominate secretarial practice and pedagogy. However, the introduction of ICT into secretarial practice has brought the profession and its pedagogy within the male comfort zone. In OTM as in many other professions, there is often gender disparity in perceptions of professional approaches and ideals.

Statement of the Problem

The quality of business education programme should be of the greatest concern to development experts and economic planners in Nigeria, especially in a period of economic recession. Education has been identified as a major factor in economic development. If Nigeria is to emerge from its current economic malaise, the quality of economic education being offered to the youths must improve considerably.

The advent of ICT also meant that new facilities had to be acquired; curricula had to be revised, although teachers also had to be continuously re-trained, for the reason that it was found that in most of higher institutions, computer-based lecturers who could not apply ICT courses to the secretarial role had been teaching OTM students these courses despite the lack of OTM skills. The circumstances calls for frequent review of the programs in order to make certain that they do not fall behind the galloping pace of the ICT uprising along with current certainty of the office. If this is not achieved, clerical teachers would only be preparing administrators as well as office managers for yesterday's office. This could have great implications for the quality of office work and economic productivity. The concern of this study was to determine the impact of curriculum, facilities and teacher competencies on skill acquisition of OTM students in polytechnics in south-western Nigeria.

Purpose of the Study

The purpose of this study is to examine the influence of curriculum contents, facilities and teacher competencies on office Technology and Management students' skill acquisition as perceived by polytechnics lecturers and instructors in South-Western Nigeria. Specifically, the study examined the extent of:

1. Influence of OTM curriculum contents on students' skill acquisition in polytechnics in South-Western Nigeria;
2. Influence of teaching facilities on students' skill acquisition in polytechnics in South-Western Nigeria;
3. Influence of teacher competencies on students' skill acquisition in polytechnics in South-Western Nigeria;

4. Influence of instructional strategies on students' skill acquisition in polytechnics in South-Western Nigeria.

Research Questions

1. To what extent do the OTM curriculum contents influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?
2. To what extent do teaching facilities influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?
3. To what extent do teaching competencies influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?
4. To what extent do instructional strategies adopted by OTM teachers influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?

Hypotheses

The following hypotheses are formulated to guide the study:

Ho_1 There is no significant difference in the mean ratings of male and female respondents on the extent of curriculum contents' influence on skill acquisition among OTM students in polytechnics in South-Western Nigeria;

Ho_2 There is no significant difference in the mean ratings of male and female respondents on the extent to which teaching facilities influence students' skill acquisition in polytechnics in South-Western Nigeria;

Ho_3 There is no significant difference in the mean ratings of lecturers and instructors on the extent to which teaching competencies influence students' skill acquisition in polytechnics in South-Western Nigeria;

Ho_4 There is no significant difference in the mean ratings of male and female respondents on the extent to which instructional strategies adopted by OTM teachers influence students' skill acquisition in Polytechnics in South-Western Nigeria;

Significance of the Study

This study could be useful to school teachers, curriculum planners and the National Board for Technical Education among others. It is expected that the findings and recommendations of the study could be useful to the National Board for Technical Education because it will help to identify the challenges posed by the implementation of the NBTE, OTM 2004 curriculum contents in polytechnics in Nigeria.

It could also be useful to school administrators because they will be able to identify the office technology equipment and instructional facilities needed to make teaching and learning effective and efficient in the polytechnics.

This study could be useful to business educators and instructors because they will see the need to continually update their knowledge by attending conferences, seminars and workshops and by going on further studies either by self-sponsorship or through the Tertiary Education Trust Fund; In the same vein, the study could be useful to curriculum planners because they will be able to see the challenges engendered by the implementation of the OTM Curriculum to the Nigerian Polytechnics.

This study could be useful to Business Educators and instructors because they will know the effect of skill acquisition on the effective performance of OTM graduates in offices.

It could also be useful to OTM Students because it will encourage them to develop greater interest in acquiring computer knowledge/skill since its importance would have been made known to them.

Finally, the study would be a worthy contribution to literature in the fields of business education, curriculum planning and related areas of study.

Delimitation of the Study

This study covered the accredited polytechnics that run the OTM programme in south-western part of Nigeria. It also involved lecturers and instructors in these polytechnics who are responsible for the implementation of office ICT technology for the OTM Department. It also covered ICT skill acquisition of OTM students. The study relied on the awareness of lecturers and instructors in these polytechnics.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter contains the review of related literature and therefore focuses on the following sub-headings:

a) **Theoretical Framework**

   Theory of Diffusion of Innovation

   Attributes of Innovation and Rate of Adoption

b) Concept of Teaching

c) Concept of Technology

d) Concept of Technology Integration

e) Concept of Curriculum

f) Components of Curriculum

g) Office Technology and Management Curriculum

h) Role of Technology in attaining the objectives of Office Technology and Management in Nigeria

i) Office Technology Facilities Used in Nigerian Schools

j) Concept of Skill Acquisition

k) Teaching Strategies for Developing Psychomotor Skills

l) How Skills are Learned

m) Review of Related Empirical Literature

n) Appraisal of Reviewed Literature

Theoretical Framework

This research is anchored on Diffusion of Innovations Theory because it dealt with the adoption of technology which is the concern of the study. According to Stuart (2000), the Diffusion of Innovations Theory is a commonly used theoretical framework in the field of innovation diffusion and adoption. The Diffusion of Technology Theory is most applicable to research into the application of innovation in higher education and employment environments. In general, Rogers (2003) used the terms "innovation" and "technology" as synonyms. He argued that innovation is a choice to make full utilization of skill as the greatest course of action obtainable, and that refusal is a decision not to accept an innovation. There are four key elements in the diffusion of the theory of inventions, as discussed below.

Technology is the first step of the diffusion of technology theory. Rogers (2003) introduced the following definition of innovation: innovation is a concept, activity or plan that is viewed as new by individual or other adoption units. Advancement may have been invented a long time ago, but if individuals see it as modern, it may still be an advancement for them. The novelty of the adoption is more closely linked to the three stages (knowledge, persuasion and decision-making) of the innovation-decision process. According to Rogers, confusion is a significant barrier to the acceptance of technologies. The implications of technology can create uncertainty. In order to reduce the complexity of the implementation of technology, individuals should be well-versed about its advantages and disadvantages in order to make them fully aware of all its implications. He also argued that the effects could be very undesirable, direct versus indirect, classified as desirable, as well as unanticipated versus anticipated.

Communication channel is the second component of the diffusion of the innovation process. For Rogers (2003), interaction is a system in which participants establish and share

information with each other in order to reach a common understanding. Such contact takes place through the networks between the sources. He also argued that the source is a person or an entity which originates a text. The channel is the mechanism through which a message is sent from the sender to the recipient. It also claimed that diffusion is a specific type of communication and includes the following communication elements: originality, two persons or other acceptance units, and a message system. Mass media and interpersonal communication are two communication channels, while mass media channels include mass media such as television, newspaper as well as radio, and social channels consist of duplex contact among two or more people.

However, diffusion is a social process that involves interpersonal communication relationships. Interpersonal networks are therefore more effective in developing or altering strong attitudes held by an individual. In interpersonal networks, interaction may have the characteristics of homophiles, that is, the degree to which two or more individuals who communicate are identical in convinced qualities, like education, belief, socio-economic prominence, and the like, but the diffusion of creativity requires at least some degree of heterophony, which is the degree to which two or more individuals interact. In addition, one of the most characteristic difficulties with the dissemination of inventions is that the applicants are typically very heterophony.

Rogers (2003) claimed that most behavioral research lacks the time dimension. Rogers argued that taking into account the time dimension of diffusion research shows one of its strengths. The cycle of innovation-diffusion, the rate of acceptance and the categorization of adoptions all include a time dimension.

. The social system is the last part of the diffusion cycle. Rogers further described the social system as a group of interrelated components engaged in a collective problem-solving effort to achieve a common goal. The social structure of the social system is influenced by the propagation of innovations in the social system. For Rogers, the structure is the designed arrangement of the units in the process. He also argued that the existence of the social system influences the creativity of individuals, which is the main criterion for the categorization of adopters.

Watson (2006) defined the innovation-decision process as an information-seeking and information-processing practice in his research, where a person is driven to minimize confusion about the advantages and disadvantages of innovation. According to him, the innovation-decision process requires five steps: persuasion, awareness, implementation, verification as well as decision-making. Usually, these stages accompany each other in a time-ordered manner.

The phase of innovation-decision begins with the stage of information. At this point, a person learns about the nature of innovation and finds knowledge on innovation. "What is it? How is it? " and "why?" These are the critical questions at the information level. At this point, individual attempts are made to decide what technology is and how and why it works. According to him, these questions explain three forms of knowledge: awareness-knowledge, how-to-knowledge, and knowledge-principles.

Awareness-knowledge is an awareness of the nature of technology. This kind of awareness can motivate individuals to learn more about technology and eventually adopt it. It may also inspire a person to learn about two other forms of information.

The other category of experience, how-to-knowledge, includes information on how to use technology correctly. Watson (2006) saw this awareness as an important factor in the

process of innovation-decision. In order to increase the likelihood of an innovation being adopted, a person should have an appropriate level of knowledge prior to the innovation being evaluated. As a result, this information has become more applicable to fairly complex developments.

The last form of knowledge is evidence-based concepts. This understanding includes the concepts of operation that explain how and why creativity works. Technology can be implemented without this knowledge, but the misuse of technology can contribute to its discontinuation.

In order to generate engineering training, new knowledge in addition to practice must make available not only a "how-to" experience, but also a "know-why" experience. According to him, an individual may have all the necessary knowledge, but that does not guarantee that the individual would accept an innovation, because the individual's attitudes often form the adoption or rejection of an innovation.

A persuasion phase occurs when a person has a negative or positive attitude towards innovation, but the development of a favourable or unfavourable attitude towards innovation does not always lead directly or indirectly to acceptance or rejection. The person develops his or her attitude after he or she is aware of the invention, so that the stage of persuasion parallels the stage of awareness in the cycle of innovation-decision. In addition, Uche (2005) explained that while the stage of knowledge is more mental (or knowledge) based, the stage of persuasion is more emotional (or feeling) focused. As a consequence, the person is more thoughtfully active in development at the stage of persuasion. The degree of uncertainty about the operation of technology and the social support of others (colleagues, peers, etc.) influences the opinions and beliefs of individuals about innovation. Near peer-to-peer, impartial evaluations of innovations

that reduce confusion about innovation results are typically more trustworthy to the person. Individuals continue to search for data and feedback on technology assessment through the decision-making process.

At the decision-making stage of the innovation-decision process, the person chooses to reject the innovation. Although adoption refers to the full use of innovation as the best course of action available, rejection means not embracing innovation. When technology is based on a partial trial basis, it is usually adopted more rapidly, since most people first want to test innovation in their own situation and then come to a decision on adoption. A vicarious trial could speed up the process of innovation-decision.

Nonetheless, rejection is likely to occur at every point of the innovation-decision process. Rogers defined two forms of refusal: active rejection and passive rejection. In effective circumstances of rejection, a person seeks innovation and talks about adopting it, but later decides not to embrace it. A decision to discontinue, which is to refuse technology after it has been accepted earlier, may be known as an effective form of refusal. In a passive rejection (or non-adoption) stance, the person does not consider the acceptance of innovation at all. Rogers (2003) argued that these two forms of refusal have not been distinguished or studied adequately in previous diffusion studies. In most of the circumstances, the knowledge-persuasion-decision phase may be knowledge-decision-persuasion. Particularly in collectivist cultures such as those in Eastern countries, this order and the influence of the community on the acceptance of innovation can change the decision on personal innovation into a collective decision on innovation. In any case, however, the stage of execution approaches the phase of decision-making.

Innovation is put into practice at the implementation level. Nevertheless, technology carries with it the newness in which a certain degree of complexity is involved in diffusion. Uncertainty about the effects of innovation can be a problem at this point. As a result, the implementer may need the technical assistance of change agents and others to the degree of uncertainty about the consequences. Therefore, the cycle of innovation-decision must come to an end, as creativity loses its unique quality as the distinct identity of the new idea disappears. Reinvention usually takes place at the point of implementation, so it is a vital part of this process.

Reinvention is the frequency at which the concept is updated and changed by the consumer in the course of its acceptance and implementation. He also described the difference between creativity and innovation. While creativity is the process by which a new idea can be discovered, the implementation of technology is the process by which an established concept can be used. Rogers (2003) argued that the more reinvention takes place, the quicker technology becomes accepted and institutionalized. As innovations, computers are tools that offer many viable opportunities and applications, so computer technologies are more open to reinvention.

Innovation-decision has already been made, but at the stage of validation the person is seeking support for his or her decision. Based on Watson (2006) findings, this decision can be reversed if the person is subjected to contradictory innovation messages. Nonetheless, the user is likely to stay away from these messages and follow up messages that support his or her decision. Attitudes are therefore becoming more important at the stage of verification. Depending on the encouragement for the adoption of technology and the individual's behavior, there will be a subsequent adoption or discontinuation throughout this point. Discontinuance can occur in two ways during this phase.

Secondly, the person refuses innovation in order to embrace a better innovation to replace it. This form of discontinuity decision is called a discontinuity of replacement. In the latter case, the person refuses innovation because he or she is not happy with its results. Another reason for this form of discontinuation of decision-making may be that creativity does not satisfy the individual's needs. It does not deliver a perceived relative advantage, which is the first characteristic of technology and influences the rate of adoption.

Attributes of innovation and rate of adoption

Mkpa (2009) defined the innovation-diffusion process as an "uncertainty-reduction process" and suggested innovation attributes that would help to reduce uncertainty about innovation. Technology characteristics are five variables that may have an effect on the acceptance of technology. These include: I relative advantage, (ii) difficulty, (iii) reliability, (iv) test performance, and (v) observability. Mkpa claimed that the interpretation of these characteristics by individuals determines the level to which innovations are adopted. He also noted that although there is a great deal of dissemination of research on the characteristics of the adoptive groups, there is little or no research on the effect of perceived innovation characteristics on the rate of adoption.

Bandele (2007) described the rate of adoption as the relative speed with which the social system members embrace innovation. The perceived characteristics of technology are important predictors of the rate of adoption. The type of innovation-decision (collective, optional or authority), the social system (norms or network interconnectedness), the communication channels (interpersonal channels or mass media) and the agents of change that increase the predictability of the level of innovation adoption. He envisaged a relative advantage as the best indicator of the rate at which technology is adopted.

Mkpa (2009) described the relative advantage as the degree to which innovation is considered to be better than the concept that it supersedes. The price and social incentive dimensions of technologies are components of a relative advantage. For example, early adopters, innovators, and early majority are more driven to embrace technologies, with the late majority largely seeing position as less significant. Rogers also divided inventions into two types: preventive and gradual (non-preventive) innovations. Preventive technology is a new idea that the person is now embracing in order to reduce the risk of some unwanted future event. Preventive technologies usually have a slow rate of acceptance, so that their relative advantage is largely undetermined. In order to increase the degree to which innovations are adopted and to make the relative advantage more efficient, direct or indirect financial payment incentives can be used to support social system entities in the adoption of innovations. Incentives are part of the factors of support and motivation. The reliability feature is another driving variable in the diffusion cycle.

In some diffusion studies, relative advantage and functionality are considered to be identical, although they are conceptually distinctive. Mkpa (2009) claimed that compatibility is the degree to which innovation is viewed as compatible with current principles, past experience and the needs of potential stakeholders. When technology is well tailored to the needs of the individual, complexity will decrease and the rate of acceptance of innovation will increase. The naming of technology is therefore an important part of usability. What is called technology must bring a great deal of weight to the ability to implement. Whatever creativity entails, it should also be well described. This is part of the complex quality.

Mkpa (2009) described complexity as the degree to which technology is viewed as relatively difficult to understand and use, in comparison to other attributes. Complexity is

negatively correlated with the level of acceptance. Excessive sophistication of technology is therefore a critical barrier to its acceptance. Technological innovation can require faculty members to modify their teaching methods to integrate technological innovation into their teaching, so that it may have different levels of complexity. If hardware and software are intelligible, they may be effectively used for the distribution of course materials.

According to Mkpa, the test-ability is the degree to which technology can be tested on a limited basis. Testability is also positively correlated with the degree of acceptance. The more technology is attempted, the sooner it will be implemented. As addressed during the implementation phase of the innovation-decision process, reinvention can take place throughout the innovation cycle. The technology can then be changed by the potential acceptance. Increased re-invention may lead to a faster adoption of innovation. Another important factor for the introduction of technology is the Vicariate Test, which is particularly useful for later adopters. Nevertheless, Mkpa (2009) argued that earlier adopters perceive the test-ability attribute of inventions as more relevant than later adopters.

Observability is the last characteristic of creativity. Okorie and Ezeji (2008) have described observability as the degree to which the effects of innovation are noticeable to others. Compared to the relative advantage, reliability and testability, observability is also positively correlated with the level at which technology is implemented. In summary, he concluded that technologies that offer more relative advantage, reliability, accessibility, testability and observability will be implemented more quickly than other innovations. He warned that it is hard to get a new idea implemented, even if it has obvious advantages, so that the existence of all these technology variables accelerates the cycle of innovation-diffusion.

The diffusion of innovation theory gives us an insight into human attitude towards the adoption of technology. It points out the key elements in innovation adoption as the innovation itself, communication channel, time, and social system. The theory goes further to highlight uncertainty as an important obstacle to the adoption of an innovation, and suggests that for uncertainty to be reduced, individuals should be well informed about its advantages and disadvantages to make aware of all its consequences. The theory states that of all the communication channels available, interpersonal channels are more formidable to create or change a strong attitude assumed by an individual.

More so, it highlights the major enablers to the adoption of an innovation as technical assistance and opportunity for trial of innovation. It puts forward five characteristics of innovation as relative advantage, compatibility, complexity, trial-ability, and observability and adds that individual's perception of these characteristics foresees the degree of adoption of innovations. On the whole, the theory of diffusion of innovation approximates the current study because it helps to understand the adoption of technology which was of immense benefit to this study in the utilization of Technology facilities by lecturers and instructors in teaching Office Technology and Management for students' skill acquisition in Polytechnics in South-Western, Nigeria.

Concept of Teaching

Teaching is any initiative aimed at helping people to learn other skills, behaviours, information, ideas and appreciation. In other words, any activity directed towards helping individuals or individuals, not just pupils, to learn and use technology, in particular those positive skills, attitudes, information that will make them productive and useful people of their country, is referred to as teaching. Izuagba (2012) saw teaching as the various tasks that were

performed by a more experienced and knowledgeable person in order to allow others to learn. This means that the "other" is less experienced, a disease that relies on the teacher. Mkpa (2009) also described teaching as a process of providing information, data, interests, skills, attitudes, aptitude of a knowledgeable and more experienced person to a less knowledgeable and inexperienced individual. A teacher is one who teaches a living thing and takes it as a career.

Concept of Technology

The term "technology" refers to advances in the techniques and tools we use to accomplish an objective as well as solve problems. Technology can include all sorts of classroom resources, presentation software, including low-tech pencils, high-tech tablets, virtual whiteboard, communication online along with meeting devices, and more. The latest technology makes it possible to try things that were previously impossible in virtual as well as physical classrooms. What you are using depends on what you are trying to do (Kervin & Mantei, 2010).

It is clear that creativity is becoming an increasingly powerful tool for the advancement of education (Ngoma, 2011). A plethora of literature suggests that technology consists of powerful components capable of creating a vision of learning. These include blogging software that can be used as a means of communication in classroom environments, PowerPoint, podcasts (Ovwiroro, 2014). Unwin (2009) argues that technology is a force for educational change because it is capable of providing teachers with tools that can be used to improve teaching and to provide learners with access to electronic media that can make concepts easier and more usable. Ubulom, Enyekit, Onuekwa, and Amaehule (2011) observe that technology has allowed a paradigm shift from traditional teaching material or traditional teaching methods

to more modern and creative technology-based teaching and learning methods. Technology impacts are becoming more pronounced worldwide, and therefore, in any field of human activity, seldom is anything discussed without reference to this type of technology. In view of this, some of the technological gadgets for teaching and learning have been listed by Utoware and Amiaya (2014), which include: technology as a curriculum, delivery mechanism (delivery of educational programs), technology as a complement to technology as well as teaching as an educational tool and press.

- Technology generates new concepts, new ideas and has an influence not only on industry and business, but also on the education sector on a daily basis. Technology has accelerated education through the use of the internet, electronic media, and so on. According to Utoware and Kren-Ikidi (2013), the worldwide development and implementation of calculators and computers in the education system has helped to simplify school teaching and learning, thus stimulating economic survival and national stability.
- Today, for reliable and up-to-date information, organizations such as educational and research institutions and individuals turn to the Internet. Virtual collaboration, which includes sharing information, trading otherwise working on the Internet with different people at different locations, is becoming a common practice. Technology evolution (globally) dates back to 1823, when Charles Babbage, professor of mathematics, invented the Analytical Engine. The design consists of four modules to perform basic input, output, process and storage functions. Ubulom et al (2011), summarized some of the characteristics that distinguished this software transition from other characteristics that had arisen before it:

- It is happening at an extreme fast pace.
- It is impacting all corners of the globe.

The demand for digital products is voracious and the generation that has grown up with IT has developed intuitive ways to understand and exploit the skills that technology also challenges the next generation.

In many aspects of human lives, the use of machines is rapidly gaining ground. The above features have shown that the trend of technological revolution has changed the global awareness of how we design as well as carry out our daily tasks on a daily basis. Subsequently, the impact of new technologies on every human effort is so dramatic in terms of speed along with quality that they have been seen as the superhighway as well as backbone of our modern life (Ubulom et al; 2011).

Concept of Technology Integration

Technological assimilation is the utilization of technology tools in education in general content areas to enable students to apply their computer and technology skills to learning and problem-solving. The curriculum guides the use of engineering, not the other way around. The incorporation of technology is described as the use of technology to facilitate and enhance the educational environment. Classroom technology integration can also aid classroom instruction by providing students with opportunities to complete computer assignments rather than standard pencil and paper assignments (Yu Chien, 2013).

Technology incorporation, however, centered on how technology can be used to improve the way higher education teaching and learning is actually done. It also encourages the use of new teaching and learning approaches in higher institutions to meet the demands of current academic trends. As Madu, Obidi and Genevive (2015) pointed out, incorporating technology

into classroom instruction involves more than teaching basic computer skills and software programs in a separate computer school. Specifically, it must facilitate four main learning components: group involvement, daily input along with contact, active engagement, and a network of real-world experts. If technology is used routinely and transparently and technology meets curricular objectives, successful technology integration is achieved.

Equipped with engineering resources, design training allows students to be intelligently challenged when providing a realistic view of what modern office appearances are. Students build and improve their analytical and problem-solving skills through projects as they work independently and in teams to identify, interpret and synthesize the information they have learned online. The endless resources of the online world also bring more interesting, new and current learning materials to each classroom. The Internet links students with real-world experts and provides many chances to connect understanding through sound, text as well as images (Nwaosa & Olannye, 2013).

Technology tools for modelling as well as visualization, especially in science, made available to students by ways of analyzing along with evaluating the phenomenon and presenting the findings in a graphical way that helps them to understand. In addition, students are more likely to remain engaged and on track with computer tools and a project-learning strategy, mitigating behavioral deficiencies in the classroom. Technology is also transforming the teaching method of teachers, providing educators with efficient means of achieving different types of learners and measuring student awareness by multiple means. It also improves the bond between teacher and student. Teachers establish roles as mentors, curriculum experts and coaches as innovation is successfully integrated into the subject areas. Technology helps to improve the value and enjoyment of teaching and learning (Edutopia, 2016).

Concept of Curriculum

Curriculum refers to the tools and resources that will be used by students to achieve agreed learning outcomes. According to Agbongiasede (2014), the curriculum is made up of all the tasks required to be carried out by the school as part of its responsibility for education. Others say that not only the intended but also the unplanned are included in the programme. Another view indicates that the course includes structured rather than orchestrated interactions, as any activity will operate in its own direction, with outcomes that are not certain in advance. Of example, events can be organized, whether they are academic or sporting, but the outcomes may depend on a myriad of factors that cannot be planned.

A key concept to note is that the program is the only part of the plan that directly involves students. Whatever in the scheme that does not encourage students is an intellectual desire, but not a course. Only that part of the plan that the student actually meets can still be a curriculum. It can be expected that a more oriented curriculum would result in a scheduling that retains the emphasis. (Ebert, Ebert & Bentley, 2013).

Components of Curriculum

If people utilise the word curriculum, they usually refer to the course they have selected to be formally taught. The approved curriculum is the substance of those guidelines in the schools that have adopted them. However, there is more to the curriculum than the specific items listed in the Official Curriculum Guide. Cuban (2005) suggested that four different curricula be used in our schools. They are:

The Official Curriculum: this is what the state and district authorities have set out in curricula and curricula programs. We expect teachers to teach, and we expect students to learn.

Curriculum taught: that is, what the teachers actually choose to teach, working alone in their quarters. Their choices are based on their knowledge of the subject, their experience of teaching the topic, their love or dislike for subjects, and their attitudes towards the students they face every day.

The Learned Curriculum: In addition to what test scores say about material training, students also learn some unknown concepts found in the classroom environment. The student may learn to possess expertise in particular ways, not in others, on the basis of what the teacher models. We need to know how to ask questions when, where and how to act carefully. We are expected to imitate the actions of their instructor. Students gain knowledge of respect for others through the teacher's own show of respect and lack of respect. The program is much more detailed than the curriculum that has been previously taught.

The Tested Curriculum: Tested is a small part of what policymakers expect, taught by educators, and studied by students. The teaching and learning curricula are largely ignored in school efficiency controversies, but they may be the most critical in student terms.

Afeidia (2014) proposed four elements or components of curriculum to include:

- Goals and objectives
- Content or subject and subject matter
- Learning experiences
- Evaluation

They found that if an outsider looks at the curriculum of a school in any given society, they will find, whether implied otherwise defined, a set of educational goals, objectives as well as a set of subjects, activities to be completed otherwise a list of tasks (learning experience) and a way of assessing whether or else not the learners have achieved the objectives (assessment).

Office Technology and Management Curriculum

Nigerian Polytechnics adopted Office Technology and Management (OTM) after the NBTE, in collaboration with UNESCO, had extensively revised the curriculum for Secretarial Studies. ICT, entrepreneurship and management as contained in the curriculum are essential to improve students' knowledge and to provide them with the skills they need in today's office environment. The office is characterized by various types of information and communication gadgets and facilities. The major landmark in the new programme is the introduction of a number of ICT courses with 75% emphasis on practical training. This direction would ensure that the programme would in the long run produce hybrid of administrative professionals (graduates) equipped with effective competencies to deal with the requirements of the ICT driven world of work (Okoro & Agholor, 2014).

The success of Office Technology and Management programme would be quantified and determined by the competence, effectiveness and job performance of the graduates of the programme. If the implementation of the curriculum, as viewed by Olawale and Abuya (2011) is deficient and faulty like some academic programmes in tertiary institutions in Nigeria that produce half-baked and poor graduates who cannot perform effectively and efficiently in the world of work, the graduates of the programme would also be deficient in knowledge and skill which would consequently make them ineffective and inefficient.

The National Board for Technical Education (NBTE) whose statutory function it is to formulate policies, including review of curriculum for Polytechnics and Colleges of Technology in Nigeria, had deemed it necessary to come up with the change of Secretarial Studies training to Office Technology and Management and in the view of Ogiagah (2009), there is no doubt that

when a programme is re-structured, the curriculum must be reviewed to meet the dynamics of the new programme, hence, some challenges are bound to emanate.

The goal of the Office Technology and Management Program is to provide students with secretarial/office work skills in different fields of operation, and students are equally equipped with effective work skills and socio-psychological work skills that are very important in their daily interactions with others (NBTE, 2004). NBTE also stressed that graduates should fit properly into the office of any computerized organization and perform professionally the position of secretary, which includes, among other things, relating the duties of the office to the organization as a whole, attending meetings and providing information as necessary, recording the proceedings correctly, filing and collecting information, taking up information, etc. ICT Office Applications, Online Printing, Webpage Design, Career Development and Communication Skills for People have been introduced into the curriculum. We see more improvements in the curriculum and, if the content of the course is implemented rigidly, students will definitely need additional skills and expertise in the technology world (Olukemi & Boluwaji 2014). NBTE's new curriculum and training requirements for Polytechnics in Nigeria are listed below (NBTE, 2004).

ND PROGRAMME (OFFICE TECHNOLOGY AND MANAGEMENT)

1st SEMESTER

Course Code	Course Title	T	P	CH
OTM 101	Technical English 1	2	2	4
OTM 111	Shorthand 1	2	2	4
OTM 112	Keyboarding 1	2	2	4
OTM 113	ICT 1	1	7	8
OTM 114	Office Practice 1	1	3	4
OTM 116	Intro to French	2	-	2
BAM 111	Introduction to Business	2	1	3
GNS 111 (*)	Citizenship Education 1	2	-	2
EED126	Principles of Entrepreneurship	2	-	2
	TOTAL =	16	17	33

2nd SEMESTER

Course code	Course Title	T	P	CH
OTM 121	Shorthand II	2	2	4
OTM 122	Career Development	2	2	4
OTM 123	ICT II	1	7	8
OTM 124	Modern Office Technology	1	3	4
OTM 125	Keyboarding II	2	2	4
OTM 126	SIWES	-	4	4
OTM 127	Use of French	1	1	2
BAM 113	Principles of Law	1	2	3
GNS 121 (*)	Citizenship Education II	1	1	2
EED 127	Practice of Entrepreneurship	2	-	2
	TOTAL =	13	24	37

(*) As stated in the GNS booklet

3rd SEMESTER

Course Code	Course Title	T	P	CH
OTM 211	Shorthand III	2	2	4
OTM 212	Keyboarding III	2	2	4
OTM 213	Records Management	1	1	2
OTM 215	Office Practice II	1	3	4
OTM 216	Desktop Publishing	1	5	6
OTM 217	Technical English II	2	2	4
OTM 228	Research Technique	2	2	4
ACC 111	Principles of Accounting	1	3	4
EED 217	Entrepreneurship Practical 1	1	1	2
	TOTAL =	13	21	34

4th SEMESTER

Course code	Course Title	T	P	CH
OTM 221	Webpage Design	1	7	8
OTM 222	Peoples Communication Skills	1	3	4
OTM 227	Social Psychology	2	2	4
BAM 114	Principles of Economics 1	2	1	3
OTM 225	Project	-	6	6
EED 218	Entrepreneurship Practical II	-	2	2
	TOTAL =	6	21	27

KEY = T – Theory; P – Practical; CH – Credit Hour

HND PROGRAMME (OFFICE TECHNOLOGY AND MANAGEMENT)

1st SEMESTER

Course Code	Course Title	T	P	CH
OTM 313	ICT Office Application 1	1	3	4
OTM 314	Office Administration and Management 1	2	2	4
OTM 315	Business Communication 1	2	2	4
OTM 316	Social Psychology	2	2	4
OTM 321	Shorthand IV (80 wpm)	1	3	4
OTM 317	Keyboarding IV	2	2	4
BAM 214	Business Law	2	2	3
EED 322	Entrepreneurship Development 1	2	-	2
	TOTAL =	14	16	29

2nd SEMESTER

Course Code	Course Title	T	P	CH
OTM 322	Shorthand V (90 wpm)	2	2	4
OTM 323	Professional Career Development	2	6	8
OTM 324	ICT Office Application II	2	2	4
OTM 325	Office Administration and Management II	1	3	4
OTM 326	Research Methods (*)	1	3	4
OTM 327	Business French	1	1	2
OTM 328	Advanced Keyboarding 1	2	2	4
OTM 312	Communication in English III	2	2	4
BAM 324	Human Capital Development	2	2	4
BAM 427	Nigerian Labour Law	2	2	4
EED 323	Entrepreneurship Development II	2	-	2
	TOTAL =	19	25	44

3rd SEMESTER

Course Code	Course Title	T	P	CH
OTM 411	Advanced Transcription II	1	3	4
OTM 412	Business Communication II	2	2	4
OTM 413	Database Management System	1	3	4
OTM 414	Oral Communication Skills	1	3	4
OTM 415	Advanced Desktop Publishing	2	6	8
OTM 416	Advanced Keyboarding II	2	2	4
BAM 224	Elements of Human Resource Management	2	1	3
EED 422	Entrepreneurship Practical 1	1	1	2
	TOTAL =	12	21	33

4th SEMESTER

Course Code	Course Title	T	P	CH
OTM 423	Management Information System	1	3	4
OTM 424	Professional Ethics and Social Responsibility	2	2	4
OTM 425	Advanced Webpage Design	2	6	8
EED 423	Entrepreneurship Practical II	2	2	4
OTM 422	Project	-	6	6
	TOTAL =	7	19	26

KEY = T – Theory; P – Practical; CH – Credit Hour

Source: NBTE, 2004 (Curriculum and Course Specification)

Components of computer systems in Office Technology and Management used in the classroom include a variety of equipment, software and systems. The equipment include computer/word processors with or without sharing facilities, electric typewriters, E-mail facilities, Micrographic equipment and accessories, photocopiers, laminating machines, projectors, scanners and shredders. The software and systems according to Nwogwugwu (2002) include internet resources such as e-mail, world-wide-web (www), newsgroup/internet, e-commerce, e-banking, computer-aided telephone, e-banking, telecommunicating/tele-writing, electronic document interchange, video or tele-conferencing.

Computer skills enable the secretary to source for information or to generate appropriate and relevant results that can facilitate planning and decision making. With the vast array of information resources and decision support tools now available on various networks, via the Internet, the world has become one large goldmine of information. According to Igbinoba (2000), the modern secretary is no longer judged by his/her ability to take and transcribe dictated material, type, file, and manage incoming and outgoing mail for a particular office but by his/her ability to access, download, sift and collate relevant information for her organization. The ability to use computer is a basic necessity to a person's formal education as reading, writing and arithmetic.

Classroom instructions are especially prepared learning procedures in form of planned steps and orders that are meant to impart knowledge to the students. To give instructions is the primary duty of the classroom teachers (Bandele, 2007). Computer-Assisted Instruction (CAI) is a package that simply explores the capability of the computer as a tool to assist in learning and instruction. That is, using computers as an aid in the classroom instruction of a particular subject matter. Drill Tutorial is one of the major types of CAI that business educators can use. The computer continues to be a learning tool for prospective students. Modern computers come with software that has tutorial facilities. Each application package is accompanied with series of self-teaching modules for the user. These are self-tutors and by classroom language, learning modules. Tutorial like other teaching and learning packages are interactive software that allows the learner to follow prescribed steps and instructions that cumulate in the mastery of steps, tasks or a whole problem targeted by the said tutorial. A software tutorial is however restricted to the software it accompanied with general application.

Computers are ideal test givers, particularly for matching true or false and multiple-choice tests. The computer presents the question, the student provides the answer. The computer checks the answer, keeps track of the number of correct answers and computes a grade for the student. Computer Aided Instruction (CAI) has the advantage of flexibility. It allows each student to progress at the learning rate that is best suited for him or her (Oyedele, 2002).

Computer can be used to manage education activities in an organized school environment. Computer-Managed Instruction (CMI) can be used to perform functions that are not confined to the four walls of the classroom. CMI handles activities that affect student records, personnel records, examination scores, salary preparation and similar management data related activities (Bandele, 2007).

The computer has prominence in being used to accomplish some learning tasks that the lecturer cannot attempt in real life situations. Simulation means making a working model or representing a situation or process. It is also making to look like a real thing. The use of the computer to make a simulation look like the real situation is significant in the teaching and learning process. The teacher is saved the rigor of explaining abstract concepts without real life illustrations. Students take advantage of simulation lessons to observe such situation directly instead of visualizing it (Bandele, 2007).

Computer can serve as a problem-solving tool. It's the highest form of computer-enhanced education. Student reviews, evaluate and organize the material of the course in this learning event using software to help solve problems. The problem-solving method has been revolutionary. The student must completely understand the problem and it must be possible for him or her to decide whether the problem can be solved on a computer.

Technology is the bedrock for national development because of its relevance and applicability to almost every sphere of human endeavour. Its emergence has given secretarial profession a new look, new tools and progress never before imagined. Information and communication technology being a complex and heterogeneous set of applications and services are used to provide and process, disseminate and transform information to yield a number of benefits in instructional delivery in office technology and management. The benefits of the use of modern technology in office technology and management are as follows:

The use of ICT in teaching OTM courses increases access to information needed by the teacher for effective instructional delivery. According to Okoro and Agholor (2014), there is no field of study that cannot be accessed through the internet. With the tool of internet for example, lecturers and instructors can download materials created by other lecturers, instructors and experts in the field. Lecturers and Instructors of the higher calibre can share their knowledge across borders, allowing lecturers, instructors and students to have access to course materials as well as attend courses across physical and economic boundaries.

With the use of ICT, teaching and learning can be individualized to suit the diverse needs of various students in the classrooms since there is a centered teaching and learning method fashioned to meet the needs of each learner. Besides, through appropriate use of interactive courseware, students will be motivated to learn and this will no doubt improve their performance.

The use of ICT offers lecturers, instructors and students the convenience and flexibility that can never be obtained otherwise. Lessons can be prepared in CDs for students to play and learn anywhere anytime. Lecturers and instructors can also give assignments to work on, course materials and other information through the net, and at the same time see what students are

doing, just as is obtainable in the National Open University of Nigeria. This is badly needed in times like this when class size has grown beyond control as a result of over enrolment of students.

When ICT is incorporated into the classroom, it will help students to develop the skills and competencies needed in the 21st century work place. This will ensure students smooth transition from school to industry. Bates (2009) argued that the main argument for the use of ICT in teaching and learning is that it helps learners develop essential skills for knowledge-based jobs by incorporating the use of information and communication technology into the curriculum. ICT has the ability to provide users with a higher interactive potential to develop their individual skills, analytical and creative capabilities. The main aim of ICT is to create human mental capital that enables people to apply existing knowledge effectively and to generate new knowledge.

The progress and achievement of the students can be assessed and monitored using custom feedback and evaluation available in interactive environments. ICT instructional packages can be designed in such a way that students can obtain immediate feedback on their progress and achievement, that is, to have in-built personal and practical test exercises for self-assessment and evaluation. This will no doubt increase students' progress and performance.

Gone are the days people choose courses of study based on the nomenclature and assumed elegance. Education is still an investment. Parents expect their educated members to assume responsibilities such as helping to fund the education of siblings. Graduates of OTM are expected by their families, communities and even their teachers to easily find employment on graduation so as to contribute in the production process while earning a living. Secretaries

are in great demand today. The acquisition of technical skills by students would make them to be self-employed after graduation (Ezenwafor & Okeke 2010).

Besides these benefits, there is no doubt that the traditional classroom with its talk-chalk approach to instruction cannot meet the demands of the present day. This, according to Grace (2014), is due to the explosion in the number of people seeking admission, poor funding of our tertiary institutions, insufficient number of quality lecturers, lack of communication facilities and infrastructure and lack of computer awareness just to mention but a few. Hence, there is need for IT integration and utilization in OTM classroom.

Role of Technology in Attaining the Objectives of Office Technology and Management in Nigeria

Nigeria has witnessed the development of modern technologies in various sectors of the economy including education and the impact of technologies has been felt by individuals, organizations and education in general. Presently, there is a paradigm shift from the traditional methods of teaching OTM courses to new methods that use learning technologies, especially for instructional delivery. ICT is fast becoming a veritable instrument for educational advancement and a springboard for economic development. ICT provides an array of instructions for acquiring and using information for thinking and expression, which provide the needed competencies and skills that will enable OTM lecturers and instructors to perform effectively in the global and digital information-based features. Unwin (2004), observed that ICT can be a catalyst by providing tools which teachers use to improve teaching and by giving learners' access to technologies that make the concepts clearer and more accessible. Nwaosa and Olannye (2013), outlined the role of ICT in business education (OTM) as follows:

- ICT as a course and programme of study in business education.

- ICT as a promoter of conducive teaching and learning environment.
- ICT as a gateway to vast sources of information for staff and students' academic pursuit.
- ICT provides an avenue to improve business education outreach and standard across the continent.
- ICT as a tool for increased productivity and professional effectiveness and efficiency.

Similarly, Anderson and Glen (2013) also identified the role of ICT in teaching and learning to include:

- Technology as instruction tool
- Technology as a complement to instruction
- Technology as curricular
- Technology as delivery mechanism

Office Technology Facilities Used in Nigerian Schools

Teaching with technology in the classroom can deepen students' learning by supporting instructional objectives. However, Kervin and Mantei (2010) said it can be challenging to select the "best" technology tools while not losing sight of the goals for student learning. The teaching technologies include the following:

Interactive whiteboards are used as a replacement for conventional whiteboards in many schools and provide a way for students to communicate with computer content. In addition, some interactive whiteboard software allows teachers to record their teaching at a later time and post material for student review.

Typically, digital communication tools in Google Applications allow students and instructors to share documents online, edit them in real time, and project them on a screen. It

offers a common platform for students to share ideas and use texts and photographs to document their work.

Multimedia presentation tools including images, maps, sound effects, audio and video clips, such as PowerPoint presentations. Students can develop presentations as a review tool before semester examinations.

Technology tablets can be connected to computers and projectors to communicate with students and teachers through messages, sketches and diagrams. Course management technology such as Canvas helps educators to organize the resources that students need for a class (e.g. syllabi, assignments, readings, online quizzes), provide useful evaluation tools, and provide space for discussion, information sharing, and video and audio commentaries. The Canvas page is issued to all courses automatically!

Smart phones, as well as Clickers, are fast and easy ways to survey students during class hours. Instant polling is a good thing, which can quickly measure students ' understanding and allow teachers to change speed and content. Lecture-capture tools such as Panoptic allow instructors to record lectures directly from their computers without the need for extensive or additional classroom equipment. When he offers them, the instructor will record his lectures and then upload them to the students to watch again. Studies show that publishing recorded lectures does not decrease attendance, and students appreciate the opportunity to revisit lectures at their own pace.

The instructor can ask his students to send an e-mail to him or her. It can also perform an email exchange by exchanging emails with students in another school, region, state, or country–especially valuable if both sets of students study the same content. Or arrange for an expert group to accept students ' emails on a specific subject.

Students are always more attractive to visual representation. Current educators use this audiovisual device instead of just reading the textbook. This makes it easier for students to learn. In addition, YouTube, the streaming media website, has a dedicated educational site where learning materials can also be found. Students in many schools have mobile devices, such as smart phones, browsers, iPods that enhance the learning experience. Students will be able to access the internet, read online resources and eBooks, and this will help students learn faster. Students can use the iPod to access educational output which provides video lessons as well as a public archive of lessons to be browsed through. Efficient delivery of OTM curricula; OTM instructors, as well as lecturers, are expected to have the necessary and adequate ICT skills needed to prepare OTM students to address along with overcoming the challenges of modern business environment technology. This should include the ability to use excel, spreadsheets, Adobe Page Builder, desktop publishing, graphics/CorelDraw for the development of office automation. Ability to understand symbolic languages, such as FORTRAN, BASIC as well as COBOL, and the ability to develop websites. Communication skills should also include the ability to use correct telecommunications methods, the ability to use oral communication efficiently, and the ability to write clear and concise messages, punctuation, capitalization and numeric types.

Word processing skills: this should include understanding the relationship between computer applications and word processing, the ability to use different word processing software packages to create different types of documents, the ability to trigger computers and other word processing equipment, and the ability to quickly and accurately enter data from the original source (keyboarding). It also includes: editing functionality, key-in document, text spelling checks, and so on; ability to combine new mail with old mail in whole or in part by removing,

inserting, encoding, copying and pasting text; ability to format and view text in an appropriate format in compliance with office standards/procedure by tabulating, displaying, recording, notifying, minutes, etc.

Telecommunications skills: This should include sending and receiving e-mails. Ability to manage mail services (incoming and outgoing mails); capacity to fax messages; ability to operate teleconferencing facilities; ability to send and receive messages via computer networks (Local Area Network, Wide Area Network, etc.); ability to send and receive correspondence via telex, telephone, mobile and private exchanges, and ability to know modern telecommunications and their functions. Reprographic Competencies: This should include the ability to save software indexes and to recover documents or disks, microfilms and other magnetic media; the ability to access data using appropriate techniques such as serial or random access; the ability to capture, record, modify files, write reports and file queries; the ability to operate electronic filing, indexing and cataloguing.

Concept of Skill Acquisition

Acquiring the skills required is a means of increasing the productive power of any nation. Nigerian society should therefore recognize that everyone should be equipped to make an active contribution to the welfare of the country. Acquiring these practical skills is necessary because, in general, high productivity is achieved when productive and professional hands are engaged in any field of human endeavour. Economically, the complete training of skills by vocational and business education (VBE) students and others will further boost the Nigerian economy and thus make sustainable development possible. Okorie and Ezeji (2008) believed that a rich nation is capable of meeting the economic, cultural, moral and political needs of its people.

Nigeria, as a state, would enjoy sustainable development if, in particular, VBE students and all other students, in general, learn full skills and expertise in their specialties. On the other hand, the production of practical skills tends to promote political personal and national grandeur. Okorie and Ezeji (2008) point out that the actions of a person in a society or a country in a community of nations may be influenced by the skills and competencies of an individual or a state. Socially, learning maximum skills helps an individual to provide fun, pleasure, caring, affection and enjoyment to others as well as to the nation as a whole. It also helps to reduce the rate of criminal activity among young people, such as armed robbery, rape and other social violations. Full competence training enables VBE students to engage in productive work either on their own or with employers. It helps VBE students to apply and maintain productive jobs, improve their productivity and earn more money.

Other benefits of gaining full skills and competencies include: minimizing drop-out rates among Nigerian youth; helping to make young smart consumers of technology products, as well as Nigeria's most effective platform for economic prosperity and diplomatic dominance. Those benefits of complete learning of skills also remain for us if VBE students think twice and change their negative attitudes towards them and strive to improve the skills and competencies inherent in the VBE programs of their institutions (Ejika, 2015). The OTM students ' tasks and the skills required are as follows: attendance and administrative processing. Professional and rigorous secretarial and administrative performance requiring the use of essential judgment and personal initiative; performing various professional secretarial duties to assist the Chief Executive in the management of administrative activities, serve as the primary resource and source of information on organizational strategies, procedures, goals and operational tasks, receive and interview office and telephone visitors; answer questions and provide details on

where judgment, knowledge and observations are used, especially when managing confidential information or files properly, resolve complaints, respond to callers.

Preparing the necessary information in administrative decisions and promoting the implementation of organizational policies and programmes, investigating, collecting, recording, tabulating, reviewing and summarizing data and information on specific activities, operations or roles as delegated, preparing various statistical and administrative summaries and reports on fiscal matters.

Teaching Strategies for Developing Psychomotor Skills

Much has been written over the years concerning the appropriate balance of knowledge and practical skills taught in polytechnic programs. Estimates that more than one-half of the students enrolled in today's polytechnics clearly indicate the need for practical experience as part of the program (Drake, 1991). While the teaching of principle should provide the necessary foundation for students to move forward, the best learning result is interplay between theory and experience, idea and application, reflection and encounter (Keeton, 1993). One of America's greatest education philosophers described the relationship between actual experience and education as an "intimate and necessary" one (Dewey, 1999).

Polytechnics in general have exercised their support for theories plus experience by providing structured experiences in skill development during laboratory and classroom sessions. But what are the most effective ways that psychomotor or manipulative skills may be developed? What teacher instructional activities aimed at developing psychomotor skills tend to result in higher student proficiency in manipulating ICT facilities?

How Skills are Learned

Manipulative skill development requires a blending of the mind and muscle. Manipulative acts are guided by thought and a direct relationship exists between the quality of thought and quality of manipulative performance. Watson (2006) stated that psychomotor skill development involves both muscular and thinking skills. According to Watson, psychomotor skills are acquired through a three stage process:

Early cognitive skill usually of short duration includes attention, observation and thought about how and why the skill is performed, lengthy practice or fixation includes practice sessions aimed at shaping correct performance and finally at the automatic stage, correct performance becomes automatic, with increases in speed, accuracy, dexterity, timing and greater understanding of application settings, unfortunately, polytechnic students do not always reach the final autonomous stage. However, advanced stages of skill acquisition process are often attainable.

Psychomotor skill variables synthesize empirically based conclusion, as well as a relevant theory, regarding the processes of psychomotor skill development. The variables to be contained in this discussion include motivation, demonstrations, physical practice, mental practices and feedback/knowledge of results.

Motivation - A student's motivation has a positive influence on the development of psychomotor skills. If experience were to be educational, they must account for the principle of puzzlement or indeterminacy. That is, the major step in the teaching process is to create an atmosphere of confusion or perplexity in the student's minds about the problem (skill) at hand (Dewey, 1999). From a review of research studies, Watson (2006) presented the following strategies for increasing motivation: (a) use a variety of psychological strategies based upon

personal goals and interests, values of the skill, and personal challenge (b) arouse curiosity by presenting a novel idea or a puzzling problem (c) set challenging, yet obtainable standards for each student (d) providing feedback and reinforcement and (e) take advantage of natural tendencies to compete.

Demonstrations - Actual demonstration has been widely viewed as the most appropriate strategy for teaching skill development. Filmed demonstrations have also been found to enhance psychomotor skill development because it enhances psychomotor skill acquisition, the higher the status of the person presenting the demonstration, the greater the influence of the demonstration on the student's skill acquisition, tasks should be broken into subunits for teaching purpose so that the skills involved in each subunit could be demonstrated in sequence, allowing students to practise in each subunit before moving to the next and demonstrations can help reduce anxiety over performing unfamiliar skills (Gould & Roberts 2002).

Physical Practice- Practices may be defined as "…repetition with the intent of improved performance" (Watson, 2006). Actual practice of a manipulative skill is essential to acceptable performance. Furthermore, actual performance of a skill effectively reduces the fear and anxiety that accompanies the performance of many skills (Gould & Roberts, 2002). Distributed practice is more effective in the development of psychomotor skills than massed practice (Fischman, Christina & Vercruyssen, 2003). That is, short frequency practice sessions over a long period of time are most effective. However, according to him, practice sessions must be long enough to allow improvement, and the time period between sessions must be short enough to prevent forgetting. Performance curves tend to reveal that improvement is usually fastest initially, with a plateau of performance reached after some time. Research evidence suggests,

however, that these plateaus are primarily due to students' stopping at their own acceptable levels of performance, rather than to any physical limitations (Watson, 2006).

Feedback/Knowledge of Results - Feedback, or information provided to students regarding their performance results, is essential in psychomotor skill development (Watson, 2006; Braverman & DeCaro. 2009). In order to provide appropriate and timely feedback, psychomotor skills must be identified as open loop, where no feedback can be received until the task is complete (e.g., website creation), where feedback, error detection and correction are possible during the course of performing the skill. These website design skills are usually complex skills that may be broken down into component parts (e.g., linking text and documents). They offered the following conclusions regarding feedback and its effects on skill acquisition:

- The rate of skill improvement depends upon the precision and frequency of knowledge of results.
- A delay in providing this knowledge does not affect skill acquisition. However, feedback is important, especially in the early stages of practising a simple website design.
- Withdrawal of knowledge of results decreases performance in the early stages of skill development but does not affect performance in the late stages.
- A variety of types of feedback should be provided, including visual, verbal and kinaesthetic. The use of video-taped and verbal feedback increases performance on website design complex skills.

The Teaching Process

The approach to teaching psychomotor skills involves a number of phases, including motivating students, demonstrating the skill, furnishing student practice and providing appropriate feedback on performance. Interestingly, Keeton (1993) recommended a systematic teaching strategy for manipulative skill development that encompassed all of these major phases, which have been more recently supported through empirical research. His steps include: Creating interest through the use of questioning and discussion of a puzzling problem or an aspect of the skill to be developed. This brings students to a psychological perception that they need to know more, that they are to become more able. Students are said to describe the appropriate steps of performing the skill, by correcting errors and explaining changes that must be made, discussing how each step of the skill should be performed and having the class prepare a set of brief, simple directions for the process (Osborne, 2006). Students will learn more from a demonstration if the hows and whys have been discussed beforehand.

Demonstration of the skill is said to be provided. Involving students mentally and physically throughout the demonstration will increase its effectiveness. Steps to be performed should be demonstrated in proper sequence and explained simultaneously.

Students practise the skill. Upon completion, two finished products are said to be placed before students to know which is better and why. Students in a group can be led in the development of acceptable standards by which future performance should be judged. Keeton (1993) strongly argues that this step is essential to appropriate performance.

Provide alternating sessions of practice and evaluation until the desired ability level is reached.

Review of Related Empirical Literature

For the purpose of this study, the following empirical studies related to this research work were reviewed.

Tony-Okeme (2015), investigated the Influence of ICT Resources on Teaching Office Technology and Management in Polytechnic in North-Central Zone, Nigeria. The main objective of the study was to assess the influence of ICT Resources on Teaching Office Technology in North-Central Geo-political Zone, Nigeria. Descriptive survey design was used. Owing to the low number of the population of 113, the whole population was used for the study. Five research questions and five null hypotheses were raised for the study. The bio-data of respondents was analysed using percentage, and the research questions were analysed using mean. Four null hypotheses were tested using two tailed Pearson Product Moment Correlation Coefficient at 0.01 level of significance. Hypothesis Five was tested using independent t-test at 0.05 level of significance.

The findings from the study showed that most ICT resources were rarely available for teaching office technology and management, that most ICT resources were inadequate for use in office technology and management, that lecturers did not utilize ICT resources in teaching Office Technology and Management, that Lecturers' ICT competency was low for the utilization of ICT resources in teaching Office Applications and that both gender were of the opinion that the utilization of ICT resources had influence on the teaching of office technology and management in Polytechnics within the North-Central geo-political zone in Nigeria. The study is related to this study because it focuses on IT resources in teaching OTM. It is however different because this research work focuses on curriculum, facilities and teacher competencies.

Onojeta, (2014), carried out a research on Business Education Curriculum and Integration of Technologies. The main objective was to examine the integration of new technologies in business education curriculum in public universities in Edo-Delta States of Nigeria. The study adopted survey research design. The population of the study was all Final Year business education students drawn from Delta State University Abraka and University of Benin, Benin City in Edo State, numbering 204; the sample was the entire population hence an intact population. A structured questionnaire on a 4-point scale was used to collect data for the study. Mean and standard deviation were used to answer the research questions, and t-test statistics was employed to test the hypotheses at 0.05 level of significance. Any item with mean score of 2.50 and above was regarded as available and any item with mean score of less than 2.50 was considered as somewhat available for research question 1. For Research Question 2, any item with mean score of 2.50 and above was considered as utilized and any one with mean score less than 2.50 was regarded as somewhat utilized. Research Question 3 any item with mean score of 2.50 and above was regarded as significant and any item with mean score that is less than 2.50 was regarded as somewhat significant. The hypothesis was accepted if the calculated table value was less than the critical table value, and rejected if the calculated table value was more than the critical table value.

The findings from the study showed that there is no significant difference between the mean response of the respondents on the extent of availability and utilization of new technologies for learning in business education in the institutions investigated. The null hypothesis was therefore accepted. Another findings from the study showed that there is no significant difference between the mean responses of the respondents on the barriers inhibiting the integration of new technologies for learning into business education curriculum in the

institution investigated. The null hypothesis was therefore accepted. That study is related to this current study because it focuses on technologies and Business Education. It was undertaken in Delta State while this study was conducted in South-Western Nigeria.

Esene (2014) carried out a research titled: Office Technology and Management and New Technologies: The challenges for Office Educators in Polytechnics in South-South of Nigeria. The main objective of the study was to find out the challenges facing OTM Educators as a result of the new OTM Curriculum and new technologies. The study adopted survey research design. The population for the study comprise 130 OTM Educators who teach OTM courses in the nine polytechnics in South-South zone of Nigeria. The research instrument was a structured questionnaire based on the six research questions raised to guide the study. The data generated from the study were analysed using mean scores and Standard Deviation statistical tools. The decision rule was that any item receiving a mean score (x) of 3.50 and above was agreed while those items below 3.50 were regarded as disagreed opinions. Similarly any standard deviation (SD) of below 0.36 was agreed upon, while those above 0.36 were regarded as disagreed opinions.

The findings showed that the present OTM Curriculum was given serious considerations by NBTE. It also showed that the mission statements of OTM Curriculum as specified by NBTE are achievable as they meet the needs, interests and aspirations of the students. Another finding showed that OTM Educators used appropriate instructional strategies when conducting theoretical and practical lessons. It was discovered from another findings from the study that the organization of the instructional contents of OTM Curriculum took into consideration the occupation of individual students and about the occupational life of the society. Therefore, the Curriculum content was well organized.

The study concluded that new technologies are on ground for the implementation of ND and HND programmes of OTM Curriculum and that the present OTM Curriculum provides the students with enough instructional contents to acquire the values, knowledge and skills needed in the world of work. The study is related to this study because it focuses on Office Technology and Management and New Technologies. It is however different because this research work focuses on curriculum, facilities and teacher competencies.

Amiaya (2014), assessed the challenges and strategies for the integration of new technologies in Office Technology and Management curriculum in the polytechnics in Edo-Delta States. The descriptive survey research design was adopted for the study. While the population was 107, the sample was the entire population hence intact population. The study was carried out using only Higher National Diploma (HND) II Final Year students in the polytechnics in Edo-Delta States, Nigeria. Data were collected using structured questionnaire on a 4-point scale. The research questions were answered using mean and standard deviation. On the other hand, t-test statistics was used to test the hypotheses at 0.05 level of significance.

The findings from the study showed that 18 of the items were accepted as challenges militating against the integration of new technologies in OTM curriculum. Only 2 of the items were rejected. Another finding revealed that all the items were accepted as strategies that can be implemented in order to mitigate the challenges of integrating new technologies into Office Technology and Management curriculum. The study also finds improvement in the curriculum and that if the course contents are rigidly implemented, graduates would no doubt have additional skills and competencies needed in the world of technology. The study is related to this one because it focuses on challenges and strategies for the integration of new technologies

in Office Technology and Management curriculum. It was undertaken in Edo and Delta States while this study was conducted in South-Western Nigeria.

Braimoh (2014), investigated the challenges of ICT in the Implementation of Business Education Programmes in Polytechnics in Edo-Delta States. The design adopted for this study is the survey research design. The population of the study comprised 125 business education teachers (lecturers and instructors) in all departments of Office Technology and Management (OTM) within the six polytechnics in Edo and Delta States. Questionnaire was the instrument used to collect data to answer the two research questions raised for the study. Data generated from the respondents were analyzed using the mean and standard deviation statistics to answer the research questions. The population for the study comprises all the 400 level undergraduate students (affiliated to the University of Maiduguri) in the School of Business Education, Federal College of Education (Technical), Gombe, for 2012/2013 academic session including lecturers teaching Business Education courses. The instrument was structured based on the research questions raised for the study. Information collected were summarised and analysed using mean and standard deviation techniques to answer the research questions, while t-test was used to test the hypotheses formulated at 0.05 level of significance.

The findings from the study showed that computer laboratories and standby generators are adequate. Another finding revealed that two items were rated ‘easy to teach’ by the business education teachers. They are keyboarding and Microsoft-word. Corel-Draw Graphics, Desktop Publishing, Webpage Design, Advanced Webpage Design, Advanced Desktop Publishing and E-business/features of online services were assessed to be difficult to teach. The study is related to this one because it focuses on challenges of ICT in the Implementation of Business Education

Programmes in Polytechnics, it is however different because the on-going research work tOOK place in South-Western, Nigeria.

Ademola (2014), also carried out a research on Paradigm Shift in Knowledge-Driven Economy towards Technologies and its Implications to Business Educators in Tertiary Institutions. The study adopted the survey design. Mean and standard deviation techniques were used to answer the research questions, while t-test was used to test the hypotheses formulated at 0.05 level of significance.

The findings from the study showed that Information and Communication Technology (ICT) is very important in the present system because it forms the foundation for the realization of global socio-economic development. Another finding shows that limited access to internet facilities, and inability to get ICT spare parts in Gombe State are capable of hindering skills acquisition programme, especially in Business Education programme in tertiary institutions if care is not taken. The study is related to this study because it focuses on Paradigm Shift in Knowledge-Driven Economy towards Technologies and its Implications to Business Educators. It is however different because this research work focuses on curriculum, facilities and teacher competencies.

Okeke, Ezenwafor and Umoru (2012) carried out a research on the Perception of Business Educators on the Impact of ICTs on Students Learning in Tertiary Institutions in Nigeria. The survey design was adopted for this study which involved all business educators in all the tertiary institutions in Nigeria. The population for this study was 466 registered members of the Association of Business Educators of Nigeria (ABEN) as at 2011. Purposive sampling was used to select 215 from the six geopolitical zones using Yamane formula for finite

population on the sample size. A questionnaire consisting 39 items in two parts (A and B) was used for data collection.

The arithmetic mean and standard deviation were used for data analyses to answer the research questions as well as determine how close the responses were to the mean. The three hypotheses were tested using t-test at 0.05 level of significance.

The findings revealed low extent of ICTs utilization in student learning in tertiary institutions in Nigeria. Another finding showed that business educators perceive ICTs to have positive impacts on students learning in tertiary institutions in Nigeria. The study is related to this study because it focuses on the impact of ICTs on students learning. It is however different because this research work focuses on curriculum, facilities and teacher competencies.

Appraisal of Reviewed Literature

This chapter reviewed in detail, works of theorists, researchers and writers related to the topic under research. The study considered the theory of Rogers (2003), which according to Medlin (2001), is the most appropriate theory to base a research on when it borders on lecturers' uptake of technology at the higher institution. The theory enumerated four main elements of the diffusion theory as innovation, communication channels, time and social system. He stated that the innovation decision process involves five steps which are knowledge, persuasion, decision, implementation and confirmation. These stages, he opined, typically follow each other in a time ordered manner. This study went further to look at the following concepts.

The study viewed teaching as a process of teaching a knowledgeable and more experienced person to impart information, skills, data, desires, attitudes, inexperienced individuals as well as skills to less knowledgeable. This also saw the idea of innovation as gradually becoming a more powerful tool for the advancement of education. Innovation has

made education easier through the advent of electronic media and the Internet. Today, organizations such as research as well as educational institutions, as well as individuals, are turning to the Internet for accurate and up-to-date information. An online collaborator, referring to the sharing of information, trading otherwise working on the Internet with different people at different locations, is becoming a common practice. The system directs the use of code in the same sense, not the other way around. Technology incorporation focuses on "how" technology can be used to help the manner in which teaching and learning is currently being done in higher institutions. Technology often changes the way teachers teach, provides educators with active means of reaching out to different types of students, and tests the student's ability through multiple means.

The study also looked at the views of writers among others who contend that the curriculum consists of all the planned experiences that the school offers as part of its educational responsibility. Others contend that curriculum includes not only the planned but also the unplanned as well. The review showed that there is more to a curriculum than specific items listed in the official curriculum guide. There are at least four different curricular in use in our schools. They are: the official curriculum, taught curriculum, learned curriculum and tested curriculum. The components of office technology include: Computer as a subject of instruction, Computer-Assisted Instruction (CAI), Dialog, Testing, Computer-Managed Instruction (CMI), Computer-Based Simulation (CBS), Computer-Aided Problem Solving (CAPS).

The research offered an ephemeral antiquity of Office Technology and Management (OTM) applied to Nigerian Polytechnics following a comprehensive review of the NBTE Secretarial Studies curriculum in cooperation with UNESCO. The main milestone of the program is the implementation of a variety of ICT programs with a 75% focus on practical

training. The Office Technology and Management Program is designed to provide students with secretarial/office work skills in different fields of service, along with students are equally prepared with effective work skills and socio-psychological work skills that are very important in their daily interactions with others. NBTE's OTM curriculum and course definition for Polytechnics in Nigeria cover ICT Office Applications, Webpage Design, Desktop Publishing, Peoples Communication Skills as well as Career Development, Which shows more changes in the curriculum and if the content of the course is applied rigidly, students will certainly need additional skills and expertise in the technology world.

This study also highlighted the paradigm shift from the traditional methods of teaching OTM courses to new method that use learning technologies, especially for instructional delivery. ICT is fast becoming a veritable instrument for educational advancement and a springboard for economic development. The teaching technologies include the following: Interactive whiteboards, online collaboration tools, Course management tools, Multimedia presentations, Computer Tablets, smart phones as well as Clickers, Email, Lecture-capture tools**,** Use of Mobile Devices along with The Audio-Visual Media.

The study also discussed the skills required by OTM instructors as well as lecturers to develop the adequate as well as necessary ICT skills needed to prepare OTM students to identify in addition to solve technology problems in present commercial surroundings. Some of the competencies needed include: Computer Competencies, Communication Competencies, Word Processing Competencies, Data Processing Competencies, Telecommunication competencies, Planning, Organizing and Decision making competencies and Reprographic Competencies.

In the same light, the office is gradually being transformed technologically through new technologies which evolve daily. These changes are in the areas of Information and

Communication Technology, machines, computers and cabinets. In the past, filings, conferences, telephone handling, mail handling and so on were done manually in the office, but the traditional role of the office has changed significantly through the advent of Information and Communication Technology (ICT). Nigerian society should understand that every person should be equipped to make an effective contribution to the welfare of the country. Training in these practical skills is important as high productivity is usually achieved when efficient and skilled hands are used in every field of human endeavour.

With the introduction of the word processor and computers, corrections are made easily as texts can be revised and edited as many times as necessary; the Nigerian workers and students require a sound knowledge of ICT if they must do well in their business careers.

The benefits of technologies in office technology and management which were highlighted include: Increased Access to Information, Improved Performance of Students, Convenience and Flexibility, Development of Skills and Competencies, Evaluation of Students and Increased Employment Prospects for Graduates.

The research also looked at the difficulty of using engineering tools and equipment, making learning as well as teaching a little easier, more meaningful, more result-oriented as well as more realistic. Since the advent of technology, there has been growing concern about its use. Technology is omnipresent, impacting nearly every part of our lives, our economies and our homes. Nevertheless, when it comes to integrating innovation into classroom learning, many schools lag behind. Business education in higher education institutions would achieve educational goals if modern technological teaching aids, such as interactive whiteboards, computers, projectors, television sets, among others, internet facilities, were sufficiently used as well as supported.

The most important variables associated with effective psychomotor skills learning are included in this motivational skills teaching methodology. Psychomotor and cognitive skills' training is a complex process that requires both high-level critical thinking and physical activity for most abilities. Teachers' preparation and implementation practices will definitely influence the growth of skills. Acquisition of skills appears to be the highest when students are motivated to learn skills, examples are provided so that students can mimic, and thus have both physical and mental learning.

Finally, seven empirical studies were reviewed, and from the review, the researcher noted that none of the studies focused on the Influence of Curriculum, Facilities, Teachers' Competence on Skill Acquisition of Office Technology and Management Students' in Polytechnics in South-Western, Nigerian. This has created gaps which the current researcher intends to bridge.

CHAPTER THREE

METHODOLOGY

This chapter presents the different methods that were adopted to collect and analyse data in the study. Specifically, the following areas were covered: Research Design, Population for the Study, Sample Size and Sampling Technique, Instrument for Data Collection, Validation of the Instrument, Pilot Study, Reliability of the Instrument, Procedure for Data Collection and Method of Data Analysis.

Research Design

For the purpose of this study, descriptive survey design was used. Descriptive research design is ideal for studies in which subjects are studied in their natural environments without treatment. It involves collection of data in order to test hypotheses or answer questions concerning the status of the subject. This study falls into that category. According to Nwogu (1991) and Agboola (2006), the study design is particularly effective for seeking individuals' opinions, attitudes and perceptions.

Population for the Study

The population for the study consisted of 152 lecturers and instructors in the department of Office Technology and Management in accredited polytechnics offering the course in South-Western Nigeria. Table 1 shows the population for the study.

Table 1: OTM Institutions in South-Western zone by type

States in South-Western Nigeria	Names of Polytechnics in South-Western Nigeria	Sex Type	No. of OTM Lecturers and Instructors
Ekiti	Federal Polytechnic Ado-Ekiti	Mixed	12
Lagos	Yaba College of Tech. Yaba.	Mixed	14
	Lagos State Poly. Ikorodu.	Mixed	13
	Grace Poly. Alhaji Masha Surulere.	Mixed	10
	Lagos City Poly. Ikeja.	Mixed	10
Ogun	Federal Polytechnic, Ilaro.	Mixed	13
	Moshood Abiola Polytechnic Abeokuta	Mixed	12
	Gateway Poly. Saapade.	Mixed	11
Ondo	Rufus Giwa Polytechnic, Owo	Mixed	12
Osun	Federal. Polytechnic, Ede.	Mixed	14
	Osun State Polytechnic, Iree.	Mixed	08
Oyo	The Polytechnic, Ibadan.	Mixed	12
	The Ibarapa Polytechnic, Eruwa.	Mixed	11
TOTAL			152

Sources: (1) http://www.myschoolgist.com.ng/ng/list-of-accredited-polytechnics-in-nigeria/

(2) Figures from offices of the Heads of Department of Office Technology and Management in accredited Polytechnics in South-Western, Nigeria.

Sample Size and Sampling Technique

All the accredited polytechnics offering OTM in the six states, have 152 Lecturers and Instructors in polytechnics in South-Western Nigeria, all were used for the study. The researcher decided to study the entire population in line with the postulation of Ademiluyi and Okwuanaso (2009) that it is ideal to study the entire population whenever it is possible to do so. Therefore, no sample was drawn, the entire population was studied.

Instrument for Data Collection

The instrument for data collection was a questionnaire titled "OTM Curriculum, Facilities and Teacher Competencies on Students' Skill Acquisition in Polytechnics Questionnaire." The instrument was administered on lecturers and instructors to collect primary data. The questionnaire items were generated from literature, based on the objectives of the study and research questions. The 4-point rating scale was adopted. The responses were weighted on the following bases; Very Great Extent (VGE) 4 points, Great Extent (GE) 3 points, Small Extent (SE) 2 points and Very Small Extent (VSE) 1 point.

The questionnaire was divided into five sections: Section 'A' sought to get information on the demographic characteristics of the respondents; Section 'B' with items 1-9 focused on the extent to which OTM curriculum contents have influence on students' skill acquisition in polytechnics; Section 'C' with items 10-25 sought information on the extent of teaching facilities influence on students' skill acquisition in Polytechnics; Section 'D' with items 26-35 sought information on the extent to which teacher competencies influence students' skill acquisition in polytechnics; Section 'E' with items 36-48 focused on the extent to which instructional strategies influence students' skill acquisition in polytechnics. This helped to answer the research questions and obtain results, used to test the null hypotheses.

Validation of the instrument

The questionnaire was subjected to face and content validation by three experts; two in the Department of Business Education and one in the Department of Computer Science in Kwara State University, Malete, Kwara State (See Appendices II). The suggestions of these experts were taken into consideration in preparing the final version of the instrument.

Pilot study

A pilot study was carried out at the Kwara State Polytechnic, Ilorin, The Federal Polytechnic, Offa and Kogi State Polytechnic, Lokoja to determine the reliability of the designed questionnaire titled "OTM Curriculum, Facilities and Teacher Competencies on Students' Skill Acquisition in Polytechnics Questionnaire," and to assess the ease with which the respondents could understand and complete it. These institutions are outside the study area but they were chosen because they possess similar characteristics with those in the study area. The instrument was administered on a sample of twenty-seven (27) lecturers and instructors. The completed questionnaire copies were collected and subjected to statistical analysis.

Reliability of the Instrument

Reliability was carried out to determine the consistency of the instrument for the collection of data. The researcher determined the reliability coefficient through the use of Cronbach's Alpha. A total of 27 copies of the instrument were administered on lecturers and instructors who were not part of the population for the study at the Kwara State Polytechnic, Ilorin, The Federal Polytechnic, Offa and Kogi State Polytechnic, Lokoja in the North-Central zone of Nigeria. The instrument used to establish the reliability coefficient was the Cronbach's Alpha which gave a coefficient of 0.868 as shown in appendix I.

With this coefficient, the instrument was considered to be reliable, valid and consistent in line with Uche's (2005) position that when an instrument has a reliability coefficient of between 0.65 to 1, the instrument is reliable.

Procedure for Data Collection

The researcher obtained a letter of introduction from the Department of Business and Entrepreneurship Education, Kwara State University, Malete, Kwara State to the various polytechnics under study. Data collection was carried out by the researcher with the help of four other research assistants from the Federal Polytechnic Offa who were trained on distribution and collection of questionnaire by the researcher for a period of one week. This was done by visiting the polytechnics to administer copies of the research questionnaire. The researcher and his assistants distributed the questionnaire and collected them back after completion. One hundred and forty-seven copies (96.7%) of the questionnaire were retuned and analysed by the researcher, out of one hundred and fifty-two (152) copies that were distributed to lecturers and instructors in the polytechnics offering Office Technology and Management, situated within the six states in South-Western Nigeria. According to Agboola (2006), a return rate of 85% and above is adequate for descriptive survey studies.

The researcher and research assistants allowed the respondents sufficient time and provided additional guidelines when demanded by the respondents. The completed questionnaire were collected immediately by the researcher and his assistants. Some of the respondents could not complete the questionnaire immediately, the researcher and the assistants returned to retrieve the completed form a few days after administration. The exercise lasted for one month. Finally, the copies of the questionnaire administered and recovered were analysed by the researcher.

Method of Data Analysis

The demographic variables of the respondents were analysed using percentage. The data collected to answer the research questions were analysed using mean scores and standard deviation. The standard deviation is fixed at 1.96. This means that a standard deviation of 1.96 and above was considered that the responses are scattered. Hypotheses were tested using independent t-test statistics at 0.05 alpha level.

Decision Rule:

Items with a mean rate of less than or equal to 1.49 were classified as "very small" influenced. Objects with mean values from 1.5 to 2.49 are classified as having a "limited degree" effect. Objects with average values between 2.5 and 3.49 were classified as having been influenced to a "significant degree," whereas objects with a mean value of 3.50 and above were classified as having been influenced to a "major extent."

The principle for testing hypotheses is to consider the null hypothesis if the level of significance observed is higher than the level of the fixed alpha (0.05) and if not, the null hypothesis was rejected (Baba, 2009).

CHAPTER FOUR
PRESENTATION AND ANALYSIS OF DATA

This research work was conducted to examine the influence of curriculum, facilities and teacher competencies on skill acquisition of office technology and management students in polytechnics in South-Western, Nigeria. This chapter deals with the presentation and analysis of the research data and discussion of findings. A total of one hundred and fifty two (152) questionnaire copies were distributed and one hundred and forty seven (147) were retrieved representing 96.7% return rate. The analyses were carried out under the following sub-headings:

1. Analysis of Demographic Data
2. Analysis of data to answer the Research Questions
3. Hypotheses Testing
4. Summary of Major Findings
5. Discussion of Major Findings

Analysis of Demographic Data

The demographic variables for the study were analyzed in tables 2 and 3 as follows:

Table 2: Distribution of Respondents by Gender

Gender	Frequency	Percentage (%)
Male	87	59.2
Female	60	40.8
Total	**147**	**100.0**

Source: Field survey, 2017

Data in table 2 reveals the frequency and percentages of the male and female lecturers and instructors used for the study. There were 87 male respondents representing 59.2% and 60

female respondents representing 40.8%. This implied that male lecturers and instructors were more than female lecturers and instructors in polytechnics in South-Western, Nigeria.

Table 3: Distribution of Respondents by Cadre

Cadre	Frequency	Percentage (%)
Lecturers	94	63.9
Instructors	53	36.1
Total	**147**	**100.0**

Source: Field survey, 2017

Table 3 data, reveals the percentage distribution of the respondents by cadre, that is, the frequency and percentage of the lecturers and instructors used for the study. There are 94 lecturers, representing 63.9%; and 53 instructors, representing 36.1%. This indicates that lecturers are more than instructors in polytechnics in South-Western, Nigeria.

Analysis of data to answer the Research Questions

Analysis of data to answer the research questions conducted, are found in tables 4 to 7 as follows:

Research Question One: To what extent do the OTM curriculum contents influence skill acquisition among OTM students in polytechnics in South-Western, Nigeria?

Table 4: Mean and standard deviation of responses on the extent to which OTM curriculum contents influence skill acquisition among OTM students in polytechnics in South-Western Nigeria.

$N_L = 94$ and $N_I = 53$

S/N	Item Statements	$\overline{X}$	SD	Remark
1.	The course contents of typewriting enables the students to master the keyboard	3.54	0.80	Very Great Extent
2.	The course contents of desktop publishing enables the students to be competent in CorelDraw application	3.39	0.81	Great Extent
3.	The Course Contents of word processing enables the students to be competent in mastering the MSword application.	3.53	0.70	Very Great Extent
4.	The course contents of Webpage design enables the students to be competent in website creation.	3.35	0.81	Great Extent
5.	The course contents of advanced Desktop Publishing to a great extent enables the students to be competent in CorelDraw, Publisher and Adobe PageMaker applications.	3.44	0.70	Great Extent
6.	The course contents of advanced Webpage design enables the students to be competent in creating dynamic website for an organization.	3.29	0.83	Great Extent
7.	The course contents of Database Management System enables the students to be competent in creating a database for an organization.	3.27	0.76	Great Extent
8.	The course contents of Modern Office Technology enables the students to be competent in operating office machines.	3.35	0.80	Great Extent
9.	The course contents of Microsoft Excel enables the students to be competent in creating a spreadsheet.	3.42	0.77	Great Extent
Weighted average		**3.39**	**0.79**	**Great Extent**

N_L: Number of Lecturers
N_I: Number of Instructors
Source: Field Survey, 2017

Table 4 shows that the content of the typewriting course allows students to master the keyboard to a very large extent (mean=3.54) and shows that the content of the desktop publishing course allows students to be highly competent in the CorelDraw software (mean=3.39). Furthermore, the respondents ' responses were on average 3.53 to the question

whether the course content of word processing allows students to be competent in mastering the MSword application and the course content of the webpage layout allows students to be highly competent in website construction (mean= 3.35). The respondents indicated that advanced Desktop Publishing courses allow students to be largely competent in Publisher, Adobe PageMaker applications as well as CorelDraw (mean= 3.44). The respondent also suggested that the course content of advanced website design allows students to be highly competent in developing a dynamic website for an organization (mean=3.29) and that the course content of the Database Management System allows students to be highly competent in creating an organization's database (mean=3.27). Modern Office Technology's course content also enables students to be highly competent in the operation of office machines (mean=3.35) and Microsoft Excel's course content allows students to be highly competent in the creation of spreadsheets (mean=3.42). These 9 items have a standard deviation range from 0.70 to 0.83 below the fixed value of 1.96. It means that the responses of the respondents are not standardized, but close to the average.

All the table items influence the acquisition of skills amongst OTM polytechnic students. This means that OTM curriculum contents significantly influences the acquisition of skills among OTM polytechnics students in South-West Nigeria with an average as well as standard deviation of 3.39, SD=0.79.

Research Question Two: To what extent do teaching facilities influence the acquisition of skills among OTM polytechnics students in South-Western, Nigeria?

Table 5: Mean and standard deviation of responses on the extent to which teaching facilities influence skill acquisition among OTM students in polytechnics in South-Western Nigeria.

$N_L = 94$ and $N_I = 53$

S/N	Item Statements	$\overline{X}$	SD	Remark
1.	Access to internet facility in the computer laboratory enhances learning in webpage design skill.	3.64	0.63	Very Great Extent
2.	Access to computer laboratory facilitates learning in word processing skill.	3.57	0.62	Very Great Extent
3.	Access to Electronic Typewriters with visual display in the laboratory facilitates learning of keyboarding.	3.42	0.75	Great Extent
4.	Availability of Printers in the laboratory enables students acquire printing skill.	3.39	0.76	Great Extent
5.	Accessibility to overhead Projectors in the laboratories and classrooms enables students acquire Power Point Presentation skill.	3.55	0.59	Very Great Extent
6.	Access to Computer Aided Instruction Software enhances learning in E-commerce skill.	3.39	0.64	Great Extent
7.	Access to Scanning machines in the laboratory enhances learning in modern office technology skill.	3.42	0.65	Great Extent
8.	Access to Desktop Computer in the laboratory enhances learning in desktop publishing skill	3.39	0.69	Great Extent
9.	Access to Desktop Computer in the laboratory enhances learning in Microsoft Excel skill.	3.43	0.74	Great Extent
10.	Access to photocopying machines in the laboratory enhances learning in office practice skill.	3.34	0.76	Great Extent
11	Access to Laminating machines in the laboratory enhances learning in modern office technology skill.	3.37	0.67	Great Extent
12	Access to Desktop Computer in the laboratory enhances learning in Database management system skill.	3.39	0.64	Great Extent
13	Access to office telecommunications equipment like intercom, telephone and GSM handsets in the laboratory enhances communication skill.	3.45	0.67	Great Extent
14	Access to audio tape, Dictaphone and facsimile machines in the laboratory enhances learning in shorthand skill.	3.46	0.63	Great Extent
15	Access to interactive Whiteboard in the laboratory enhances learning in use of modern technology skill.	3.31	0.79	Great Extent
16	Access to computer with internet in the laboratory enhances learning internet browsing skill.	3.41	0.79	Great Extent
Weighted average		**3.43**	**0.69**	**Great Extent**

Source: Field Survey, 2017

Table 5 reveals that respondents suggested that access to the Internet computer lab greatly improves web page design skills (mean=3.64), whereas access to the computer lab facilitates the development of word processing skills to a very large extent (mean=3.57). Nonetheless, the respondents indicated that access to electronic typewriters with visual display in the laboratory facilitates the learning of keyboarding to a large extent (mean=3.42), and the availability of printers in the laboratory enables students to develop substantial printing skills (mean=3.39). Respondents suggested that the availability of overhead projectors in laboratories and classrooms allows students to learn a very large amount of PowerPoint Presentation skills (mean= 3.55). Likewise, the respondent noted that access to computer-aided guidance programs greatly enhances the ability to learn in e-commerce (mean=3.39) and access to laboratory scanning machines greatly enhances the ability to learn in modern office technology (mean=3.42).

Nevertheless, the respondents indicated that access to the Desktop Computer laboratory greatly improves the learning on desktop publishing and the skills of Microsoft Excel (mean= 3.39, 3.43). In addition, access to laboratory photocopying machines greatly enhances the ability to learn in office practice (mean=3.34) and access to laboratory laminating machines greatly improves the ability to learn in modern office technology (mean=3.37). Nonetheless, respondents indicated that exposure to the Desktop Computer laboratory enhances the skills of the Database Management System Learning and access to office telecommunications equipment such as intercoms, mobile phones and GSM handsets in the laboratory significantly improves communication skills. These were backed by a mean score of 3.39 and 3.45, respectively. Nevertheless, the respondents proposed that access to audio tape, dictaphone and facsimile machines in the laboratory would greatly enhance shorthand learning (mean=3.46).

Different methods of accessing interactive whiteboards in the laboratory greatly enhance learning through the use of modern technology skills (mean= 3.31). Respondents find that access to internet computers in the laboratory greatly enhances the ability to learn internet browsing (mean=3.41). These 16 goods have a standard deviation from 0.59 to 0.79 below the fixed value of 1.96. This means that the answers of the respondents are not widely distributed, but close to the average.

Generally, all of the above facilities have influence on the acquisition of skills among OTM polytechnic students. This means that teaching facilities in South-West Nigeria have a considerable influence on the acquisition of skills among OTM students in polytechnics. This has been confirmed by (mean=3.43, SD=0.69).

Research Question Three: To what extent do teaching competencies influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?

Table 6: Mean and standard deviation of responses on the extent to which teaching competencies influence skill acquisition among OTM students in polytechnics in South-Western Nigeria.

$N_L = 94$ and $N_I = 53$

S/N	Item Statements	$\overline{X}$	SD	Remark
1.	Teachers' proficiency in CorelDraw helps students' skill acquisition in Desktop Publishing	3.41	0.87	Great Extent
2.	Teachers' proficiency in website design help students' skill acquisition in Webpage Design	3.24	1.00	Great Extent
3.	Teachers' keyboarding dexterity helps students' skill acquisition in Word Processing.	3.31	0.90	Great Extent
4.	Teachers' shorthand dexterity helps students' skill acquisition in shorthand.	3.48	0.70	Great Extent
5.	Teachers' presentation with projector helps students' skill acquisition in PowerPoint presentation.	3.52	0.69	Very Great Extent
6.	Teachers' proficiency in spreadsheet helps students' skill acquisition in Microsoft Excel application	3.51	0.70	Very Great Extent
7.	Teachers' use instructional software (tutorials, drills and practice) helps students' skill acquisition in advanced keyboarding.	3.42	0.70	Great Extent
8.	Teachers' proficiency in database creation helps students' skill acquisition in Database Management packages.	3.54	0.69	Very Great Extent
9.	Teachers' use of e-mail helps students' skill acquisition in e-mail application.	3.38	0.84	Great Extent
10.	Teachers' proficiency in video conferencing helps students' skill acquisition in video conferencing system.	3.51	0.67	Very Great Extent
Weighted average		**3.43**	**0.78**	**Great Extent**

Source: Field Survey, 2017

Table 6 shows that the respondents indicated that CorelDraw teaching skills help students acquire skills in Desktop Publishing to a large extent (mean=3.41), just as website design skills help students acquire skills in Webpage Design to a large extent (mean=3.24). In addition, the respondents suggested that the keyboard dexterity of teachers helps students to acquire skills in Word Processing (mean=3.31) and that the shorthand dexterity of teachers helps

students to acquire shorthand skills (mean=3.48). The respondents suggested that the presentation of teachers with a projector would help students to a very large extent, acquire the skills of PowerPoint presentation (mean= 3.52). The respondent also suggested that the experience of teachers in the spreadsheet helps students to develop very comprehensive skills in the Microsoft Excel system (mean=3.51) and that the use of instructional software (tutorials, drills and practice) by educators helps students to learn advanced keyboard skills (mean=3.42). Nevertheless, the respondents indicated that the ability of teachers to build databases helps to a very large extent to acquire the skills of students in database management packages (mean= 3.54). The use of e-mail by teachers also helps to a large extent to acquire the skills of students in e-mail applications (mean=3.38) and the experience of teachers in video conferencing helps to a very large extent to acquire the skills of students in video conferencing (mean=3.51). These 10 goods have a standard deviation of 0.67 to 1.00 below the fixed value of 1.96. This means that the responses of the respondents are not widely disseminated as they are close to the average.

Generally speaking, all the constructs suggested that teaching competencies had an impact on OTM students' acquisition of skills. This means that teaching competencies has impact on acquisition of skills among OTM polytechnic students in South-Western Nigeria. This was followed by (mean=3.43, SD=0.78).

Research Question Four: To what extent do instructional strategies adopted by OTM teachers influence skill acquisition of OTM students in polytechnics in South-Western Nigeria?

Table 7: Mean and standard deviation of responses on the extent to which instructional strategies adopted by OTM teachers influence skill acquisition among OTM students in polytechnics in South-Western Nigeria.

$N_L = 94$ and $N_I = 53$

S/N	Item Statements	$\overline{X}$	SD	Remark
1.	Lecture methodology is good for learning office skills.	2.84	0.87	Great Extent
2.	Demonstration is necessary to master computer skills.	3.39	0.76	Great Extent
3.	Repetition with conscious direction when teaching helps to master skill subjects.	3.31	0.72	Great Extent
4.	Practice time when broken into short drill periods helps in mastery of keyboarding skill.	3.21	0.78	Great Extent
5.	Practice time when broken into short drill periods helps in mastery of shorthand skill.	3.48	0.76	Great Extent
6.	Varying drills before the law of diminishing returns start to operate on the students helps improve their skill acquisition.	3.20	0.77	Great Extent
7.	Tutorial lessons and exercises help students to acquire CorelDraw skill in Desktop publishing.	3.20	0.76	Great Extent
8.	Tutorial lessons and exercises help students to acquire website creation skill in webpage design.	3.27	0.74	Great Extent
9.	Developing emotional stability in students helps in building their skills.	3.35	0.76	Great Extent
10.	Setting attainable goals for each student helps sustain his/her interest in skill subjects.	3.35	0.74	Great Extent
11	Automatic methodology of skill building helps students to master the short forms in shorthand.	3.36	0.79	Great Extent
12	Positive rather than negative approach to skill building helps students to master database management technique.	3.39	0.81	Great Extent
13	Little formal testing helps to build the skills of students effectively.	3.27	0.85	Great Extent
Weighted average		**3.28**	**0.78**	**Great Extent**

Source: Field Survey, 2017

Table 7 shows that the respondents indicated that teaching methodology is perfect for the learning of office skills to a large extent (mean=2.84) and that it is necessary to demonstrate

the same degree of mastery of computer skills (mean=3.39). In addition, the respondents suggested that training with conscious guidance during teaching helps to master skill subjects to a large extent (mean=3.31) and practice time when divided into short drilling periods helps to master keyboard skills and shorthand skills to a large extent (mean=3.21, 3.48). Respondents indicated that a variety of drills begin to work with students before the rule of declining returns helps greatly improve their skills acquisition (mean=3.20). The respondent also noted that tutorial lessons and exercises help students learn CorelDraw skills in desktop publishing, develop website skills in the web page format to a large extent (mean= 3.20, 3.27) and help students improve their skills to a large extent (mean= 3.35). Nevertheless, the respondents proposed that setting attainable goals for each student would help to maintain a great deal of their trust in the skill of the subjects (mean=3.35). Automatic skill building method also helps students master shorthand forms to a large extent (mean=3.36) and a positive rather than negative skill building approach helps students master database management techniques to a large extent (mean=3.39). The respondents also indicated that a small amount of formal testing would help students develop their skills effectively (mean= 3.27). All 13 products have a standard deviation from 0.72 to 0.87 below the fixed value of 1.96. This means that the responses of the respondents are not widely distributed, but clustered around the average.

All the constructs in table 7 suggest that the teaching strategies of OTM teachers affect the acquisition of skills among OTM learners. This implies that the teaching strategies adopted by OTM teachers have a significant impact on the acquisition of skills among OTM polytechnic students in South-West Nigeria. Support (mean= 3.28, SD= 0.78).

Test of Hypotheses:

The four null hypotheses of the study were tested using independent t-test. The null hypotheses were tested at 0.05 level of significance. The summary of the test of hypotheses are presented in tables 8 to 11 as follows:

Ho_1 There is no significant difference in the mean ratings of male and female respondents on the extent of Curriculum contents' influence on skill acquisition among OTM students in polytechnics in South-Western Nigeria.

Table 8: Summary of t-test of the difference between the mean ratings of male and female respondents regarding the extent of curriculum contents' influence on skill acquisition among OTM students in polytechnics in South-Western Nigeria.

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	87	3.90	0.21				
				19.669	145	0.000	S
Female	60	2.64	0.55				

Source: Field survey, 2017

The data in table 8 reveals that there are 87 male respondents and 60 female respondents. The male and female responses showed that curriculum contents influence skill acquisition among OTM students to a great extent ($\bar{X}$ = 3.90; SD = 0.21) and ($\bar{X}$ = 2.64; SD = 0.55). Their responses are close to the mean as the standard deviations are very low. The table revealed that there was significant difference between the mean ratings of male and female respondents on the extent of curriculum contents' influence on skill acquisition among OTM students (t_{145} = 19.669, P<0.05). Therefore, the null hypothesis that states that there is no substantial modification in the mean ratings of male and female respondents as to the amount to which curriculum contents' influence on skill acquisition among OTM students in polytechnics in South-western Nigeria was rejected. This implies that male and female differ in their responses regarding the extent of curriculum contents' influence on skill acquisition among

OTM students in polytechnics. Their responses showed that male respondents rated extent of curriculum contents' influence on skill acquisition among OTM students higher than the female respondents (mean difference = 1.26).

Ho_2 There is no significant difference in the mean ratings of male and female respondents on the extent to which teaching facilities influence students' skill acquisition in polytechnics in South-Western Nigeria.

Table 9: Summary of t-test of the difference between the mean ratings of male and female respondents regarding the extent to which teaching facilities influence students' skill acquisition in polytechnics in South-Western Nigeria

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	87	3.88	0.23				
				19.300	145	0.000	S
Female	60	2.79	0.45				

Source: Field survey, 2017

Table 9 data revealed that 87 male respondents and 60 female respondents were present. Female as well as male reactions revealed that training facilities had a substantial impact on the development of polytechnic skills among students (= 3.88; SD= 0.23) and (= 2.79; SD= 0.45). Because the standard deviations are very low, their responses are close to the average. The table revealed that there was a major difference between the average ratings of male and female respondents as to how much teaching facilities influence students ' learning of polytechnic skills (t145= 19,300, P<0.05). The null hypothesis, which notes that there is no substantial difference between the average scores of male and female respondents on the level of teaching facilities, has therefore been dismissed as having an impact on the skills acquisition of students in polytechnics in South West Nigeria. This means that males and females vary in the degree to which teaching facilities affect the learning of polytechnic skills by students in their responses.

Ho_3 There is no significant difference in the mean ratings of lecturers and instructors on the extent to which teaching competencies influence students' skill acquisition in polytechnics in South-Western Nigeria.

Table 10: Test analysis of the disparity among the average ratings of instructors as well as lecturers on the degree to which teaching skills affect the learning of polytechnic skills through students in South-Western Nigeria.

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Lecturers	94	3.70	0.36	9.366	145	0.000	S
Instructors	53	2.90	0.61				

Source: Field survey, 2017

Table 10 shows that 94 lecturers and 53 instructors are present. Responses from lecturers and instructors have shown that teaching skills have a significant impact on students ' learning of polytechnic skills (= 3.70; SD= 0.36) and (= 2.90; SD= 0.61). Because the standard deviation scores are very small, their answers are close to the mean. The table shows a significant difference between the average ratings of lecturers and instructors on the degree to which teaching skills impact the learning of polytechnic skills by students ($t302=9.366$, $P<0.05$). The null hypothesis, therefore, that there is no significant difference in the average rating of lecturers and instructors as to the degree to which teaching skills influence the learning of polytechnics skills of students in South-West Nigeria has been refuted. This means that lecturers and teachers differ in their response to the degree to which teaching skills have an effect on students ' learning of polytechnics skills. Their responses showed that the degree to which teaching skills affect students ' learning of skills was higher than that of teachers (mean difference= 0.80) was valued by lecturers.

Ho_4 There is no significant difference in the mean ratings of male and female respondents on the extent to which instructional strategies adopted by OTM teachers influence students' skill acquisition in Polytechnics in South-Western Nigeria.

Table 11: Study overview of the difference between male and female respondents ' mean ratings of the degree to which OTM teaching approaches influence the skills acquisition of students at Polytechnics in South-Western Nigeria.

Group	N	Mean	SD	t-cal	Df	p-value	Decision
Male	87	3.40	0.59				
				2.800	145	0.006	S
Female	60	3.10	0.70				

Source: Field survey, 2017

Table 11 data shows that there are 87 male and 60 female respondents. Male and female responses indicate that teaching approaches implemented by OTM teachers have a significant impact on the development of student skills (= 3.40; SD= 0.59) and (= 3.10; SD= 0.70). Because the standard deviations are very high, their responses are close to the average. The table shows that there was a significant difference between the average ratings of male and female respondents as to the degree to which teaching approaches implemented by OTM teachers have had an impact on the development of students ' polytechnic skills (t_{145}= 2,800, $P<0.05$). The null hypothesis, therefore, indicates that there is no significant difference in the mean ratings of male and female respondents as to the degree to which the educational approaches adopted by OTM teachers affect the acquisition of polytechnic skills by students in South-western Nigeria. This means that the response of both male and female respondents differs in the degree to which OTM teachers ' education methods influence students ' learning of polytechnics skills.

Summary of major findings

The following are the summary of the major findings of the study:

1. The standard of OTM curricula has a significant impact on OTM students' acquisition of skills.

2. To a large extent, teaching facilities has impact on the acquisition of OTM skills in polytechnics students.

3. To a large extent, teaching competencies has impact on acquisition of skills by OTM students in polytechnics.

4. To a large extent, the instructional strategies used by OTM teachers has influence on OTM students' acquisition of skills in polytechnics.

5. There was a significant difference in the mean ratings of male and female respondents on the extent to which curriculum contents' influence skill acquisition among OTM students in polytechnics.

6. There was a significant difference in the mean ratings of male and female respondents on the extent to which teaching facilities influence students' skill acquisition in polytechnics.

7. There was a significant difference in the mean ratings of lecturers and instructors on the extent teaching competencies influence students' skill acquisition in polytechnics.

8. There was a significant difference in the mean ratings of male and female respondents on the extent to which instructional strategies adopted by OTM teachers influence students' skill acquisition in Polytechnics.

Discussion of major findings

The purpose of this study was to examine the influence of curriculum contents, facilities and teacher competencies on office Technology and management students' skill acquisition as perceived by polytechnics Lecturers and Instructors in South-Western Nigeria. The study found that OTM curriculum contents have influence on skill acquisition of OTM students in polytechnics to a great extent. This means that the contents embedded in OTM curriculum have influence on the skill acquisition of OTM students. This finding supports the earlier findings of Amiaya (2014) which noted improvement in the curriculum and that if the course contents are rigidly implemented, graduates would no doubt have additional skills and competencies needed in the world of technology.

The study also found out that teaching facilities influence skill acquisition of OTM students in polytechnics in South-Western Nigeria to a great extent. The acquisition of teaching facilities like new technologies for teaching/learning processes is occasioned by the fact that information must be managed, planned, organized, directed, coordinated and controlled in an office and technologists and managers must be available to perform these functions. This finding is in line with earlier findings by Esene (2014) who noted that teaching facilities help students to develop the ability to solve problems intelligently, prepares students competently, effectively and productively and develop in the individual, competencies and lifelong skills, knowledge and understanding for self actualization and sustainability.

The study found out that teaching competencies influence skill acquisition among OTM students in polytechnics in South-Western Nigeria to a great extent. This means that teachers' proficiency in the use of new technologies influence OTM students skill acquisition. This findings were supported by earlier findings by Ademola (2014) who stated that limited access to

internet facilities, and lack of proficiency in ICT are capable of hindering skills acquisition programme, especially in business education programme in tertiary institutions. The finding was supported by an earlier study by Madu, Obidi, and Genevive, (2015) which stated that for effective delivery of OTM curriculum, OTM lecturers and instructors are expected to possess relevant and adequate ICT-competencies needed to equip OTM graduates to face and surmount the challenges of technologies in modern business environment. The study also found out that instructional strategies adopted by OTM teachers influence skill acquisition among OTM students in polytechnics in South-Western Nigeria to a great extent. This finding corroborate an earlier study by Watson (2006) which noted that a well-stocked storehouse of strategies will enable a teacher to vary the classroom experience to prevent monotony and boredom and keep the learning situation fresh and stimulating. It will also enable him to individualize the learning method as well as the content, each based on student's needs.

The study found that there was significant difference in the mean ratings of male and female respondents on the extent to which curriculum contents influence skill acquisition among OTM students in polytechnics in South-Western Nigeria. This means that male and female differ in their responses regarding the extent of curriculum contents influence on skill acquisition among OTM such that male respondents rated extent of curriculum contents' influence on skill acquisition among OTM students higher than the female respondents. This result was supported by an earlier study by Okorie and Ezeji (2008) which stated that there was significant difference in the mean ratings of male and female respondents regarding the extent to which mission statements contained in OTM curriculum meets the needs of students. The study also found out that there was significant difference in the mean ratings of male and female respondents on the extent to which teaching facilities influence students' skill acquisition in

polytechnics in South-western Nigeria. This finding is in line with an earlier findings by Esene (2014), who stated that male and female differ significantly on the extent to which instructional facilities influence office technology and management students' performance.

The findings revealed that there was significant difference in the mean ratings of lecturers and instructors on the extent teaching competencies influence students' skill acquisition in polytechnics in South-Western Nigeria. This means that lecturers and instructors differ in their responses as lecturers rated the extent teaching competencies influence students' skill acquisition higher than the instructors did. This finding was contradicted by an earlier finding by Madu, Obidi, and Genevive, (2015) which stated that there was no significant difference between lecturers and instructors adequate ICT-competencies needed to equip OTM graduates to face and surmount the challenges of technologies in modern business environment. The study finally found out that there was significant difference in the mean ratings of male and female respondents on the extent to which instructional strategies adopted by OTM teachers influence students' skill acquisition in Polytechnics in South-Western Nigeria. This finding contradicts a study by Onojeta, (2014) which stated that there was no significant difference between the mean response of the respondents on the extent of utilization of new technologies for learning in business education in universities in Edo-Delta States of Nigeria.

From the foregoing, it is obvious that OTM curriculum contents have significantly improved the skills of OTM students in the use of modern facilities in the office. Lecturers and instructors have also significantly upgraded themselves in the use of these facilities which has made it possible for them to teach the students with these modern facilities that can be found in modern offices.

However, with the endless revolution of office technology and teaching facilities, OTM curriculum will have to be continually updated. Teacher competence will have to be continuously upgraded. Curriculum, facilities and teacher competencies are the tripod on which OTM students' skill acquisition is erected. Office skills cannot be successfully imparted unless education service delivery, of which curriculum, facilities and teacher competency are made to keep pace with the revolution in office technology.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The study examined the impact of curriculum content, facilities and teaching skills on the acquisition of skills by Office Technology and Management students as viewed by polytechnics lecturers and instructors living in polytechnics in South-Western Nigeria. The study identified four specific purposes, including the review of the impact of OTM curriculum content on the acquisition of polytechnic skills by students in South-Western Nigeria, based on four research questions and four null hypotheses. The research method for the analysis was a descriptive survey model. 152 lecturers and instructors have been developed in the Office Technology and Management Department of Accredited Polytechnics offering courses in South-Western Nigeria. There was no sample since the total population was used. The instruments used for data collection for the study was a structured questionnaire titled "OTM Curriculum, Facilities and Teacher Competencies on Students' Skill Acquisition Questionnaire. In order to answer the research questions, the data collected were statistically evaluated using mean and standard deviations. The four null hypotheses were tested at 0.05 alpha level using t-test. The key findings of the study are:

1. The quality of the OTM curriculum had significant impact on the acquisition of skills among OTM students in polytechnics in South-Western Nigeria.
2. To a large extent, teaching facilities has impact on the acquisition of skills among OTM polytechnic students in South-Western Nigeria.
3. To a large extent, teaching competencies had impact on the acquisition of skills among OTM polytechnic students in South-Western Nigeria.

4. Teaching strategies adopted by OTM teachers have a major impact on the acquisition of skills among OTM polytechnic students in South-Western Nigeria.

Conclusion

On the basis of the results of the study, which displayed that the performance of curricula, teaching facilities, teaching competencies as well as training methods had a positive impact on the acquisition of skills by office technology and management students, it was therefore concluded that, if properly implemented and used, the current curriculum and facilities would contribute to the acquisition of relevant skills. The present OTM facilities are also equally perceived to be relevant to what is obtainable in the modern office. It was likewise established that the lecturers are competent in teaching relevant skills to the students in the polytechnics.. The consequence of this is that, in the 21st era domain of effort, the existing curriculum for office management as well as technology as seen by means of business educators fulfils the required skills. It was similarly decided from the outcomes that the level of competence to use the student-centered teaching strategies of OTM lecturers is sufficient to impart the skills required.

Recommendations

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

1. The curriculum of office technology and management should be constantly reviewed, revised and adjusted in order to meet the challenges brought about by information and communication technology.
2. The various stake holders from the polytechnics such as institutional management, Federal and State Governments through the ministries of education should look into the provision of funds for the purchase of teaching facilities in the polytechnics.

3. Lecturers should be trained and retrained in order to keep them abreast and competent with the current trends in curriculum and instruction of OTM courses and for effective service delivery.
4. OTM lecturers should be exposed to conferences, seminars and workshops to enhance their competency level on the use of student-centered instructional strategies as a means of enhancing students' performance in OTM courses.

Limitations of the Study

The major limitations of the study were the confinement of the study to only Polytechnics in South-Western States, difficulty in retrieving copies of questionnaire and uncooperative attitudes of some respondents in answering questions. In spite of these limitations, however, the researcher ensured that the study was not affected by the mentioned challenges.

Suggestions for Further Study

The researcher suggests the following areas for further study:

1. Availability and utilization of instructional facilities in teaching office technology and management courses.
2. Influence of new technologies on the teaching and learning of office technology and management courses in tertiary institutions in South-Western Nigeria.
3. Assessment of the use of ICT in teaching and learning business education in Colleges of Education in North-Central Nigeria.
4. Impact of teaching and learning of ICT on office technology and management education students in polytechnics in South-Eastern Nigeria.

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APPENDIX I

Reliability

[DataSet1] C:\Users\ISRAEL\Documents\reliab. result\2017\Mr Yusuf.sav

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	27	100.0
	Excluded[a]	0	.0
	Total	27	100.0

ı. List wise deletion based on all variables n the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.868	.844	49

APPENDIX II

Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete.

Date 30/07 – 2017

Mr. Yusuf S.,
Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete,
Kwara State.

Dear Mr. Yusuf,

CONFIRMATION OF FACE AND CONTENT VALIDATION OF RESEARCH INSTRUMENT

Your letter on the above mentioned subject matter refers. I Dr. J. S Mamman of the Department of Business and Entrepreneurship Education, Kwara State University, Malete, hereby certified that I carried out face and content validity of the attached research instrument on "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition by Office Technology and Management Students in South-Western Nigerian Polytechnics".

Thanks.

Yours sincerely,

Dr. Joshua Mamman,
RESEARCH INSTRUMENT VALIDATOR

Att'd.

Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete.

Date 30/07/2017

Mr. Yusuf S.,
Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete,
Kwara State.

Dear Mr. Yusuf,

CONFIRMATION OF FACE AND CONTENT VALIDATION OF RESEARCH INSTRUMENT

Your letter on the above mentioned subject matter refers. I Dr T A Umoru of the Department of Bus. & Entrepreneurship Educ, Kwara State University, Malete, hereby certified that I carried out face and content validity of the attached research instrument on "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition by Office Technology and Management Students in South-Western Nigerian Polytechnics".

Thanks.

Yours sincerely,

Umoru, T. A. (Ph.D.)
RESEARCH INSTRUMENT VALIDATOR

Att'd.

Department of Computer Science,
College of Sciences,
Kwara State University, Malete,
Kwara State.

Date 02-08-2017

Mr. Yusuf S.,
Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete,
Kwara State.

Dear Mr. Yusuf,

CONFIRMATION OF FACE AND CONTENT VALIDATION OF RESEARCH INSTRUMENT

Your letter on the above mentioned subject matter refers. I Dr. (Mrs) J. F. Ajao of the Department of Computer Science, Kwara State University, Malete, hereby certified that I carried out face and content validity of the attached research instrument on "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition by Office Technology and Management Students in South-Western Nigerian Polytechnics".

Thanks.

Yours sincerely,

Dr. (Mrs.) J. F. Ajao,
RESEARCH INSTRUMENT VALIDATOR

Att'd.

APPENDIX III

Titus Amodu Umoru, PhD, (FABEN)
Associate Professor of Business Education
Head of Department
Department of Business & Entrepreneurship Education
COLLEGE OF EDUCATION
Phone:
08033519030
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KWARA STATE UNIVERSITY, MALETE
The University for Community Development
P.M.B. 1530, Ilorin, Kwara State, Nigeria

Date: 13/11/2017

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Dear Sir/Madam

Student's Dissertation Work in partial fulfillment of the requirement for the award of Postgraduate Degree in Business Education

This is to introduce to you Shuaibu YUSUF (with matriculation no: 14/27/PBE009), a postgraduate student in the Department of Business and Entrepreneurship Education, Kwara State University Malete.

In partial fulfillment of the requirement for the award of PhD in Business Education, the bearer is conducting a research on: Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition of Office Technology and Management in Polytechnics in South-Western Nigeria.

We therefore solicit your assistance to enable him successfully conclude his investigation.

We assure you that any information given to the students will not be used for any other purpose except for the stated intention.

Thank you

Associate Professor T.A. Umoru
Head of Department

APPENDIX IV

LETTER OF INTRODUCTION TO RESPONDENTS

Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete.

Dear Respondent,

REQUEST TO COMPLETE QUESTIONNAIRE

I am a postgraduate student of Business Education in the Department of Business and Entrepreneurship Education, Kwara State University, Malete. I am presently carrying out a research on "Influence of Curriculum, Facilities and Teacher Competencies on Skill Acquisition of Office Technology and Management Students". I sincerely hope you will consent to complete the attached questionnaire as your response will be useful in this research, which is purely for academic purpose. The information you will provide will be treated as confidential and will be used only for the purpose of the research; neither will any attempt be made to disclose the identity of the respondents. Please be as accurate as possible to enable the researcher get valid information.

Thank you for your cooperation.

Yours faithfully,

S. Yusuf,
RESEARCHER.

att'd.

APPENDIX V

Department of English and Literary Studies,
Federal University Lokoja,
Kogi State.
13th May, 2019

Mr. Yusuf,
Department of Business and Entrepreneurship Education,
College of Education,
Kwara State University, Malete
Dear Sir,

Certification of Error-Proof Doctoral Thesis

I wish to certify that I, Dr. OLANIYI Oladimeji Kaseem of the Department of English and Literary Studies, Faculty of Arts and Social Sciences of the Federal University Lokoja read the Ph.D thesis written by Shuaibu YUSUF of the Department of Business and Entrepreneurship Education of the Kwara State University, Malete. The thesis is titled: **INFLUENCE OF CURRICULUM, FACILITIES AND TEACHER COMPETENCIES ON SKILL ACQUISITION OF OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS IN POLYTECHNICS IN SOUTH-WESTERN NIGERIA.**

I have read the thesis and made corrections where necessary on the misuse of tenses, omission of articles, wrong prepositions and spellings found in the research report. I therefore certify that the thesis has become error-proof to the best of my ability. It is presentable therefore in terms of readability and grammaticality.

Faithfully,

14/05/19

OLANIYI Oladimeji (Ph.D)

Research Thesis Editor

Nigerian English Phonology and Sociolinguistics.

+2348066497280

APPENDIX VI

OTM CURRICULUM, FACILITIES AND TEACHER COMPETENCIES ON STUDENTS' SKILL ACQUISITION IN POLYTECHNICS QUESTIONNAIRE FOR LECTURERS AND INSTRUCTORS

SECTION A: DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

Gender	Male Female	
Cadre	Lecturer Instructor	

KEY

VGE - Very Great Extent
GE - Great Extent
SE - Small Extent
VSE - Very Small Extent

SECTION B: **The extent to which OTM Curriculum contents influence students' skill acquisition**

Q/I	OTM Curriculum Contents	VGE	GE	SE	VSE
1.	The course contents of typewriting enables students to master the keyboard.				
2.	The course contents of desktop publishing enables students to be competent in CorelDraw application.				
3.	The Course Contents of word processing enables students to be competent in mastering the MSword application.				
4.	The course contents of Webpage design enables students to be competent in website creation.				
5.	The course contents of advanced Desktop Publishing to a great extent enables students to be competent in CorelDraw, Publisher and Adobe PageMaker applications.				
6.	The course contents of advanced Webpage design enables students to be competent in creating dynamic website for an organization.				
7.	The course contents of Database Management System enables students to be competent in creating a database for an organization.				
8.	The course contents of Modern Office Technology enables students to be competent in operating office machines.				
9.	The course contents of Microsoft Excel will enables students to be competent in creating a spreadsheet.				

SECTION C: **Extent of teaching facilities influence on student's skill acquisition**

Q/I OTM Facilities for Skill	VGE	GE	SE	VSE
10. Access to internet facility in the computer laboratory enhances learning in webpage design skill.				
11. Access to computer laboratory facilitates learning in word processing skill.				
12. Access to Electronic Typewriters with visual display in the laboratory facilitates learning of keyboarding.				
13. Availability of Printers in the laboratory enables students acquire printing skill.				
14. Accessibility to overhead Projectors in the laboratories and classrooms enables students acquire Power Point Presentation skill.				
15. Access to Computer Aided Instruction Software enhances learning in E-commerce skill.				
16. Access to Scanning machines in the laboratory enhances learning in modern office technology skill.				
17. Access to Desktop Computer in the laboratory enhances learning in desktop publishing skill				
18. Access to Desktop Computer in the laboratory enhances learning in Microsoft Excel skill.				
19. Access to photocopying machines in the laboratory enhances learning in office practice skill.				
20. Access to Laminating machines in the laboratory enhances learning in modern office technology skill.				
21. Access to Desktop Computer in the laboratory enhances learning in Database management system skill.				
22. Access to office telecommunications equipment like intercom, telephone and GSM handsets in the laboratory enhances communication skill.				
23. Access to audio tape, Dictaphone and facsimile machines in the laboratory will enhance learning in shorthand skill.				
24. Access to interactive Whiteboard in the laboratory enhances learning in use of modern technology skill.				
25. Access to computer with internet in the laboratory enhances learning internet browsing skill.				

SECTION D: The extent to which teacher competencies influence skill acquisition of OTM students

Q/I	Teacher competency Influence	VGE	GE	SE	VSE
26.	Teachers' proficiency in CorelDraw helps students' skill acquisition in Desktop Publishing				
27.	Teachers' proficiency in website design helps students' skill acquisition in Webpage Design				
28.	Teachers' keyboarding dexterity helps students' skill acquisition in Word Processing.				
29.	Teachers' shorthand dexterity helps students' skill acquisition in shorthand.				
30.	Teachers' presentation with projector helps students' skill acquisition in PowerPoint presentation.				
31.	Teachers' proficiency in spreadsheet helps students' skill acquisition in Microsoft Excel application..				
32.	Teachers' use instructional software (tutorials, drills and practice) helps students' skill acquisition in advanced keyboarding.				
33.	Teachers' proficiency in database creation helps students' skill acquisition in Database Management packages.				
34.	Teachers' use of e-mail helps students' skill acquisition in e-mail application.				
35.	Teachers' proficiency in video conferencing helps students' skill acquisition in video conferencing system.				

SECTION E: The extent to which instructional strategies influence skill acquisition of OTM students.

Q/I	Teacher Instructional Strategies	VGE	GE	SE	VSE
36.	Lecture methodology is good for learning office skills.				
37.	Demonstration is necessary to master computer skills.				
38.	Repetition with conscious direction when teaching helps to master skill subjects.				
39.	Practice time when broken into short drill periods helps in mastery of keyboarding skill.				
40.	Practice time when broken into short drill periods helps in mastery of shorthand skill.				
41.	Varying drills before the law of diminishing returns start to operate on the students helps improve their skill acquisition.				
42.	Tutorial lessons and exercises help students to acquire CorelDraw skill in Desktop publishing.				
43.	Tutorial lessons and exercises help students to acquire website creation skill in webpage design.				
44.	Developing emotional stability in students helps in building their skills.				
45.	Setting attainable goals for each student helps sustain his/her interest in skill subjects.				
46.	Automatic methodology of skill building helps students to master the short forms in shorthand.				
47.	Positive rather than negative approach to skill building helps students to master database management technique.				
48.	Little formal testing helps to build the skills of students effectively.				