RELEVANCE OF SHORTHAND SKILLS TO SECRETARIAL DUTIES IN AUTOMATED OFFICES IN NORTH EAST GEO-POLITICAL ZONE OF NIGERIA

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TITLE PAGE

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A DISSERTATION SUBMITTED TO SCHOOL OF POSTGRADUATE STUDIES AHMADU BELLO UNIVERSITY, ZARIA
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MAY, 2015

DECLARATION

I declare that the work in this dissertation entitled "**Relevance of Shorthand Skills to Secretarial Duties in Automated Office in North East Geo-Political Zone, Nigeria**" has been carried out by me in the Department of Vocational and Technical Education. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other institution.

Rhoda Sarki AWAK _____ Signature _____ Date

CERTIFICATION

This dissertation entitled: "**Relevance of Shorthand Skills to Secretarial Duties in Automated Office in North East Geo-Political Zone, Nigeria**" by Rhoda Sarki AWAK meets the regulation governing the award of the Degree of Doctor of Philosophy in Business Education of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

Prof. A. A. Udoh Chairman, Supervisory Committee	_____ Signature	_____ Date
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Prof. A. A. Udoh Head of Department Vocational and Technical Education	_____ Signature	_____ Date
Prof. A.Z. Hassan Dean, School of Postgraduate studies	_____ Signature	_____ Date

DEDICATION

This work is dedicated to my daughters, Mercy and Margret, and to my grandson, Jess Oshla Joseph.

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OPERATIONAL DEFINITION OF TERMS

The following terms were used in the study and their special meanings are defined for better understanding

Automated Office: An office that has adopted the use of electronic equipment such as computers, telephones, recorders, printers, photocopiers, and scanners.

Automation: Replacing work done by humans with machines.

Electronic mail: System of sending text, pictures etc. by means of computers linked to the world wide web.

Facsimile or fax: A device for scanning documents and encoding their images for transmission over a telephone line.

Information Processing: The coordination of people, equipment and procedures to handle information, including word and data processing, administrative support, and storage, distribution/communication and retrieval of information.

Secretary: A person whose work consists of supporting management, using a variety management, communication and organizational skills.

Stenography: Shorthand skills acquired by a Shorthand writer or a stenographer

ABSTRACT

This study sought to establish the relevance of shorthand skills to secretarial duties in automated offices in the North East Geo-Political Zone of Nigeria. Shorthand is a skill that prepares one for an occupation as a secretary. Its many applications include taking of minutes, composing letters, report writing, recording messages and others. Technology seems to have caught up with shorthand in this era. Proponents of automated equipment in offices and the increased use of automated equipment by business executives and secretaries have promoted the assumption that, the use of shorthand skills will be phased out and modern machines and equipment would take over the role of shorthand writers. The major objective of this study was to determine the relevance of shorthand skills to secretarial duties in automated public offices in North East geo-political zone of Nigeria. The research design employed for this study was the descriptive survey research. The population for the study was one thousand two hundred (1,200) secretaries and managers. The sample size for the study was six hundred (600) comprising three hundred (300) secretaries and three hundred (300) managers in automated public institutions drawn from state establishments, federal medical centres and universities. Proportional sampling techniques was used to get equal number of secretaries and managers from both state and federal institutions in the zone. The instrument used to collect data for the study was a questionnaire. The questionnaire contained 64 items divided into seven sections; A,B,C,D,E,F and G. Section A was designed to obtain personal data of the respondents to fill in appropriately. Section B – G contains items designed to elicit data on research questions 1 – 7 respectively. Frequencies and percentages were used in presenting the bio-data of respondents. Mean and standard deviation were used to answer the seven research questions. Pearson Product Moment Correlation (PPMC) was used to test null

hypotheses one to six, while independent t-test was used to test null hypothesis seven to determine the difference between the views of secretaries and managers on the relevance of shorthand skills to secretarial duties in automated offices. The null hypotheses were tested at 0.05 level of significance. The findings of the study revealed among others that, shorthand skill is relevant to secretaries' accuracy in taking minutes. Shorthand skill is still relevant to secretaries' speed in taking minutes. Shorthand is relevant to secretaries' ability to compose correspondence. The study concluded that, shorthand skill is still relevant to all forms of secretarial duties judging by its relevance noted from the result presented in the study. The study recommended among others that, shorthand should not be expunged from the school curriculum of secretarial education at both secondary schools and post secondary institutions of learning.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Over the years, advancement in office technology and new management styles have brought about changes to the office environment. Secretaries have undergone rapid transformation, moving from working in their age-old traditional role of taking notes in shorthand and transcribing on manual typewriter to new and multiple roles of using electronic, computer and recording devices. According to Norris (2008), the work of secretaries has shifted to a more management/administrative function in addition to their traditional secretarial functions. This is as a result of the introduction and use of new technologies in the office. Secretaries are assuming more and newer responsibilities, and are expected to perform at higher levels of administration and management, with higher remunerations. The traditional secretarial skills of taking notes in shorthand and transcribing on manual typewriter is fading away. Emphases has shifted to storing, editing and retrieving minutes of meetings and correspondences with the use of computer and electronic typewriter due to automated equipment in offices (Akpan, 2000).

In keeping with the change in secretarial job contents, secretaries have for several years been assessed by means of other work-related criteria, especially in the private sector. For example, proficiency in information technology applications management and administrative skills are now prominent assessment criteria. On the other hand, the assessment and placement of secretaries employed in the public sector are still based on ability to take notes/minutes in shorthand. As stated by Igbinola (2003) that office education or office technology management curricula have been reviewed and updated over the years, to keep abreast with new work patterns and emerging information and

communication technologies. Shorthand skills, although previously essential to secretaries are now not as important as other skills. Office Managers are more inclined to either compose correspondences themselves, or even use computer to draft reports and other office correspondence. As a result, shorthand skills appear to have been de-emphasized from the curriculum and the focus is now on business/management information technology skills.

Since late nineteenth century, several inventions have taken place to change the traditional office to an automated one. Some of these inventions include the electronic typewriter, telephone, and the computers. Initially, such machines were made up of old manual typewriters, duplicating machines, giant telephones and switchboards, and dictating machines. With the invention of the dictating machine, secretaries could record words using the machine or shorthand. Gradually, new equipment and machines have replaced the old ones, making work more efficient and reliable. This, according to Spence (2009), is the automated office which uses new technologies such as the electronic typewriter, and computer to make office work move faster and more accurate. In line with this, Wertsch (2008) explained that if one work in a modern office for any length of time, one would surely experience changes in the different kinds of equipment used and in the ways work is now done.

In Nigeria, shorthand is one of the subjects taught at the secondary and tertiary levels of education, and a close examination of the curriculum shows that shorthand is given more contact time in many tertiary institutions than other courses. Upon graduation, the students discover that shorthand may no longer be essential to the secretary's work. In view of this change, advertisements for secretaries in newspapers no longer emphasize the need for shorthand but rather place emphasis on computer literacy (Hokanson, 2001).

Nevertheless, the belief that shorthand may no longer be useful is not necessarily justifiable until a proper research of this nature is carried out, whose findings should agree or disagree. Nwosu (2003) emphasized that, unlike word processing operations in most settings, office secretaries carry out tasks which often extend beyond typing or keyboarding. Some secretaries work directly with authors in forming and preparing documents and some authors delegate some document creation to their secretaries. He further affirms that no executive has ever lived up to his maximum responsibilities without the help and cooperation of a competent secretary.

The American Association of secretaries (2014) emphasizes that, minutes as tangible records of meetings and a source of information for members who are not able to attain. This implies that minutes capture the essence of meetings, including details such as decisions made. In addition, the American Association of secretaries (2014) has pointed that minutes can act as reference point or example when a minutes' outcome impacts other collaborative activities or project within the organization, minutes can serve to notify individuals of tasks assigned to them and or timelines.

The indications that people have different opinions, values and ability to exchange ideas with others, understand others perspectives. Again, people's ability to solve problems and successfully utilize steps and processes taught during training depends significantly on how effectively they are able to communicate with others. The act of communicating involves verbal, nonverbal, and preverbal components. The verbal component refers to accents of the messenger and the choice and arrangement of words. The nonverbal components refer to the message we send through body language. The paraverbal components refer to how people say what they say-the tone, the pacing and volume of the voice. In order to communicate effectively people need to use all the

components, as identified by Chip (2014). People thus need to send clear, concise messages and hear and correctly understand messages sent to them. Effective verbal messages are brief and organized, free of jargons, and they do not create resistance in the listener.

Agbionu (2014) defined reports as facts, suggestion, information that seek what is wanted and the presentation of findings. He further stated three main parts of a report as follows: Statement of the subject, term of reference, difficulties encountered and acknowledgement. The second part is the main findings of the investigation and the third is conclusion and appendices.

The present study was based in North East Geo-Political Zone, Nigeria comprising Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe States with the intention to determine the relevance of shorthand skills to secretarial duties in automated offices. A number of tertiary institutions and establishments have been chosen for the study to determine the current views of secretaries and managers in public organizations on the relevance of shorthand skills to secretarial duties in automated office environment in the zone.

1.2 Statement of the Problem

Shorthand is a skill that prepares one for an occupation as a secretary. Its many applications include taking of minutes, composing letters, report writing, recording messages among others. Technology has caught up with shorthand in this era. Proponents of automated equipment in offices and the increased use of automated equipment by business executives and secretaries has promoted the assumption that the use of shorthand will be phased out and modern machines and equipment would take over the functions of

shorthand writers. This is because efficient and sensitive recorders which are less dependent on shorthand are in the market and shorthand would go into oblivion (Webututor, 2009). As a result of these situations, secretaries in modern offices seem to have abandoned the use of shorthand and have resorted to using sophisticated office equipment, such as facsimiles, computers for faster and easier communication. Computer operators are regarded as being better than secretaries, while secretaries do more work than computer operators. Shorthand is seen to be superseded by the use of the computer in particular; even though secretaries are still required to have very high shorthand skill before promotion in most public offices.

However, in recent times, there have been discussions at seminars, workshops, and media houses on the relevance of shorthand in the era of automated equipment. Commentators such as Wofersohn (2001), Anyakoha (2002) and Akpomi (2003) have opined that automated equipment are more convenient in office service delivery than shorthand. Secretaries now have many automated office gadgets to ease their jobs and enhance proficiency and productivity leading to improved access to goods and services globally.

High proficiency in shorthand skill is still an important criterion for both employment selection and promotion of secretaries. Some office managers and educationists are undecided about this inconsistency of imposing shorthand skill as one of the criteria for selection and promotion while it is assumed that the skill is becoming obsolete. Conversely, the lack of information on the extent of use of shorthand by secretaries is another challenge. It is based on these conflicting positions that this study was conceived using empirical evidence to ascertain whether or not shorthand skill is still

relevant to secretarial duties in an automated office environments in North East geo-political zone of Nigeria.

1.3 Objectives of the Study

The major objective of this study was to determine the relevance of shorthand skills to secretarial duties in automated offices in North East Geo-Political Zone of Nigeria.

The specific objectives were to:

1. determine the relevance of shorthand skill to secretaries' accuracy in minutes taking in automated offices.
2. determine the relevance of shorthand skill to secretaries' speed in minutes taking in automated offices.
3. determine the relevance of shorthand skill to secretaries' ability to compose correspondence in automated offices.
4. determine the relevance of shorthand to secretaries' communication skill in automated offices.
5. determine the relevance of shorthand skills to report writing ability of secretaries in automated offices.
6. determine the relevance of shorthand skills to confidentiality of secretaries in automated offices.
7. determine the difference between the opinion of managers and secretaries on relevance of shorthand skills to secretarial duties in automated offices.

1.4 Research Questions

The study was guided by the following research questions derived from each specific objective:

1. What is the relevance of shorthand skills to secretaries' accuracy in minutes making in automated offices?
2. What is the relevance of shorthand skills to secretaries' speed in minutes taking in automated offices?
3. What is the relevance of shorthand skills to secretaries' ability to compose correspondence in automated offices?
4. What is the relevance of shorthand to secretaries' communication skill in automated offices?
5. What is the relevance of shorthand skills to report writing ability of secretaries in automated offices?
6. What is the relevance of shorthand skills to confidentiality of secretaries in automated offices?
7. What is the difference between the opinion of managers and secretaries on relevance of shorthand skill to secretarial duties in automated offices?

1.5 Research Hypotheses

The following hypotheses were formulated in line with the objectives of the study:

1. Shorthand skills have no significant relevance to secretaries' accuracy in taking minutes in automated offices.
2. Shorthand skills have no significant relevance to secretaries' speed in taking minutes in automated offices.

3. Shorthand skills have no significant relevance to secretaries' ability to compose correspondence in automated offices.
4. Shorthand skills have no significant relevance to secretaries' communication skill in automated offices.
5. Shorthand skills have no significant relevance to report writing ability of secretaries in automated offices.
6. Shorthand skills have no significant relevance to confidentiality of secretaries in automated offices.
7. There is no significant difference between the opinions of managers and secretaries on the relevance of shorthand skills to secretarial duties in automated offices.

1.6 Significance of the study

The findings of this study will go a long way to correct the misconception and or confirm the belief of many organizations and institutions that shorthand is an irrelevant skill to the practicing secretaries in automated office in North east geo-political zone. Through the findings of this research, relevant information regarding the benefits or otherwise of shorthand skills would be revealed.

The result of this study will be of immense benefit to curriculum planners and implementers as it will help them in their job of curriculum review and implementation as it concerns shorthand in the schools system. The findings of this study will be of benefit to school administrators, guidance/counselors and teachers; it will help them to adopt the teaching of shorthand and computer literacy concurrently, and will aid the school guidance/counselors to counsel students in their career choice. Finally, the result of this

work will be of benefit to future researchers who may wish to carryout similar researches in the related areas.

Finally, the findings of this study will stimulate further research and expand the frontiers of knowledge.

1.7 Basic Assumptions for the study

For the purpose of this study, the following assumptions were made:

1. Secretaries in automated offices, in the North-east geo-political zone of Nigeria have background knowledge/training in shorthand.
2. Shorthand skill is used by secretaries in automated offices.

1.8 Delimitation of the study

This study was delimited to secretaries and managers in automated offices in public organizations in the North east geo-political zone. Public organizations were selected because shorthand skill and proficiency are criteria usually used for selection and promotion of Secretaries as well as having the same mode of office operations based on these conditions. The public organizations involved in the study are universities, federal medical centres and state establishments in the North east geo-political zone. The study was also delimited to the following states: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe States which are chosen because they are within the same geo-political zone with same characteristics that represent a reasonable number of secretaries and managers in the North-East geo-political zone of Nigeria. Accessibility to information served as a major consideration of the delimitation to this study.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This chapter dealt with review of literature expressed by persons and groups as related to the study. The review was presented under the following sub-headings:

2.1 Theoretical Framework

2.2 Concept of Shorthand, Shorthand systems and office automation

2.3 Relevance of Shorthand to Secretaries in automated offices

2.4 Status of shorthand and the work of Secretaries in Automated Offices.

2.5 Automated Equipment and Secretaries' Productivity.

2.6 Secretaries and their Roles in Automated Offices

2.7 Shorthand Skill Levels for Secretaries

2.8 Characteristics of the Secretary

2.8.1 Duties of Secretaries in offices

2.9 Challenges of Secretaries in Automated Offices

2.10 Empirical Studies

2.11 Summary of Reviewed Literature

2.1 Theoretical Framework

This research work was based on the main theory of relevance propounded by Wilson and Sperber (2002) on inferential approach to pragmatics because the notion of positive effect is needed to distinguish between information that merely seems to the individual to be relevant and information that actually is relevant as some of our beliefs may be false and we would prefer not to waste our effort drawing false conclusions. An

efficient cognitive system is one which tends to pick out genuinely, relevant inputs, yielding genuinely true conclusions.

According to the theory, relevance is based on a cognitive principle (that human cognition is geared to the maximization of relevance), and a communicative principle (that utterances create expectations of optimal relevance). In relevance theoretical terms according to Wilson and Sperber, (2002), an input is relevant to an individual when it's processing in a context of available assumptions yield a cognitive effect.

A positive cognitive effect is a worthwhile difference to the individual's representation of the world – a true conclusion, for example, false conclusion is not worth having. They are cognitive effects, but not positive ones. And the notion of positive cognitive effect is needed to distinguish between information that merely seems to the individual to be relevant and information that actually is relevant. We are all aware that some of our beliefs may be false (even if we cannot tell which they are), and would prefer not to waste our effort drawing false conclusions. An efficient cognitive system is one which tends to pick out genuinely relevant inputs, yielding genuinely true conclusions as explained below:

Relevance theory may be seen as an attempt to work out in detail one of Grice's central claims, that an essential feature of most human communication, both verbal and non-verbal is the expression and recognition of intentions (Grice, 1989). In developing this claim, Grice laid the foundation for an inferential model of communication, an alternative to the classical code model. According to the code model, a communicator encodes her intended message into a signal, which is decoded by the audience using an identical copy of the code. According to the inferential model, a communicator provides evidence of her intention to convey a certain meaning which is inferred by the avoidance

on the basis of the evidence provided. An utterance is, of course, a linguistically coded piece of evidence, so that verbal comprehension involves an element of decoding however, the linguistic meaning recovered by decoding is just one of the inputs to a non-demonstrative inference process which yields an interpretation of the speaker's meaning (Ward, 2002).

Accordingly, the goal of inferential pragmatics is to explain how the hearer infers the speaker's meaning on the basis of the evidence provided. The relevance – theoretic account is based on another of Grice's central claims that utterance automatically creates expectations which guide the hearer towards the speaker's meaning. Grice described these expectations in terms of a co-operative principle and maxims of quality (truthfulness), quantity (informativeness), relation (relevance) and manner (clarity) which speakers are expected to observe the interpretation. A rational hearer should choose that one that best satisfies those expectations of relevance, but question several other aspects of his account, including the need for a co-operative principle and maxims, the focus on pragmatic processes which contribute to implicatures rather than to explicit, truth-conditional content, the role of deliberate maxim violation in utterance interpretation, and the treatment of figurative utterances as deviations from a maxim or convention of truthfulness.

The central claim of relevance theory is that the expectations of relevance raised by an utterance are precise enough, and predictable enough, to guide the hearer towards the speaker's meaning. The aim is to explain in cognitively realistic terms what these expectations of relevance amount to, and how they might contribute to an empirically plausible account of comprehension (Sperber and Wilson, 2002).

What sort of things may be relevant? Intuitively, relevance is a potential property not only of utterances and other observable phenomena but of thoughts, memories and conclusions of inferences. In relevance theoretic terms, any external stimulus or internal representation which provides an input to cognitive processes may be relevant to an individual at some time. According to relevance theory, utterances raise expectations of relevance not because speakers are expected to obey a operative principle and maxims or some other specifically communicative convention, but because the search for relevance is a basic feature of human cognition, which communicators may explain (Wharton, 2001).

When is an input relevant? Intuitively, an input (a sight, a sound, an utterance, a memory) is relevant to an individual when it connects with background information he has available to yield conclusions that matter to him; say, by answering a question he had in mind, improving his knowledge on a certain topic, setting a doubt, confirming a suspicion, or correcting a mistaken impression. In relevance theoretic term, an input is relevant to an individual when it's processing in a context of available assumptions yields a positive cognitive effect. A positive cognitive effect is a worthwhile difference to the individual's representation of the world – a true conclusion, for example false conclusion is not worth having. They are cognitive effects, but not positive ones (Sperber and Wilson, 1995).

Other types of cognitive effect include the strengthening, revision or abandonment of available assumptions. Relevance theory in other words, is that, an input is relevant to an individual when, and only when, it's processing yields such positive cognitive effects as needed to distinguish between information that merely seems to the individual to be relevant and information that actually is relevant. We are all aware that some of our

beliefs may be false (even if we cannot tell which they are), and would prefer not to waste our effort drawing false conclusions. An efficient cognitive system is one which tends to pick out genuinely relevant inputs, yielding genuinely true conclusion (Sperber and Wilson, 2000).

Intuitively, relevance is not just an all-or-none matter but a matter of degree. There is no shortage of potential inputs which might have at least some relevance for us, but we cannot attend to them all. Relevance theory claims that what makes an input worth picking out form mass of competing stimuli is not just that it is relevant but that it is more relevant than any alternative input available to us at that time. Intuitively, other things being equal, the more worthwhile conclusions achieved by processing an input the more relevant it will be. In relevance theoretic terms, other things being equal the greater the positive cognitive effects achieved by processing an input, the greater its relevance will be. What make an input worth picking out from the mass of competing stimuli are not just the cognitive effects it achieves. In different circumstances, the same stimulus may be more or less salient, the same contextual assumptions more or less accessible, and the same cognitive effect easier or harder to drive.

2.2 Concept of Shorthand, Shorthand Systems and Office Automation

Through the centuries shorthand has been written in systems based on orthography (normal spelling), on phonetics (the sounds of words), and on arbitrary symbols, such as a small circle within a larger circle to represent the phrase, “around the world.” Most historians date the beginning of Shorthand with the Greek historian Xenophon, who used an ancient Greek system to write the memoirs of Socrates. It was in the Roman Empire, however, that shorthand first became generally used (Korie, 2001).

Shorthand is any system of rapid handwriting which can be used to transcribe the spoken words. Shorthand systems use a variety of techniques including simplifying existing letters or characters and using special symbols to represent phonemes, words and phrases Aromolaran (2011). Shorthand is a core and an anchored for secretarial educators and administrators. It is a system of rapid handwriting employing symbols to represent words, phrases, and letters. The training of secretaries in Nigeria has been associated with shorthand for many years now. This is because shorthand is useful in taking instructions from a boss down quickly and accurately and has been known to improve the concentration and ability to increase the secretaries' memory, which enhances the listening ability as opinioned by chip (2013).

The invention of writing, scribes have used various techniques to enable them to write easily. Ancient Egyptians devised two scripts, Hieratic and Demotic, as alternatives to their complex Hieroglyphic script, which was used mainly for monumental inscriptions. Peter (2010) noted that, during the 4th century BC, the Greeks devised a number of symbol systems which reduced letters to a single stroke and which could also be used to represent common words, suffixes and prefixes. Such systems are generally referred to as stenography (narrow writing), brachygraphy(short writing) or tachygraphy (swift writing). Their purpose was to make writing more compact and/or faster.

Omiglot (2000) further started that, the first modern shorthand system was presented in 1588 by the English cleric Timothy Bright. More than a dozen systems followed, such as: the 1602 system of the stenographer John Willis, acknowledged as the father of shorthand; the 1626 system of the writer and translator Thomas Shelton, used by the diarist Samuel Pepys'; the 1672 system of the writing master William Mason; and the 1786 system of the stenographer Samuel Taylor, which was adapted to many European

languages. Most of the 17th and 18th century shorthand followed the principles of Willis's system, they have geo-political zonemetric characters, with straight lines, segments of circles, and so forth, and were basically alphabetic and orthographic (using normal spellings).

Olowu (2002) further asserted that, British educator Sir Isaac Pitman first published his system of shorthand in 1837. Pitman designed light and heavy lines and curves to represent consonants, dots and dashes to indicate vowel sounds, and small semicircles and v-shaped symbols to designate dipthongs. The system was introduced to the United States in the 1850s and is still widely used in many countries, including Nigeria.

Shorthand is the act of representing spoken words with written signs as briefly and as distinctively as possible (Pitman, 1978). The Oxford Advanced Learner's Dictionary (2010) defined shorthand as a method of writing what is being said as quickly as it is being said, using special symbols and abbreviations. It is a brief rapid system of writing used in transcribing spoken words. Ismaila (2008) described shorthand as a skilled subject which aids the ability to concentrate on taking account of events using special outlines. Aromolaran(2005) also described it, as any system of writing that is rapid and concise enough to enable the writer to keep pace with normal speech, usually brief strokes, abbreviation, and special characters are used to represent letters, word and phrases.

Azuka (2000) explained it as the act of representing spoken words with written signs as briefly and as distinctively as possible. In summary shorthand is a skilled subject which helps the ability to concentrate, on taking account of events using special outline. It is a method of writing what is being said as quickly as possible using symbols, strokes, abbreviations, characters representing letters, word and phrases. According to Ade

(2001), there are many different Shorthand systems currently in use. The most popular ones include:

1. Pitman Shorthand

Pitman Shorthand was devised by Sir Isaac Pitman (1813-1897) and was first published in 1837. Over the years it has been gradually improved and has been also adapted for 15 different languages. The system was widely used in the UK and USA by secretaries, reporters and writers, but lost popularity with the invention of pocket tape recorders (Wertsch, 1991). The notable features include:

a. Pitman is phonetic: it records the sounds of speech rather than the spelling. For example, the sound [f] in form, elephant and rough is written in the same way for each word.

b. Vowel sounds are optional and are written with small dots, dashes or other shapes next to the main strokes. This helps increase writing speed because most words can be identified from their consonants only.

c. The thickness, length and position of the strokes are all significant.

d. There are many special abbreviations and other tricks to increase writing speed.

2. Gregg Shorthand

Gregg Shorthand was invented by John Robert Gregg (1867-1948) and was first published in 1888. Since then many different versions have appeared, including some for languages other than English. Gregg is still used, particularly in the USA. In 1888 the stenographer John Gregg published a markedly different shorthand system. It is phonetic and cursive, with slanting, elliptical characters designed for easy execution. Character forms are based on the language paired voiced and unvoiced consonants have long and short version of sign, frequently combined consonants such as f and nd are systematically

blended to eliminate abuse angles. Vowels and consonants are joined in phonetic sequence so that positioning, shading or lifting the pen to insert vowels is necessary. Gregg system became widely taught in high schools. About 90 percent of present shorthand instruction in U.S. is in the Gregg system, and it has made some inroads in Canada and the United Kingdom. It has been adapted to Hebrew, Tagalog, Thai, Chinese and other languages (Microsoft Encarta, 2009). Gregg shorthand's notable features include the following:

a. Gregg is phonetic: like Pitman it records the sounds of speech rather than the spelling. For example, the sound f] in form, elephant and rough is written in the same way for each word.

b. Vowels are written as hooks and circles on the consonant.

3. **Speedwriting in Shorthand**

Of the various shorthand systems using long hand letters, Ismaila (2007) reported that, the best known is speed writing shorthand, formulated in 1924 by the American educator Emma Dearand and revised in 1950 by the American educator who learn sheff in this system, sounds and words are represented by long hand letters (sometimes modified) and punctuation marks; capital C, for example, means the sound ch No unfamiliar symbols must be learned, and the system can be mastered at office speeds of about 120 words per minute in about six weeks. It is now taught in America, the United Kingdom, Australia and elsewhere. In speed writing shorthand accuracy in transcription is gained because the stenographer reads back his/her own handwriting (National Association of Secretaries, 2000).

4. **Machine Shorthand**

Beginning in the late 19th century various machines were invented to write at the space of speech. Machine shorthand was developed by Moles Bartholomew and Steve Ireland in 1979. The most successful were the stenograph and the stenotype. On this machine all keys can be depressed at once; a syllable is recorded in a single multi-finger stroke. Machine shorthand can record extremely rapid speech (more than 200 words per minute), and it is widely used in the US, in court sessions and government hearings. It is extremely legible, can be transcribed by someone other than the writer, and is usually assigned only to special trained reporters (Microsoft, 2009).

Aliyu (2001) said automation is an innovation and a consequence of the industrial revolution. It is a collection of methods for controlling machinery and production processes by mechanical means, usually with electronic equipment. Spencer (2000) defined automation as the process of replacing human work with work done by machines or system designed to perform a specific combination of action automatically or repeatedly.

Office Automation, according to Merony (2001) refers to the practical use of electronic systems to provide general clerical office support. Electronic systems used in an office environment comprise of hardware and software components. When used together, these components are capable of storing, retrieving, manipulating, transferring, computing, and printing information. Hardware components include, electronic typewriters, word processors personal computers, work stations (keyboarding and visual displays) linked to a computer, and associated equipment such printers, optical scanners, and modems. Typical types of software used in office automation work include word processing, electronic mail, calendar, project management, database management, desk-

top publishing, graphics, and spreadsheet. Office automation according to him has both a narrow and a broad meaning. Narrowly, office automation is the use of computer system to execute variety operations such as word processing, accounting, electronic mails etc. Broadly, office Automation is a general term that includes wide range of applications of computer, communication and information technology in the office environment.

Office automation products are used in the office to make all official work happen at a faster speed without any mess. Office automation products includes computer, calculator, printer, copier machine, fax machine (facsimile), laminating machine, note binding machine, electronic typewriter, voice messaging, telemarketing, teleconferencing, e-commerce, electronic funds transfer, electronic mail, telecommuting speech recognition machine, dictating machine, tape recorder, etc. Computers help in storing data in various files and folders which otherwise had chances of getting misplaced. The office automation products that effectively help in decreasing manual work and also save time through their automated functional features according to Meron (2001), identified the following:-

Facsimile

This is a device that codes and encodes document so they can be transmitted over the telephone lines. The term fax refers to documents that are sent via a fax machine..Fax machines scan print texts and graphics and convert the image into digital codes, 1 represent the dark areas and 1represent the white area. The code is transmitted through the telephone network to similar devices, where the documents are reproduced close to their original form. The fax machine that is receiving the incoming data, converts the digitized data back in to image, and prints or stores a copy of the original image.

Voice mail

This is much like an answering machine which allows someone to leave a voice message for one or more people. Unlike answering machine, a computer in a voice mail system converts analog voice massage into digital form. Once the message is in digital form, it is then stored in a voice mailbox.

Voice messaging

Voice message refers to a message that can be sent to a destination using voice media. Voice itself can be 'package' and sent through the IP backbone so that it reaches it's marked 'address'. In a sense, the process of sending 'voice packets' is a semi passive way of communication and given the speed at which it can be delivered to make the communication sound seamless.

Telemarketing

Telemarketing is a method of direct marketing in which a salesperson solicits to prospective customers to buy products or services, either over the phone or through a subsequent face to face or Web conferencing appointment scheduled during the call. Telemarketing can also include recorded sales pitches programmed to be played over the phone via automatic dialing.

Teleconference

A teleconference is a telephone or a video meeting between participants in two or more locations. Teleconferences are similar to telephone calls, but they expand discussion to more than two people. Using teleconferencing in a planning process, members of a group can participate in a conference with agency staff. This is a work arrangement in which employees work away from a company's standard workplace and often

communicate with the office through the computer. Types of technologies that are being used in telecommunication process include: computer, cellular, mobile device and printer.

Electronic Funds Transfer

Electronic Funds transfer refers to the computer based systems used to perform financial transactions electronically. It allows users to connect to a network to transfer money from one bank account to another via transmission media. One of the most widely –used EFT programs is Direct Deposit, in which payroll is deposited straight in to an employee's bank account. Although EFT refers to any transfer of funds initiated through an electronic terminal, including credit card, ATM, and point-of-sale (POS) transactions, It is used for both credit transfers, such as payroll payments, and for debit transfers, such as mortgages.

E- Commerce

E-commerce (electronic commerce) is the buying and selling of goods and services on the internet, especially the World Wide Web-business used inter changeably with e-commerce. When using e-commerce, customers can pay using different methods example: credit card, debit card, pay pal etc.

Electronic mail

Electronic mails, often abbreviated as e-mail, are a method of exchanging digital messages, designed primarily for human use. E-mail was designed so that scientist and researchers working on Government–sponsored projects to communicate with colleagues at other locations. You can use e-mail programs to create, sends, receive, forward, store, print and delete messages.

Speech Recognition

Speech recognition is a computer aided device used in some parts of the world where word processor is sued to record speeches which can be played back, Boritz (2000) associated that speech recognition enables one directly into word processing programme. The speaker can see the dictation appearing on the computer screen as he speaks. He can make necessary correction.

Dictating machine

Hensan and Means (2009) explained that, a dictating machine takes down speeches through a microphone that is connected to a recorder which are reproduced like a phonograph.

2.3 Relevance of Shorthand in an Automated Office

The relevance of shorthand in an automated office is one that has troubled the minds of many in the present day Nigeria, especially secretaries, employers, professionals and non-professionals. Azuka (2009) stated that, there varying opinions about the future of the shorthand. Barnes (2004) was of the opinion that with the recent advances in the area of office technology, the use of shorthand will be highly de-emphasized while Jubril (2011) opined that shorthand should be removed from the curriculum of secretarial education. This opinion also agrees with the suggestion of Adeliluya (2012) that in the next round of curriculum review, shorthand should be expunged to give way to modern automated equipment. Also, Udoh (2013) pointed out that the 21st century job skills require the replacement of shorthand with computer education. This situation led many scholars to recommend that modern office technology and information systems should be integrated into the curriculum of secretarial education as shorthand has lost its relevance.

Anderson (2011) believed that shorthand skills will continue to be needed and that it is noteworthy that the purpose of training/development is to enable an individual acquire the skills that will be relevant for his/her job performance and that every curriculum is expected to make beneficiaries apply the skills acquired in solving problems in the work place. Macnicol (2000) said that a sound skill of shorthand is essential to note taking-shorthand has the ability of molding life and that it instills discipline by being careful when writing. It builds confidence into writers. Ogunyinka (2001) said that shorthand has come to stay. Though seen as a vocational and not educational course, yet it has been discovered that shorthand has educational values as it works through the medium of language and for many students it is often a key to understanding English Language. It also helps in the development of reading writing, language and spoken abilities. It is also useful to note taking in other subjects faster than longhand that is, the conventional handwriting. It can be used to record speeches at meetings or as a means of keeping secret writing.

Whitecomb (2000) deserved that, shorthand has been a saving grace for many graduates roaming the streets without jobs, and have had to go for evening short courses in shorthand and typing to be employed as secretaries. Many women today who would have had nothing to do are now breadwinners because of the acquired skills of shorthand and typewriting. It is believed that shorthand skills will continue to be needed. It is noted that even with the support of word processors, it is questionable whether dictating equipment can make Shorthand achieve job requirement in the foreseeable future. It is also pertinent to state that there is no other method of note taking than shorthand. Shorthand and typewriting for all will mark the beginning of self-sufficient improved productivity in office.

The emphasis given to shorthand is one of the glaring constraints that have existed in the process of the education of the secretary over the years. Tombe, (2007) noted, "the effect of the provision of excess number of hours of lecture for one single course a week is that it would not only be difficult to fix such an alarming number of hours of lecture in a general time-table but it would also limit the possibility of the inclusion of other essential general business education courses in the program if reasonable credit-load mix were to be attained".

Sunday (2005) said that it is worthy to note that shorthand is indispensable to the secretarial profession and much emphasis is given to it. For the secretarial student, shorthand helps in developing her reading and writing abilities, especially in the area of written and oral English. Shorthand is also used in recording speeches at meetings. And for the graduate secretary, proficiency in shorthand is very essential especially in situations where the job demands secrecy in business or where a quick recording of information is necessary. Unfortunately, from records available, the use of shorthand in modern offices is declining at an alarming rate and students' performance in shorthand has gone down too.

According to Ohakwe, (2001) on graduation the secretary is handicapped in the modern office because the shorthand skill acquired is hardly used, while she would be introduced to sophisticated office machines, which she was not trained to use. This contradicts the purpose of training, which according to Orobso, (2001) is the preparation for a job performance and the application of skills to the present job. Also Azuka (2009) opinioned that, a course is considered suitable if it meets the needs of an individual and relevant if it provides the student with the skills, which he perceives to be realistic

according to goals and aspiration; and adequate if the skills acquired can be used to enter an occupation.

In today's modern offices, large numbers of data are created, processed, stored, retrieved and disseminated daily because of technological innovations. On this note, Nwosu (2002) opined that as new electronic equipment are introduced into the office; new methods of working are often needed. New skills and concepts have to be learned as new job opportunities arise. He further added that old job opportunities disappear, and the need for old skills often disappears with them. Obijole (2006) advised that teachers of secretarial studies and departments must adapt their methods; curricula, equipment and facilities to meet the growing demands for competent information/word processing personnel. Agbionu (2014) stated that, despite the automated machines being in offices, shorthand skills enhance secretary's ability to write comprehensive reports, describing in detailed how the information is obtained, difficulties encountered. He further emphasized that only secretaries with shorthand skills can follow the steps involved in report writing one at a time.

According to Prince (2004), before the advent of technology and even in the recent past, advertisement for the post of secretary was usually done with shorthand speeds as criteria and word-processing as an added advantage. But with the arrival of automation, the reverse is now the case, and in most cases, no mention is made of shorthand. It is difficult now to secure the post of a secretary in a business organization without excellent word processing and computer skills. It therefore becomes pertinent to instruct/train the students on the skills and attitude required to operate the word processor and computer efficiently, if they are to remain competitive in the labour market upon graduation. Adamu (2010) noted, that shorthand skills developed secretarial students'

consciousness for speed and accuracy. As the student continues to strive to write and transcribe shorthand with speed and with minimum errors, it creates in him/her the consciousness for speed and accuracy. Any secretary that possesses these skills handles his/her functions efficiently and effectively.

Ambrose (2011) supported the idea that shorthand skills is still relevant in the composition of correspondence and effective in communication skills despite the introduction of sophisticated machines in offices which was also affirmed by Sunday (2005) who opined that, shorthand skills are indispensable to the secretarial profession, as it helps secretaries in developing their written and oral English communication. Ogunyinka (2007) also affirmed that shorthand has come to stay, though seen as a vocational and not educational course yet it has been discovered that it has educational values. This contradicts Barnes (2004) who was of the opinion that, with recent advances in the area of office technology, the use of shorthand skill will be de-emphasized. Adebayo (2006) opined that good communication skills makes secretaries more productive and the ability to communicate well allows secretaries to better compose correspondence to capture what is expected of them by their management.

Prince (2004) said listening skills acquired through teaching and learning of shorthand helps the secretary to cultivate the habit of good report writing and composing of correspondence including minutes of meetings in automated offices. This, to a large extent helps the manager to concentrate on other issues. Agbionu (2014) affirmed that, shorthand skills enhance secretaries ability to write detailed reports, by describing how the information in reports are obtained, difficulties encountered and acknowledgement of help and assistance. He further emphasized that only secretaries with shorthand skills can follow the steps involved in report writing one at a time.

Roe, (2014) stated that, shorthand skills tends to reduce the burden of workload in the office and promote confidentiality in service delivery. Inline with this, Teeline (2010) affirmed that, shorthand is a vital tool for secretaries in keeping secret and confidential matters of the organization. He stressed that despite the digital age, shorthand skills are still regarded as an absolutely essential skill that make secretaries more productive in automated offices. Adebayo (2011) affirmed that, shorthand skill is still very relevant in maintaining documents than automated machines that can be operated by anyone who is literate in manipulating the office machines. Barnes (2004) however, observed that improvement in the automated equipment may render shorthand less useful in automated offices especially in the area of confidential record keeping.

Fasami (2014) said that, secretaries needs shorthand skill to carry out the day to day responsibilities and routine in offices, in areas of receiving instructions and getting update information and good listening skills by pointing out the ways, through which both secretaries and executive can realize a higher level of success in achieving the organizational goals. To confirm this, Aromolaran (2014) said shorthand skill, is much the "cherry on the cake" in the skill set of the forward – looking contemporary personal assistant and a skill that will help a secretary stand out from the crowd when looking for that career progression. He stressed that recruitment agencies go weak at the knees when they see shorthand on a curriculum vitae because it is very rare to get secretaries with shorthand skills.

Chip (2014) supported the opinion of Aromolaran, that secretaries with shorthand skills are regarded as the "life – blood" of the organization, because they are the link between the manager and the office workers. He also said that, any disagreement between the secretary and the management will affect the whole organization. He further stressed

that, shorthand skills help secretaries to establish good working rapport with their managers through dictation of issues and problems with the boss and that shorthand skills of secretaries also contribute to the wider aspect of work and relieving a lot of pressure on others. Prince (2014) said, it is difficult now to secure a post of a secretary in business organization without excellent word processing and computer skills.

Chip (2014) affirmed that nobody can qualify as a professional secretary without adequate skills in shorthand. Inline with the above, Fasami (2014) opined that, secretaries now have many technologically advanced office gadgets to ease their jobs and enhance proficiency such as computer software programmes, which helps the secretary to write and edit memos, letters and reports, data management programmes or data bases, which help the secretary to use long lists of data and spreadsheet programmes which handle tables and numbers instead of driving and drawing with shorthand skills.

Prince (2014) further stated that shorthand skills will continue to be needed. He also stressed that, it is noteworthy that the purpose of training development is to enable an individual acquire the skills that will be relevant for his/her job performance and that every curriculum is expected to make beneficiaries apply the skills acquired in solving problems in the work place. Stressing that shorthand skill has been a saving grace for many graduates roaming the streets without jobs. In view of this, curriculum designers should re-design the curriculum for secretarial education; simplify the teaching of shorthand by breaking down the course into modules that would attract the interest of the business education students.

2.4 Position of Shorthand and the Work of Secretaries in Automated Offices

The ambitious and dedicated secretary needs to get required shorthand skills beside the operation of automated machines in order to adequately carryout the numerous office routine duties that are repetitive, boring and cumbersome. Chukwumezie, (2007) reported that, with the constant changes in technologies in the workplace, the traditional office is fast giving way to modern technological operations in both the nature of the work and the position of the secretary. Mechanical technology inherent in the traditional office has now been replaced by digital technology. The clamor for revision was necessitated by the fact that the skills, attitudes and skills previously acquired in the course of study were inadequate to arm the secretaries with the competencies needed to adjust to the rapidly changing needs of the office. What should be the fate of the skills of traditional shorthand and typewriting in consideration of the need to reform the content of the secretarial studies curriculum?

Ndinechi (2000) referred to shorthand as one of the trees in the forest of titles under business education rubric which has grown steadily over the years, and is dying a slow and aimless death caused by pockets of irrelevances. To Adebusi (2001) business educators, executives and students erroneously believe that shorthand skill was only a tool for taking dictations. As a result of this erroneous belief, they have not been encouraged to put shorthand skill to other important uses like recording messages, recording minutes of meetings; recording speeches as a means of keeping secrets. Contributing to the issue of whether the introduction of these technologies can displace shorthand and typewriting skills in the secretarial studies curriculum. Sesan (2000) notes that, nobody can qualify as a professional secretary without adequate skills of shorthand. Earlier Dele (2002) reasoned that, if Shorthand skills was not found useful in the

secretarial studies curriculum the developed countries would not have continued to invent systems of shorthand from time to time.

Davis and Eddy (2002) concluded after a survey that a marketable skill in shorthand was worth a large sum of money a month as salary for secretary, the reason being that shorthand writers were perceived as possessing an abundance of skills that involve high language skill and found no any other than secretary. Sesan (2000) noted that, nobody can qualify as a professional secretary without adequate skills of shorthand. In complete agreement with this view Adebusi (2001) stated that shorthand and typewriting skills in higher education curriculum were beneficial to students and society. She further said that shorthand had education values, which works through the medium of language and spoken abilities, was useful for note taking in other subjects, and was used to record speeches as a means of keeping scores. Shorthand skill according to her was a saving grace to many graduates of other discipline who otherwise would have been roaming about the streets in search of jobs but who had to undergo evening shorthand and typing studies to be employed as secretaries.

Sesan (2000) also investigated the need for shorthand in the secretarial studies curriculum and discovered that shorthand skill was a major requirement to enter into secretarial jobs. The skill of Shorthand was needed for advancement and will continue to be in high demand in the 21st century, Adebusi (2001) stated that shorthand was very relevant and had the potentials of affecting production of work positively. Seventy percent of her respondents agreed to the inclusion of shorthand in their curriculum. This result showed that shorthand skill was still very much relevant. On the other hand, Ohakwe (2001) who carried out a study on manual office skills in an information technological era found that shorthand competencies were no longer popular. The results

of the analyzed data also showed that dictating orally to dictating machines or over the telephone were no longer important skills required of a secretary. He recommended that shorthand skills be de-emphasized given the myriad of tools of information technology for managing information in our business.

In line with this recommendation Azuka (2009) advocated for less emphasis in shorthand in order to make way for the new technological machines. Azuka also requested for the removal of what he referred to as jaw- breaking words, which he said was partly responsible for high failure rate in shorthand examinations. This to him would settle the issue of syllabic intensity that goes along with shorthand speeds. According to him, it is not yet clear whether the business world would witness the total extinction of shorthand as a result of technological development because traditional secretarial skills like filing, shorthand computations are usually considered important but not required.

Ohakwe (2000) considered typing skills as fundamental in any keyboarding on computer, electric machine, word processor teleprinter or telex. To him, office correspondence such as business letters, memos, minutes of meeting, stencil cutting, financial matters and statistical drafts are regular features of typing, task of any office. With or without technology effective typing is very much required of a secretary. He advised that typing and shorthand co-exist with electronic gadgets. In support Azuka (2000) noted that keyboarding should be emphasized along with the traditional typing in the proposed curriculum as he identified closer relationship with data processing.

With the current influx of technologies in the office most writers feel that the present contact hours and credit units attached to the skill subjects in the curriculum were no longer realistic. They advocate for a reduction to make allowance for the introduction of the new technologies in the proposed curriculum. While some writers recommend a

reduction of typing from 4 to 2 credit units (Gonzalez, 1981,Michael 1987, Akinyemi, 2001), others have advocated for a reduction without stating at what levels (Azuka 1999, Ohakwe, 2000, Otobo and Makeri-Yahaya, 2008).In consideration of the training content of the secretary in the face of tremendous technological innovations in the office whether for total revamping or rejuvenation, Nwosu (2000) concluded that, any piece of equipment is useless without people to operate it. To him, no matter how drastic and how awesome the change in technology, human-beings must be able to cling to fundamentals that do not change. These fundamentals centre on human beings and the skills which they have which will never be replaced by word processor or other technological development. He therefore, advocated for increased capabilities for adaptation to changing trends in the aspects of building higher skills from solid theoretical base.

2.5 Automated Equipment and the Secretary's Productivity

For decades now, fast changes have been taking place in all facets of human life including the office environment. This is as a result of technological advancement. Every office in today's business world, be it government, industry or other human endeavors, require facts and accurate information for quick decision-making. As a result of changes in technology, the role of secretaries in business has changed tremendously from that of typewriting and shorthand dictation, answering of telephone calls and processing of mails. Today's secretaries are exposed to office technology including the internet that make work much easier and skills more accessible (Edwin, 2008). It is now easier to send messages by telex, electronic mails (e-mails), fax and telephones. Other office gadgets available to the secretary are photo-copy machines, duplicating machines, dictating

machines, printers, among others. This is the era of computers and information technology which has become an enabler of greater convenience.

Three of the most popular types of computer software programs reword which helps the user to write and edit memos, letters and reports, data management programs or databases, which help the user-secretary to use long lists of data and spreadsheet programs, which handle tables and numbers (Dulek and Fielden, 1999). Secretaries have many technologically advanced office gadgets to ease their jobs and enhance proficiency and productivity leading to improved access to goods and services globally (Wofersohn, 2001; Anyakoha, 2002;Akpomi, 2003).There are wide range of office machines and equipment that now enable secretaries to improve their performances. Such new machines take the form of electronic typewriters that have replaced the manual ones. Word processors with multi-purpose facilities, computers and other sophisticated office machines and equipment are now provided by employers. Some of the physical equipment used by secretaries includes computer communication equipment and electronic pocket organizers. (Lucas, 2003).

New technological equipment that has altered the procedures and technique for office functions include the computers, electronic mail/ commerce, voice mail, and the Internet. Automation is an innovation and a sequence of the industrial revolution. It is a collection of methods for controlling machinery and production processes by mechanical method, usually with electronic equipment. Spencer (2001) defined automation as the process of replacing human work with work done by or system designed to perform a specific combination of action automatically or repeatedly. An automated office, undoubtedly, offers new roles and responsibilities for the secretary. Such new roles

presuppose that additional training and qualifications are required from the secretaries. The relevance of automation in business was identified by Aromolaran (2003) as follows:

i. Creating a distinct career path for the secretary.

ii. Automation creates a prominent place for the secretary on the organization chart.

iii. It creates routine and assigned roles for the secretary.

iv. With automation the secretary now spends less time in correcting, revising, proof-reading and reproducing documents.

Joshua (2011) asserted that, based on the reorganization of the office and the introduction of the automated office equipment, the manager's work is produced faster with professional touch. The manager is also able to concentrate on a more creative task with the presence of an experienced secretary assisting him. Komolafe (2010) opined that, automation remains a prominent factor that has contributed immensely and positively to the complete information processing revolution. In recent times, the secretary's routine has reached an advanced stage due to the invention of automated office equipment. Most of the traditional and routine tasks are performed by automated office equipment such as computers, telephone, etc. In a nutshell, automation has improved general and secretarial education, thus, enabling secretaries to become better prepared for automated office tasks.

2.6 Secretaries and their Roles in Automated Offices

A secretary is an office-staff who combines the mastery of secretarial skills of typewriting and shorthand with office routine functions. Ogunyinka (2010) asserted that, a Secretary is the person who performs the myriad of daily chores that nibble away at an executive's time much like some kind of corporate piranha. Secretaries work for the executive secretary and cooperate with the administrative assistant. They must be selected

as appropriate representatives of the executive and the enterprise. They must be personable and have impeccable telephone manners. They must also thoroughly understand their role in the enterprise in general and with the executive for whom they work in particular.

Mayer (2008) defined a secretary as an executive assistant, who possesses a mastery of office skills, demonstrates the ability to assume responsibility with or without supervision, exercises initiatives and judgment and makes decision within the scope of assigned authority. It means that a qualified secretary should have a wide skills of business acumen, versatile skills in accounting, personnel, office practice, communication and inside skills of the operation of all departments within the organization where he works, unlike a half-baked secretary who possesses only skills of shorthand, typewriting and basic office practices. The advent of the word processor has helped to make the secretarial career path cleaner. For a secretary to be employable in an automated office, Joshua (2010) opined that such a secretary must be well versed in the following specific automated office equipment training:

i. The concept and theory of specific automated office equipment.

ii. Skills of the categories of equipment and their intended uses and differences.

iii. The skill to use resource or reference materials properly.

iv. Hands-on equipment training, etc.

It is believed that for a new equipment to be installed in any organization, it has to win the good will of the staff, since they are the ones who would use it. By getting the good will of the user staff, the introduction and procedures will be accepted and effective. Furthermore, since most executives spend much more time with their executive secretary than their spouses, an invisible and conscious barrier must exist eternally between them.

The relationship must always remain an work place relationship sharing a common goal, success of the enterprise and the personal success of the executive. The relationships between and among an executive and his executive secretary/administrative assistant/secretary are similar to the relationships of a military commander with their executive officers and top NCOs. Joshua (2010) further identified the following categories of secretaries:-

a. **Personal/Private Secretary**

This class of secretaries works for only one official, unlike other types who may serve many bosses. At the same time, the private secretary attends to the boss's, personal/individual matters.

b. **Executive Secretary**

These perform fewer functions and have junior secretaries who possess the mastery of shorthand and typewriting, working under her. She performs more of secondary functions, gives instructions, is able to take decisions and even represent the boss on business occasions.

c. **Administrative Secretary**

This class of secretary is referred to a management assistant who specializes in non-typing task they deal with administrative Secretaries. A Higher National Diploma in Secretarial Administration from any recognized polytechnic or college of technology also qualifies one for this position.

d. **Company Secretary**

The company secretary must have a good knowledge of law and if possible have a degree or diploma in law. The basic skills of typing and shorthand are not pre-requisites for the assumption of this position.

e. **Bilingual Secretary**

This type of secretary can be bilingual or multi-bilingual. They are trained in the art of understanding and using two or more languages in discharging their secretarial duties.

f. **Multifunctional Secretaries**

The three common titles for traditional secretaries who perform varieties of tasks for their employers are junior secretary, senior secretary, and executive secretary. The titles reflect increasing levels of responsibility.

A junior secretary usually performs routine secretarial duties for a supervisor or head of a small organizational unit, while a senior secretary is usually assigned to a higher level and has more complex and confidential duties. An executive secretary is assigned to top management-the chair of the board, the president, vice president, or other corporate officers. Executive secretaries might also work for the owner or partner of a business organization or the manager of a large division of an organization (Oono, 2011).

Oono, (2011) further asserted that the executive secretary is a highly skilled person with considerable authority for making decisions and may be assigned a clerk-typist to help with the routine aspects of the job. For example, in addition to normal secretarial duties, the executive secretary may have specific responsibilities to administer special programs or functions in the company.

In this capacity, the executive secretary would keep statistical records of activities, assemble materials for reports, and maintain strictly confidential files and records. He said an executive secretary may also supervise and train other employees, communicate company policy, and perform bookkeeping and accounting or other specified functions. This secretary may maintain personnel promotion files, interview and recommend

applicants for office positions, design and draft business forms, secure information from the library, or obtain and supply information to other offices. He or she might also obtain credit cards and endorse checks for employers, maintain income tax records, and keep petty cash accounts.

g. **Professional Secretaries**

Secretaries employed by professionals, such as doctors, lawyers, or engineers, may have titles that reflect their specialties. Possibilities include legal, medical, or technical secretary, as well as international/foreign language secretary, civil and Foreign Service secretary, or educational secretary.

Roe, (2001) stated that, secretaries who have expertise in the area of word processing may have the title word processing specialist, correspondence secretary, or administrative secretary, depending on their particular functions. In addition, legal secretaries, along with general secretarial duties, prepare legal papers and correspondence such as summonses, complaints, motions, and subpoenas. They may review law journals and other legal publications to identify court decisions pertinent to pending cases and submit the articles to company officials. Medical secretaries perform general secretarial duties but need skills of medical terminology and hospital, clinic, or laboratory procedures. They compile and record medical charts, reports, and correspondence; and may prepare and send bills to patients and record appointments.

Word processing secretaries' work in offices that rely on automated equipment to process much of the information produced. In these offices, secretarial work is specialized according to the type of work performed. Secretaries who operate automated, text-editing typewriters and whose main tasks are typing handwritten on machine-dictated correspondence and reports are known as correspondence secretaries or word processing

specialists. According to him, those who specialize in no typing aspects are known as administrative secretaries. Although administrative secretaries sometimes type documents on standard electric typewriters, their main tasks are in such areas as mail handling; filing and records management, travel, appointments, and meetings; and reprographics (the copying or duplicating of documents). As executives delegate more of their management responsibilities, administrative secretaries' responsibilities increase.

Skills are the practical ability to do something like, carpentry, cooking, weaving, typing, shorthand, etc. Fadere (2004) viewed skill as "expertness", aptitude and competencies appropriate for a job. It has to do with expert knowledge and creative reasoning, it is level of mastery". A skill has been achieved when as an action can be used or exercised although something is uppermost in the mind (Tonne, Popham, and Freeman (1986), in Mbaezue, 1988). In order to attain to these skills the individual need to acquire basic training or knowledge level related to the task to be performed whether through formal, informal or a combination of the two (Okagbare and Geraldine, 2008).

The word relevance according to the Oxford Advanced Learners dictionary (2009) is, "closely connected with the subject you are thinking about or having ideas that are valuable and useful to people in their lives and work". In this regard the relevance of shorthand to secretaries is the valuable and usefulness of shorthand to secretaries in automated offices. The secretary over the years has been traditionally associated with normal office skills which took much physical and mental ability, laboriously obtained through the exertion of physical and mental energy to accomplish higher communication functions (Salami, 2009). But the introduction of office equipment to secretarial practice have brought with it technological changes that are gradually taking over all manually operated processes of office activities (Obijile, 1998).

Igbinola (2005) also agreed with this view that manual information systems are giving way to electronic information and communication technology in today's office and the secretary is therefore faced with the need to constantly update her skills and knowledge in order to cope with the demand. In many ways technology has come to revolutionize every aspect of secretarial practice and make the secretary have more duties, and as a threat to the indolent and un-ambitious secretary who has refused to keep abreast with the technological development of her profession.

Igbinola (2005) said that basic technical qualifications for secretarial work include typing, transcription from machine or shorthand dictation, filing ability, good telephone techniques, and written and oral communication skills. Important language skills are grammar, spelling, punctuation, proofreading, and vocabulary. Depending on the particular position, a secretary will also need to be able to process mail, operate specific office equipment (such as calculators and word processing equipment), and follow through on appointments, meetings, trips and assigned projects.

2.7 Shorthand Skill Levels for Secretaries

Firms in metropolitan areas, which demand both typing and shorthand ability, generally require a typing speed of about 60 words a minute (WPM) and the ability to take dictation at 90(WPM). With 80 WPM dictation speed, an individual may expect to fill 81 percent of all positions that require shorthand. With 100 WPM, an individual qualifies for 98 percent of all positions (Usman,2006).Field survey (2012) indicated that, selection and the promotion of secretaries from CONTISS 7 to 13 which is the terminal grade in most public institutions, candidates must possess either HND/*NCE*/OND or 80 to 120 WPM in shorthand plus working experience which differs from one level to an other

in universities and Federal Medical Centres respectively, while the selection and promotion of secretaries in state ministries from USS 7 to 14 as the terminal grade, candidate must possess; either HND/NEC/OND or 80to 120 word per minute (WPM) in shorthand 35WPM in typing including years of working experience.

Komolafe (2005) believed that the availability and efficiency of dictating and transcribing machines have resulted in many "non shorthand" secretarial positions; shorthand is still required for many traditional multifunctional secretarial positions. Komolafe, (2005) confirms that shorthand may not be used in every entry-level position; it may be required for promotion to higher level executive secretarial jobs. While its use is declining as the use of word processing equipment increases, shorthand is a communication skill that enables an individual not only to transcribe verbatim correspondence but also to take down general instructions and telephone messages rapidly and accurately and to outline presentations and minutes of meetings.

2.8 Characteristics of Secretaries

Secretaries have special duties and functions like every profession as stated by Azuka (2002), who also noted that the ideal secretary should have most of the following knowledge and characteristics:

a. A basic understanding of what her firm does and its industry. The favourite is when a secretary tells you she doesn't know what business her company is in.

b. Her industry's terminology. The firm should maintain a dictionary of definitions and acronyms that all employees are expected to know.

c. Be organized and systematic. Struggling, unsteady persons should be not secretaries.

d. Ability to draft and edit routine correspondence.

e. Basic research skills and know how and where to obtain routine information.

f. Ability to use all of the office equipment. In addition, she (or someone else) should handle all service calls for this equipment.

g. Willingness to work a reasonable amount of overtime, for which she should be compensated.

h. Loyalty to her executive (and vice versa).

i. Discreetness. In her job, she will learn much confidential information, about both the executive and others.

j. Ability to keep her mouth shut.

k. Ability to handle incoming calls with discretion. Most important is the desire and ability to take charge of clerical and administrative tasks — i.e., the "will to manage." Since many executives don't know how to instruct their secretaries to manage and organize his life, ideally she should know how to do.

Dangana, (2009) stated that the responsibilities of a good secretary include:

a. Carrying out secretarial duties, including typing, shorthand and word processing

b. Assisting the leadership of unit in day- to- day secretarial activities and overseeing the cleanliness of the unit

c. Taking minutes of units meetings, keeping custody of records and office equipment as well as providing some professional and community service

d. Supervises subordinates and ensuring the efficient running of the unit as well as ensure the training of junior colleagues by senior ones and coordination of the administrative duties of the units

e. Keeping and ensuring security of records and equipment as well as acting on behalf of the boss in his absence.

These responsibilities of secretaries depend on their grade levels and categories.

2.8.1 Duties of Secretaries in Offices

Business correspondence does not necessarily need to be too lengthy and use of unfamiliar words should be avoided as stated by (Aliyu, 2010) who also noted that, there are some trends and techniques in reducing business correspondence as follows:

1. Developing standard replies (guide paragraphs and guide letters) for repetitive routine correspondence.
2. Developing printed materials (leaflets, insert sheets, brochures) to be used in place of longer letters.
3. Delegating authority for routine letter writing to secretaries and assistants.
4. Eliminating needless repetition of basic instructions, standardizing them and putting them in writing.
5. Experimenting with streamlined correspondence styles. Providing examples of standardized letters and the use of window envelopes which are the most efficient to produce.
6. Using more handwritten notes for inter office and inter branch communication.
7. Using uniform line length whether letters are long, medium or short.
8. Using the subject line more to aid mail delivery. The attention line should be de-emphasized.
9. Typing only the reference initials of the typist.
10. avoiding the tabling of posterity (PS) by "P.S." Type it as if it was a regular paragraph.

11. Using correction tape or ribbons.
12. Correcting only those errors on file copies that would change the meaning of the letter (numbers, proper nouns).
13. Analyzing procedures and costs of preparing duplicate copies to determine whether copying machines or carbons are the most economical.
14. Providing training and instruction to those who give dictation.
15. Recording messages on cassette tape recorders and send the cassettes through the mail.
16. Equipping secretaries with electronic typewriters, top-quality dictating system, and secretarial reference manuals, a good secretary using appropriate equipment can turn out 50 to 75 one-page letters in a seven-hour day.
17. Utilizing word-processing centres where appropriate.
18. Analyzing the layout of secretarial work stations and trace the flow of correspondence production.
19. Analyzing the frequency of reference to previous correspondence and records.
20. Using more high-speed mail metering devices.
21. Using a uniform size for stationary.
22. Improving proof reading skills.

Report Writing:-

A report is a formal statement of the result of an investigation. Report writing, according to, is a task that requires one to take time to think through. He also recommends the following for effective and efficient report writing: putting your ideas into words, keep sentences short, on the average, use simple instead of complex language, avoid unnecessary words, use active voice not passive voice in sentences, write

as he talk, use terms the reader can picture, relate to the reader's experience, use variety in writing. Write to express, not impress, once you have put your ideas into word in written form, the next step is to edit for: clarity, conciseness, format, proportion, completeness and style.

One should, therefore, be familiar with what to look for with the various kinds of editing. When to edit, you should edit for, clarity, conciseness, format, proportion, completeness and style. At the same time, you should look for, understanding, reducing vestige, space and size, relationships, total information and courtesy and test.

One should keep the rules for effective writing and the major kinds of editing uppermost in his mind especially when one begin the writing of his report. Mayer (2008), suggested the following steps that need to be taken when writing and making a report as follows:- Defining the problem, Identifying the reader, stating a specific purpose, defining the terms, establishing procedures, considering the scope ... deep, how far, how shallow and, limitations, evaluating time and money constraints, making an outline, explore the following sources for information needed for your report.

Joshuan (2010) identified the following as the sources of information: books, magazines and periodical; newspapers; reports, bulletins and brochures; and government documents.

Primary Sources:

These are the creation of the writer and they include questionnaire; interviews; observations; experiments and expertise.

In the process of putting finishing touches to writing a report, one needs to add life and meaning to the written words by including visual aids. There are times when written

and spoken language will need to be supplemented. Some of the visual aid that can be put to use include; tables; photos; cartoons; illustrations; charts and graphs. (Joshua 2010).

Meetings

In searching the contents of meeting Roe (2001) explained meeting as the coming together of individuals. It is an assembly of persons for some specific purpose. Meeting is another way of communicating to express views and exchange idea on areas of common interest.

Meetings according to Roe, are necessary, as the reasons is to inform members directly about important matters in a situation where they ask questions and make comments, Build cohesiveness, give participants an opportunity to interact and develop roles and to get to know one another, share experiences, problems, and successes, provide channel for upward communication can brief upper echelons on information and attitudes of the rank and file.

Proper uses of meetings:

Roe (2001) stated that meeting should be able to take the following patterns: The briefing meeting, the instructional meeting, the creative meeting, the decision - making meeting six basic rules for planning the meeting as stated by Roe (2001) which include the following:

i. do not have a meeting unless it is absolutely necessary make sure that it accomplishes its objectives,
ii. determine the purpose of the meeting,
iii. plan the meeting to achieve the purpose, and
iv. determine the place determine format, who should attend, who should be chairman.

The role of the secretary as identified by Roe (2001), are as follows: Utilizing the results of meetings, evaluation of meetings, feedback of evaluation to upgrade future meetings.

Agbionu (2014) stated that when taking part in a meeting, it must be ensured that there is balanced participation by all members in attendance and the contribution (speech) of each member should be to the point. He made it clear that the chairman/person of the meeting should have some characteristics which are outlined below:- a). Committed to the meeting, b). desire to conduct a productive session, tune and energy to devote to the task enjoys participating in a discussion, c). good speaker dynamics of groups, d). skills for conducting a meeting, e). planning an agenda, f). creating a good climate, g). controlling the talk, h). steering the group, i). adjusting on the spur of the moment, he went further to state some duties of the leader which include, a). making introductions if needed, b). draw a silent participants, c). watch time and agenda, d). relieve tensions at the beginning, e). handle comments and questions, f). techniques for leading the meeting , g). question, h). summary, i). directive.

According to Agbionu (2014), when preparing for a meeting, the following questions should be answered with regards to the meeting:- a). What is the purpose of the meeting, ritual? b). Briefing/instruction, creative development? c) Decision forming? d). Consultation? family politics, what outcomes are to emerge from the meeting, when should these goals be reached, what type of conference will best achieve the meeting's purpose, lecture and discussion, Short presentation by several people, followed by a discussion period? Round table discussion? Others, who will participate? Have they left out someone who should be invited? Have they included someone who need not be involved? Who will serve as the chairman? What is the best place to hold the meeting?

What is a good time? How long should the meeting last, how and when will the participants be briefed on the meeting and given directions for preparing to take part? What physical details need to be taken care of? Will the room be ready and open? Ventilation and heating? Audiovisual aids, can we guard against unnecessary distractions? How will the proceedings and results be recorded, who will prepare the agenda, Will it be circulated in advances, How will the conference be evaluated, what will be done to follow up and apply the results of the meeting,

Agbionu (2014) also stated that, questions to be answered when evaluating a meeting: a). was the preparation for meeting adequate, equipment available, necessary information furnished, members, Room, visual aids, physical requirement, as the purpose of the meeting clear to all members? b). Were the objective clearly specified? c). Did the leader introduce the agenda clearly and concisely, was permissive social climate established, did all members participate, were feedback and disagreement encouraged, did the meeting stay on the topic? d). Did the leader exercise the right amount of control, did the participants keep their contribution short and to the point, did the meeting accomplish anything, did the leader help the group reach consensus, how well did the leader handle difficult situation? e). The talkative member, the quiet member? Conflicts resolution, were plans made to follow up and tie up the loose ends in another meeting? f). in conferences, what three things can be done to improve the next meeting?

Agbionu (2014), further explained the procedure for taking minutes of meetings:- The name of the organization, the type of meeting - special, general or adjourned, the date and time of the meeting, the locations of the meeting, the name of the person who chaired the meeting, who is, normally the chairman. in the absence of the Chairman, the name of the substitute should be recorded and the fact that the chairman was absent, the presence

of the secretary or the substitute acting in his place, should be call List those present and those absent. It is important, to even indicate the time a member comes in (if he is late) if, the meeting is rather important and weight matters are being, discussed and decided upon, the disposal of the minutes of the previous meeting; note any corrections, additions, or deletions, the financial report if one is given and its disposition, committee reports and actions taken, decisions and actions taken, the announcement of the next meeting, the time of adjournment, the signature of the secretary who prepare the minutes and the president or the Chairman, Sometimes the signature of the chairman of the meeting. the minutes may be typed – in an informal manner with no subheads centre heads, or side heads or they may be typed in rather formal manner. The act of imparting or transmitting information is referred to as communication. It is the responsibility of the sender to prepare the information in a way that will be clearly apprehended by the receiver.

Chip (2014), stated that, communication provided within an organization, includes internal telephone calls, oral instructions from supervisors grievances from employees, memoranda, formal, interviews etc. This type of communication is usually employer employee or between a company and its shareholder.

External Communication System according to Chip (2014) is between the organization and its customers, suppliers, general public, including government departments such as the Inland Revenue and financial institutions such as the banks and companies. Here the media take the form of telephones, telegrams, orders, statements of account, reports, suggestions in written form and ten information from the business to the various bodies.

Written communication, according to Chip (2014), are (i) letters, which are incoming mails and outgoing mails form which are the most important medium of

communication in terms of quantity. Correspondence is usually done between the business and its customers. Agenda: (ii) This is a written statement listing in sequential order the business to be transacted at a meeting. It is the invitees or those actually present at the meeting to be dealt with. (iii) Minute is a written record of issues discussed at a meeting, the decisions taken and resolutions on the minutes of previous meetings are always read before another meeting starts. (iv) A report is written information concerning some facts or circumstances that had been investigated by a person. Reports give information and often tender advice or make recommendations. (v) Memoranda: are usually internally circulated kinds of informations or instruction as part of the normal day-to-day administration. (vi) Bulletins: Some companies usually issue printed sheets with official news or announcements to their employees or customers to keep them up to date and in touch with company developments. (vii) Annual reports: are part of the provision of information companies issue (annual reports) to shareholders, debenture etc., concerning the company's policies, development and activities (Chip 2014).

2.9 Challenges of Office Secretaries in Automated Offices

There are always openings for topflight secretaries in both the public and private sectors. These sectors rely on the nation’s higher institutions of learning to supply them with this indispensable category of manpower. The office environment has metamorphosed into a very modern one from the traditional office that was. The move now is towards a paperless office. This new trend according to Chukwumezie (2002) has helped to enrich and widen the scope and practice of the secretarial profession in terms of speed, quality, accuracy and variety. There is, however, the need for the graduate office

secretary to be at home with internet resources and other new innovations that assist the secretary to facilitate his work and provide the much needed assistance to his executive.

Ohokwe (2004) believed that, training institutions have not responded sufficiently to the changes in the office and emerging secretarial practices. Their skill laboratories lack the needed equipment to adequately train graduate office secretaries for the challenges in the world of work. The trainers, themselves, need retraining as most of them still rely on the old methods of training. They are not versed in modern information and communication technologies and even the use of computer, which are crucial to the work of the office secretary. Chukwumezie (2002) deplored the idea of hiring outsiders as part-time computer trainers, or sending secretaries to other departments to learn computer skills. The skills and skill of secretarial trainers must be urgently upgraded for their output to be relevant.

Ekruyota (2005) stated that the most fascinating challenge facing the office secretary is the use of his talents and skills for the prospects of the organization. Rather than just being content with his routine responsibilities and duties he must be aware that he is the backbone of the executive. An office secretary who lacks these abilities and skills would not be of much help to the executive and organization. Akinyemi (2001) noted that the office secretary is the power behind the work of many executives, as he does more to promote the efficiency of the organization than any other occupation. Akinyemi's work is felt in all aspects of the organization because he is the key link between the executives or top management, board members, panels, or committees and the other workforce and the public. The prospects and success of any organization, whether it be business, government or non-governmental depends on the leadership of the organization. A dynamic, resourceful, creative and intelligent leadership does not operate

in a vacuum. He needs a support assistant, a confidant, an organizer - who is the graduate office secretary.

2.10 Review of Empirical Studies

There are many studies relating to relevance of shorthand in automated offices. However, the following related studies were reviewed.

Adebayo (2000) conducted a study to determine the relevance, suitability and adequacy of Shorthand in the 21st century in Oyo state. The main purpose was to find out if shorthand should remain the major requirement to enter the secretarial occupation or not. The study involved 100 managers and 100 secretaries in financial and manufacturing industries in Oyo State. The researcher used 50% of the population. The research design used was a survey research design. The findings showed that, 20% of the respondents were of the opinion that shorthand should remain a major requirement to enter secretarial occupation, 20% said shorthand should be emphasized in secretarial curriculum, and 27% said, shorthand made better secretaries, while 20% said, organizations preferred secretaries with Shorthand skills; 37% said secretaries with shorthand skills are highly demanded in the 21stcentury; 20.4% managers preferred secretaries who can write shorthand and 2.94% said typewriting is becoming more relevant to secretarial studies than shorthand. The study revealed that improvement in office technology may make shorthand less useful in modern offices. There was no empirical evidence to suggest that shorthand skill is archaic.

The past study focused on secretarial skills for employment and required for advancement on the job. It showed that shorthand is still a major requirement for employment and advancement on the job. The current study is similar to the previous

study thus; the characteristics of the respondents differed. The organizations are not the same and the time and area of the study differed. However, the current study has gained from the previous study in the area of research design, which is a survey research that the current researcher used and the questionnaire that aided the current researcher to draft questions for this current research work..

Akinyemi (2001) carried out a study to determine the status of shorthand in teaching, learning, situation in polytechnics in Calabar. After interviewing 300 respondents as his population which included secretaries, students, parents and teachers on the teaching and learning of shorthand, the researcher used an in-depth interview survey method to seek the opinion of the respondents, in 3 polytechnics. The exercise lasted for three sessions, which the researcher went to each school, one in a session, with the aid of six research assistants drew an analytical conclusion as revealed in the study that 92% were against the teaching and learning of shorthand while 8% were in support. This current survey was slightly different from the present research as the former wanted to know if teaching and learning of shorthand in polytechnics was still necessary. It was not compared with other courses or training equipment. This research, however was carried out with the main aim of finding out if shorthand was still useful in this era, and to examine the status of shorthand in teaching, learning situation from teachers and students who were in the position to know whether it is in use or not. The findings revealed among others that, shorthand should be removed in the school curriculum due its lack of use in a technological era. The current study has gained from the previous study in the area of research design, procedure for data collection with the aid of research assistance including the duration of questionnaire administration.

Barnes (2004) carried out a study to determine whether secretaries require shorthand skills for employability, and advancement on the job. With the population of 200 secretaries in two public institutions in Ibadan, the researcher adopted a survey research design for the study. Two public institutions involved in his study were, Power Holding Company (PHC) and Water Board with a total population of 80 Secretaries. The researcher used the entire population, as the sample size. The study showed that 65% of secretaries used manual Shorthand and 35% favored the use of dictating machines and transcribing equipment. On Shorthand as a requirement for the secretary profession, 43.6% responded positively, 304% said 'no' while 26% said it was not necessary, but useful. On the usefulness of shorthand to secretaries in their present position in the face of office computerization, 46.6% responded that shorthand was very useful, 38.6% indicated that it was useful; while 14.8% declared it was of little or no use. Asked whether there would be a decline in the use of shorthand as a result of office automation, 60% responded negatively, while 39.9 said "yes". This was carried out in 2000 which calls to question if these requirements are still needed today. This study, however, is not concerned with criteria for employment and promotion. It is similar to this present study but the population was very small. The researcher used a survey research design and his findings among others revealed that there would be a decline in the use of shorthand as a result of office automation since 60% of the respondents were of that opinion. The findings may be the same or differ from this study since this present study involved larger population and more area of coverage. This current study has gained from the previous study especially in the area of literature reviewed and the statistical tools used in analyzing data.

Boladele (2006) carried out a study in Ilorin on the problems being faced by secretaries who were trained with manual office equipment in automated office with a population of 300. The researcher used 50% of the population as sample size for the study and raised 3 research questions and formulated 3 null hypotheses to find out problems faced by secretaries who were trained with manual office equipment in automated offices. The study showed that employers in automated offices required the services of Secretaries who are skilled in shorthand and typewriting, the use of word processors, electric typewriters, fax machine etc. It was found out that, secretaries who were trained with manual office equipment had problems working in automated offices. It showed that although skill in shorthand were still required, skills in operating word processor, fax machines and others were also needed for secretaries to function in a modern automated office. The previous study was more concerned about the skills acquired by the secretary which is shorthand. The present study differed with the previous research as the present study will be on the relevance of shorthand in automated offices. The study revealed among others, that secretaries who were trained with manual office equipment had problems working in these offices, although skills in shorthand were still required. The current study is different from the previous study, but the current study gained from the previous study in the area of literature reviewed on automated offices.

Azuka (2006) conducted a study among members of the institute of qualified private secretaries in Zamfara State to discover how new technology was introduced and implemented in the office. The population was 150 Secretaries. The researcher used the entire population for the study and a descriptive survey research was adopted for the study. The responses were. 92.6% said they did not find the implementation of new technology threatening, 78% believed that new office technology would relieve the

secretary from the more routine and respective elements of the job, allowing greater attention to be given to more interesting and discretionary tasks, 86.2% agreed that new technology would encourage secretaries to play a central role in communication network of an organization and 81.3% said secretaries would need to be better educated to cope with the constant changes in office work, while 82% said secretaries of the future working a highly integrated member of a management team should be familiar with new technology and automated equipment.

This survey focused on the impact that new technology had on the offices, the survey showed that the secretary would be relieved of most of his routine jobs, and he would be elevated to management level and would play vital roles in the communication network of the organization. This current work is different from the previous study because the work was in an automated office era though similar because the study also used respondents from institutions though private. The study indicated that with technological equipment in the offices, secretaries would be relieved of most of his routine jobs. There are similarities between this study and the current research because secretaries were used as respondents, and the method for data collection are the same. The current study gained from the previous study in the area of procedure for data collection and the research design as the current research will be using the same.

Dangana (2009) conducted a study on bank executives and secretaries using 3 First Bank Nig. Plc to examine the impact of shorthand on secretaries productivity in technological era. The population used by the researcher was ninety (90), sixty (60) executives and thirty (30) secretaries. Since the population was small, it was used as the sample for the study. The method for data collection was the questionnaire and the questions responded to were; (i) in what way was shorthand relevant to the secretary? (ii)

What are the impacts of shorthand on the secretary's productivity? (iii) In what way does modern office technology affects the secretary's production? (iv) What are the strategies for improving the use of shorthand in the office? (v) The results showed that, secretaries were expected to be more sophisticated in general knowledge, not just typing, taking down dictations and transcribing shorthand but should be able to operate any modern office equipment so that their work could be easier, better and faster. This research gained from the previous research study reviewed in the area of research design and instrument for data collection that is survey research design and questionnaires as instruments for data collection which the current research intend to use.

Teeline (2010) conducted a research work titled "Shorthand-a vanishing sought after skill" The researcher formulated four null hypotheses for the study. The study employed descriptive research design. The population for the study consisted of one hundred and thirty-three secretaries privately trained and two hundred and eighty-nine senior/management staff of selected colleges of education in south Western Region of Nigeria out of which one hundred and fifty constituted the respondents. Random sampling technique was used to select sample for the study. Self designed questionnaire was used to collect data for the study. The researcher personally administered the questionnaire and t- test was used to test the four null hypotheses at 0.05 level of significance. The result revealed that, less than 15% of office personnel felt they had adequate shorthand skills. Some had been taught but had neglected to keep their skills honed whilst over two thirds had never even learned it. The same survey however suggested that the vast majority of senior managers felt shorthand was important and wanted their support staff to be able to take down instructions, dictation and meeting minutes quickly and accurately. Hence it was concluded that shorthand is very much the

“cherry on the cake” in the skill set of the forward-looking contemporary personnel assistant and a skill that will help you stand out from the crowd when looking for that career progression. Recruitment agencies go weak at knees when they see shorthand on curriculum vitae because it is becoming so rare. The previous study is similar to the present in the area of research design and the instrument used for collecting data. Also of similarity was the procedure for data collection and category of respondents used for the study, though differ in the area where the study was conducted as the previous was conducted in the South Western region in Nigeria while the present study was conducted in North East Geo-Political Zone of Nigeria.

Anderson (2011) examined three (3) banks in Enugu for the study to examine if banks still use shorthand as means of record keeping. The population was 100 managers. The researcher employed the use of questionnaire for data collection. The questions that guided the study were: (i) Do offices still use shorthand as means of record-keeping? (ii) Has the advent of modern office technology taken the place of shorthand in organization? (iii) To what extent is Shorthand used in modern offices? (iv) And, what are the reasons for organizations preferring modern office technology to Shorthand as means of record-keeping? (v) Has the advent of modern office technology taken the place of shorthand in organization? (vi) To what extent is shorthand used in modern offices? (vii) And, what are the reasons for organizations preferring modern office technology to shorthand.

The data analysis was based on a four Likert scale of measurement for rating the opinion of respondents. The result showed that, employers did not utilize the full shorthand skills of their secretaries, even when it was used for job interviews, civil service examinations, and military promotional tests. The result further showed that emphasis was laid more on the possession of computers acquired certificate. In this study

the population and sample including the instrument used were okay the respondents and institution differed with this present research as the respondents were only managers, and the researcher used banks which is a public institution. This present study used secretaries and three (3) public institutions in both State and Federal service. That is the difference between the two studies. However, the previous study did not seek the opinion of secretaries and managers, therefore, the findings, result and conclusions cannot be generalized. The current study has gained from the previous study in the area of using Likert scale of measurement for rating the opinion of respondents also the sampling procedure is the same as the current used random sampling procedure.

Ambrose (2011) carried out a research on the "relevance of Shorthand to Secretaries in modern office administration in the National Eye Centre Kaduna. The method used in collecting data was questionnaire; the working population of secretarial staff all over the state (Kaduna) was used as population in the study, while the total population of secretarial staff of the National Eye Centre was the sample used. The researcher used both primary and secondary sources for her findings, and found that Shorthand is still relevant despite the introduction of sophisticated machines, some Secretaries suffered some setbacks in improving on their skills due to negligence on the side of their employees, and the Secretaries agreed that Shorthand is still relevant to them.

The statistics used was not stated which could have given an insight to the present researcher. However, the work has contributed to the framework setting of this current study.

2.11 Summary of Reviewed Literature

A lot of literatures were reviewed on the relevance of shorthand skills to secretaries in automated offices. The literatures revealed that, employers place emphasis on computer literacy these days and indicated that the modern day office has more corporate look than the old traditional office, with the introduction of electronic equipment such as electronic typewriters, word processors, digital telephones/cellular/mobile phones, photocopiers, pocket tape recorder etc. technological innovations in the office has also uplifted the secretarial profession into enviable heights. These various equipment's and how they are used to increase productivity were discussed. There are fears that automation may reduce the quantity of workforce, with the growing complicity of society and increase in the collection of automated equipment in offices, there is that conflicting problem of whether shorthand is still relevant to the work of Secretaries in this paperless office.

It was observed that secretaries roles in the organization has changed over the years from drudgery to more sophisticated roles such as: creating and retrieving files, interpreting of computer programmes, printing of documents, keyboarding and storage, word and data processing etc. Thus, he must be computer literate in addition to his secretarial qualification and he must be trained and retrained. This role is now a managerial one, which involves organizing, controlling and taking of decision.

Nine empirical studies were reviewed; the first study conducted was to determine the relevance, suitability and adequacy of shorthand in the 21st century. Whose findings among other showed that: shorthand remains a major requirement to enter secretarial occupation and that, secretaries, with shorthand skills will be in high demand in the 21st century, although evidence from the study indicate that improvement in office automation

may make shorthand less useful in modern offices, there is no empirical evidence to suggest that shorthand skill is archaic. Another study was conducted to determine whether secretaries require shorthand skill for employability and advancement on-the-job. His findings revealed that secretaries prefer the use of manual shorthand skill to dictating machines and transcribing equipment for employment and advancement, it indicates that there is a decline in the use of shorthand because transcribing equipment was preferred to manual shorthand skill. And another study was carried out, on the problems faced by secretaries who were trained with manual office equipment in automated office. It was found out that secretaries who were trained with manual office equipment had problems working in automated offices and that skill in shorthand is still required along with skill in operating automated equipment's.

Based on the empirical studies, the researcher concluded that the relevance of shorthand skill in automated era is conflicting. Since others were of the opinion that it is needed in the automated offices while others are of the opinion that it is no longer relevant and that office managers are not utilizing the full shorthand skills of their secretaries and that others are of the opinion that shorthand skill remains a major requirement for secretarial occupation and that secretaries with shorthand skills will be in high demand in the 21st century. It is in this conflicting stage of affairs that this research was conducted to ascertain the relevance of shorthand skills to secretarial duties in automated office in North-East geo-political zone with the hope it will throw more light on the state of shorthand and its relevance, as the time and area of the study differs from the ones reviewed. The researcher has observed that in all the empirical studies reviewed, none has focused on the views of secretaries on the relevance of shorthand to secretarial duties in automated offices, which served as the major gap this study has closed.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter is on the methodology used in conducting this research. The chapter was organized under the following sub-headings

3.1 Research Design
3.2 Population for the study
3.3 Sample Size and Sampling Procedure
3.4 Instrument for Data Collection
3.4.1 Validity of the Instrument
3.4.2 Pilot Study
3.4.3 Reliability of the Instrument
3.5 Procedure for Data Collection
3.6 Procedure for Data Analysis

3.1 Research Design

Survey research design was used for this study. Kerlinger (2008) stated that, survey research determines incidence, distribution and inter-relatedness among sociological variables and focuses on vital facts, beliefs, opinions, attitudes, motivations and behavior of people. Philip (2001) maintained that descriptive survey research design has the advantage of including multiple variables for analysis, unlike other methods that require only one variable. Accordingly, in this research, data was collected from a sample of the population, and it was subjected to statistical analyses. The design was considered appropriate because it provided a useful means of obtaining base line data on the prevailing traits among segments of the population and generalizing the findings obtained from the population.

3.2 Population of the study

The population for this study was one thousand two hundred respondents (1,200), made up of six hundred (600) secretaries and six hundred (600) managers in public institutions in North-East geo-political zones of Nigeria. The accessible population was drawn from six states' establishments, six federal medical centres and six universities in the zone who served as respondents for the study as shown in Table 3.1.

Table 3.1 Population for the Study

S/No.	Institutions	Office Managers In Automated Offices	Secretaries in Automated Offices	Total
1.	**Universities**			
	Gombe State University	44	44	88
	Federal University of Technology, Yola	42	42	84
	Abubakar Tafawa Balewa University, Bauchi	46	46	92
	University of Maiduguri	44	44	88
	Taraba State University	42	42	84
	Yobe State University	44	44	88
	Total	**262**	**262**	**524**
2.	**State Establishments**			
	Gombe State establishments	36	36	72
	Adamawa State establishments	38	38	76
	Bauchi State establishments	40	40	80
	Borno State establishments	40	40	80
	Taraba State establishments	40	40	80
	Yobe State establishments	40	40	80
	Total	**234**	**234**	**468**
3.	**Federal Medical Centres**			
	Federa lMedical Centre, Gombe	20	20	40
	Federal Medical centre, Yola	16	16	32
	Federal Medical centre, Bauchi	16	16	32
	Federal Medical centre, Borno	18	18	36
	Federal Medical centre, Taraba	18	18	36
	Federal Medical centre, Yobe	16	16	32
	Total	**104**	**104**	**208**
	Grand total	**600**	**600**	**1, 200**

Sources: Universities, Federal Medical Centres, States establishments Staff Recruitment offices (2012)

3.3 Sample size and Sampling Procedure

The sample size for this study, was based on the recommendation of Dogo (2003) and Araoye (2004) who stated that where the population is as large as 1000, 50% can be used as sample. Based on this, the sample size of 50% was used consisting of 600 respondents, made up of 300 secretaries and 300 managers in public organizations in the North East Geo-political zone of Nigeria as presented in Table 3.2.

Table 3.2 Sample size for the study

S/No	Institutions	Office Managers in Automated Offices	Secretaries in Automated Offices	Total
1.	**Universities**			
	Gombe State University	22	22	44
	Federal University of Technology Yola	21	21	42
	Abubakar Tafawa Balewa University	23	23	46
	University of Maiduguri	22	22	44
	Taraba State University	21	21	42
	Yobe State University	22	22	44
	Total	**131**	**131**	**262**
2.	**State Establishments**			
	Gombe establishments	18	18	36
	Adamawa establishments	19	19	38
	Bauchi establishments	20	20	40
	Borno establishments	20	20	40
	Taraba establishments	20	20	40
	Yobe establishments	20	20	40
	Total	**117**	**117**	**234**
3.	**Federal Medical Centres**			
	Federal Medical Centre, Gombe	10	10	20
	Federal Medical Centre, Yola	8	8	16
	Federal Medical Centre,Bauchi	8	8	16
	Federal Medical Centre, Borno	9	9	18
	Federal Medical Centre, Taraba	9	9	18
	Federal Medical Centre, Yobe	8	8	16
	Total	**52**	**52**	**104**
4	**Grand Total**	**300**	**300**	**600**

In each organization, the researcher used proportional sampling to get equal number of secretaries from both states and federal institutions in the zones. This was to avoid any element of bias as stated by Omiglot (2000).

3.4 Instrument for Data Collection

The instrument used to collect data for the study was a four point rating scale structured questionnaire for the Office Managers and Secretaries in Automated Offices as in Appendix III. The questionnaire contained 64 items meant to answer research questions 1-7 and was divided into seven sections: A, B, C, D, E, F and G. Section A was designed to obtain personal data of the respondents with items 1-4. Section B contained items 1-10 that were designed to elicit information on research question one on the relevance of shorthand skills on secretaries accuracy in minute taking. Section C contains items 11 – 20 designed to seek information on the relevance of shorthand skills on secretaries speed in minute taking, Section D contains items 21 – 30 designed to elicit information on the relevance of shorthand skills on secretaries abilities to compose correspondence, section E contains item 31 – 40 design to elicit information on the relevance of shorthand skills on secretaries communication skills, Section F contains items 41 – 50 designed to elicit information on the relevance of shorthand to secretaries on report writing, Section G contains items 51 – 60 designed to elicit information on the relevance of shorthand skills on secretaries confidentiality in automated offices. All responses were on the rating scale of Strongly Agreed, Agreed, Disagreed, Strongly Disagreed with scores 4, 3, 2 and 1 respectively.

3.4.1 Validity of the instrument

In order to establish the face and content validity of the instrument, the instrument was subjected to scrutiny by research experts in Ahmadu Bello University Zaria, of not below the rank of senior lecturer. Comments, observations and corrections made were

effected and used for final draft. This was in line with Ibrahim (2011) who affirmed that establishing face validity alone is adequate for instruments of this nature.

3.4.2 Pilot Study

A pilot study was conducted in order to establish the reliability of the instrument. The instrument was administered to 10 secretaries and 10 managers in the Senate Building of Ahmadu Bello University, Zaria. It was also administered to 10 secretaries and 10 managers of Power Holding Company of Nigeria, Zaria business office. Finally, the instrument was administered to 10 secretaries and 10 managers in Ahmadu Bello University Teaching Hospital, Shika, Zaria. A total of 60 copies of the instrument were administered to 30 Secretaries and 30 managers. The reason for the choice of the places for pilot study was that the institutions have the same characteristics with the same environment, but are not part of the study areas.

3.4.3 Reliability of Instrument for Date Collection

The data obtained from the pilot study were statistically analyzed using split-half method for the purpose of reliability. The results gave a Spearman Brown coefficient of 0.90. This falls within the range suggested by Ade (2001), who established that an instrument used for data collection was reliable and valid when reliability coefficients are between 0.70 and 1. According to Gaur and Gaur (2009), the closer the reliability result is to 1, the more reliable the instrument to be used for data collection. In view of the above, the questionnaire for this study was adjudged to be reliable for this study.

3.5 Procedure for Data Collection

Letter of Introduction as in appendix I was collected from the Head, Department of Vocational and Technical Education, Ahmadu Bello University, Zaria and was given to

each of the selected Institutions in the study. The instrument for the study was administered by the researcher and one trained research assistant in each of the six states in the zone. The exercise lasted for one week in each state going from one institution to the other to ensure speedy and proper completion and quick return of the instrument. Four days were used in each week for the distribution and collection of the instrument for each state and one day each was spent to travel from one state to another. On the whole, Six weeks were used for the distribution and collection of the completed research instrument in the six states in the North-East Geo-political zone. Six hundred (600) copies of the questionnaire were administered; only five hundred and seventy six (576) were duly filled and returned representing 97% of the respondents, which were analyzed for the study.

3.6 Procedure for Data Analysis

In order to analyze the data collected, both descriptive and inferential statistics were used. Percentages and frequencies were used to answer the bio- data variables. The research questions were answered using mean and standard deviations. The answers to research questions, "Strongly Agree" and "Agree" were classified as "Agree" and "Disagree" and "Strongly Disagree" were classified as "Disagree". A score of 2.5 and above was considered as an index for "Agree", while a score less than 2.5 was considered as "Disagree".

The bench mark score of 2.5 was based on an average score of rating scale of {(4+3+2+1) ÷4}. It was necessary to employ inferential statistics to draw inferences for the research hypotheses. Null hypotheses one to six were tested using Pearson Product Moment Correlation Coefficient (PPMC) to determine the relevance of shorthand skills to secretarial duties in automated offices. While the Independent t-test was used to

determine differences between the opinions of secretaries and that of Managers on the relevance of shorthand skills to secretarial duties in automated offices in null hypothesis seven. This was in line with Aroaye (2004) who suggested that, when two independent variables are involved in a study, independent t-test statistics should be used. All the seven null hypotheses were tested at the 0.05 level of significance. Similarly, the decision rule for testing all the hypotheses was that, if the calculated value is greater than or equal to the table value, the null hypothesis was rejected otherwise it was retained.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

This chapter presented and analysed data collected. The chapter was discussed under the following sub-headings:

4.1 Analysis of Bio-data of respondents

4.2 Answers to research Questions

4.3 Test of Null Hypotheses

4.4 Summary of Major Findings

4.5 Discussion of Major Findings

4.1 Analyses of Bio-Data of the Respondents

The Bio-data presented includes gender, status/designation of respondents, qualification, and grade level.

The summary of responses was presented in Tables 4.1 to 4.4.

Table 4.1 Distribution of Respondents by gender

Gender	Frequency	Percentages (%)
Male	286	49.7
Female	290	50.3
Total	**576**	**100.0**

Source: Field Survey, (2014).

Table 4.1 reveals that out of 576 secretaries and managers that responded to the questionnaire, there were 286 males representing 49.7% while 290 females responded which represented 50.3%. The result here shows that there were more female secretaries in automated offices than the male in North-East geo-political zone, Nigeria.

Table 4.2 Distribution of Respondents by Status and Designation

Status/Designation	Frequency	Percentages (%)
Secretaries	290	50.3
Office Managers	286	49.7
Total	**576**	**100.0**

Source: Field Survey, (2014)

Tables 4.2 revealed that on the basis of status/designation of the respondents, 290 representing (50.3%) of the respondents were secretaries, while 286 (49.7%) were office managers sampled from the selected public organizations. It can be deduced from the result in the table 4.2 that both secretaries and managers were proportionally represented.

Table 4.3 Distribution of Respondents by Qualification

Qualification	Frequency	Percentages (%)
NCE	139	24.1
OND	145	25.2
HND	204	35.4
Degrees and above	50	8.7
Others	38	6.6
Total	**576**	**100.0**

Source: Field Survey, 2014.

Table 4.3 revealed that the highest qualification of the respondents showed that 39 (24.1%) were NCE holders, 145 (25.2%) were OND and 204 (35.4%) that possessed HND certificate, while 50 (8.7%) are degree and above and the remaining 38 representing (6.6%) possessed other forms of qualifications. This implies that most of the respondents were literate and were able to respond as well as provide the researcher with informed information on the study.

Table 4.4 Distribution of Respondents by Grade Level

Level	Frequency	Percentages (%)
05-07	55	9.5
8-10	241	41.8
11-13	133	23.1
14-16	147	25.5
Total	**576**	**100.0**

Source: Field Survey, (2014).

The Table 4.4 revealed the grade level of the respondents. It showed that 55 (9.5%) were on grade level 05-07 while 241 (41.8%) were on grade level group of 8 – 10 and 133 (23.1%) were on grade level 11 – 13, while the remaining 147 (25%) were on grade level between 14-16. From the Table 4.4 above, it can be deduced that the representation of secretaries and managers on grade level 8-10 was significant considering the low response of those on grade level 05- 07 based on the survey.

4.2 Answers to Research Questions

This section showed the analyses and interpretation of data collected in order to answer Research Questions 1 – 7 that were raised in the study.

Research Question One

What is the relevance of shorthand skills to secretaries' accuracy in minutes taking in automated office?

Questionnaire items 1 to 10 in Appendix III Section B were used to answer the research question. Analysis of data collected to answer the research question presented in Table 4.5.

Table 4.5 Mean score on relevance of shorthand skill on secretaries accuracy in taking minutes in automated offices

S/N	Items	Mean	Std.dev	Std.err	Decision
1	Shorthand skills are helpful in taking minutes of meetings accurately.	3.2	1.0	.06	**Agreed**
2	Shorthand skills help the secretaries to accurately follow the steps involved in taking minutes of meetings.	3.3	0.8	.05	**Agreed**
3	Accuracy of secretaries in taking of minutes does not depend on their skills in shorthand	3.1	1.0	.06	**Agreed**
4	Shorthand skills enable secretaries to achieve a greater accuracy and fluency in meetings	3.6	0.8	.05	**Agreed**
5	Shorthand skills do not help secretaries to develop minutes of meetings to reflect major points discussed	3.4	1.2	.07	**Agreed**
6	Shorthand skill is important to accurately translate outlines into full notes quickly after a meeting	3.4	1.2	.07	**Agreed**
7	Shorthand skill enables secretaries to accurately write clear sentences and paragraphs in minutes of meetings	3.0	1.0	.06	**Agreed**
8	Secretaries do not require shorthand skills to help them take minutes of meetings accurately	3.6	.8	.04	**Agreed**
9	Secretaries use shorthand skills to display their professional image in taking minutes of meetings	3.5	0.9	.05	**Agreed**
10	Shorthand skills helps secretaries to accurately summarized minutes of meetings in an organization	3.6	0.8	.05	**Agreed**
	Cumulative mean	**3.4**	**1.0**		

Source: Field Study, (2014)

The analyses of items 1- 10 used to answer research question one was presented in Table 4.5. indicated that, the mean score of all the ten items were found to be greater than the index score of 2.5 for Agree, this can also be seen in the cumulative mean value found to be greater than the index mean score for agree (3.4>2.5) with standard deviation of 1.0. The analysis therefore indicated that shorthand skill is relevant on the accuracy of Secretaries in the taking of minutes in automated office.

Research Question Two

What is the relevance of shorthand skills to secretaries' speed in minutes taking in the automated office?

To answer the research question two, questionnaire items 11 to 20 in Appendix III Section C were used. Result of the analysis is as presented in Table 4.6.

Table 4.6 Mean score on the relevance of shorthand skill on secretaries' speed in minutes taking in the automated offices

S/N	Items	Mean	Std.dev	Std.err	Decision
11	Shorthand skills helps secretaries with speed in using symbols and abbreviations in taking minutes of meetings	2.9	1.1	.07	**Agreed**
12	Shorthand skills helps secretaries to speedily follow the steps involves in taking of meetings	3.2	1.9	.05	**Agreed**
13	Shorthand skills helps secretaries to speedily take information when taking minutes of meetings	3.2	1.1	.07	**Agreed**
14	Shorthand skills enable secretaries to achieve greater speed in taking minutes of meetings	3.5	1.0	.06	**Agreed**
15	Shorthand skills do not help secretaries to speedily take minutes of meetings to reflect major points discussed	3.2	1.3	.08	**Agreed**
16	Shorthand skills helps secretaries to speedily translate outline into full notes quickly after a meeting	3.5	1.0	.05	**Agreed**
17	Shorthand skills enable secretaries to speedily writes clear sentences and paragraphs in minutes of meetings	2.9	0.9	.05	**Agreed**
18	Secretaries use Shorthand skills to speedily display their professional image in taking minutes of meetings	3.2	0.8	.05	**Agreed**
19	Secretaries do not require speed in shorthand skills to take minutes of meetings	3.3	1.0	.06	**Agreed**
20	Shorthand skills help secretaries to speedily summarize minutes of meetings.	3.4	0.9	.05	**Agreed**
	Cumulative mean	**3.3**	**1.1**		

Source: Field Study, (2014)

The Table 4.6 revealed the responses of respondents used to answer research question two in which the mean score of all the questionnaire items were greater than the 2.5 bench score for agree. This was also seen in the cumulative mean score of 3.3 which was found to be greater than the criterion index score of 2.5 for Agree with the standard deviation value of 1.1. Based on the result, it was concluded that shorthand skill is relevant on Secretaries' speed in minutes taking in automated office

Research Question Three

What is the relevance of shorthand skills to secretaries' ability to compose correspondence in automated office?

Items 21 to 30 in the Appendix III Section D were used to answer the research question with the data analyzed as presented in Table 4.7.

Table 4.7 Mean score of Relevance of shorthand skills on ability to compose correspondence in automated offices

S/N	Items	Mean	Std.dev	Std. Err	Decision
21	Shorthand skills helps secretaries to easily with compose correspondence	3.4	1.2	0.19	**Agreed**
22	Shorthand skills helps secretaries to compose letters	3.6	1.0	0.20	**Agreed**
23	Shorthand skills do not helps secretary when writing memo	2.8	1.0	0.10	**Agreed**
24	Shorthand skills helps secretaries in writing circulars	3.2	0.8	0.04	**Agreed**
25	Shorthand skills provides secretaries with technical skills needed in written communication writing	3.4	1.2	0.06	**Agreed**
26	Shorthand skills help secretaries in Planning and organizing correspondence easily	3.4	1.2	0.07	**Agreed**
27	Secretaries do not require shorthand skills for collecting and analyzing information in a correspondence	3.8	0.9	0.05	**Agreed**
28	Shorthand skills help secretaries in sorting and writing appropriate mail in the office and present it in a useful way.	3.5	1.1	0.07	**Agreed**
29	Shorthand skill do not help to increase secretary's ability of writing correspondence	2.7	1.0	0.06	**Agreed**
30	Shorthand skills help Secretaries to compose correspondence error- free which create cordial relationship with managers in the office.	3.3	0.8	0.05	**Agreed**
	Cumulative mean	**3.4**			

Source: Field Study, (2014)

The results of data used to answer research question three was presented in Table 4.7. The mean score of the items were all more than the benchmark mean score for agree. This is also applicable to the cumulative mean score value of 3.4 which was found to be greater than benchmark score of 2.5 for agree with standard deviation of 1.1. Based on the result, it was concluded that, shorthand skill is relevant to the secretaries when they are composing correspondence in the office.

Research Question Four

What is the relevance of shorthand to secretaries' communication skill in automated office?

To answer the research question four, questionnaire items 31 to 41 in appendix III Section E were used. The results of the data collected to address the research question are as presented in table 4.8.

Table 4.8 Mean score of relevance of shorthand skills on communication skills in the automated office

S/N	Items	Mean	Std.dev	Std. Err	Decision
31	Shorthand skills helps secretaries with the ability necessary in communication	3.7	0.9	.0520	**Agreed**
32	Shorthand skills help secretaries to communicate effectively with others using the range of spoken, written, and other non- verbal means of expression	3.8	0.8	.0484	**Agreed**
33	Shorthand skills helps secretaries to communicate clearly	3.7	1.2	.0686	**Agreed**
34	Shorthand skills have no relevance to secretaries ability to interact effectively in the office	3.4	1.2	.0727	**Agreed**
35	Shorthand skills helps secretaries while communicating ideas and information	2.5	0.9	.0548	**Agreed**
36	Shorthand skills help secretaries to interact effectively with other people both one-to-one basis and in group.	3.2	1.8	.0441	**Agreed**
37	Shorthand skills are not relevant to secretaries ability to evaluate information and communicate effectively in the office	3.5	1.0	.0590	**Agreed**
38	Shorthand skills helps to secretaries to persuade groups so as to achieve desired results	3.7	0.8	.0477	**Agreed**
39	Shorthand skills enable Secretaries to have good command of English language and writing skills	3.3	1.2	.0703	**Agreed**
40	Shorthand do not help secretaries in communication processes	3.3	1.2	.0717	**Agreed**
	Cumulative Mean	**3.2**	**1.2**		

Source: Field Study, (2014)

The Table 4.8 revealed the opinion of respondents on the relevance of shorthand on secretaries' communication skill. From the Table, the mean score of all the questionnaire items were found to be greater than index score of 2.5 for agree. The cumulative mean score was 3.5 with standard deviation value of 1.2. Based on the result the calculated value was greater while the value of decision rule stood as (3.5>2.5), hence the result shows that shorthand skill is relevant to secretaries in communication process.

Research question five

What is the relevance of shorthand skills to report writing ability of Secretaries in Automated office?

Items 41 to 50 in appendix III Section F of the questionnaire were used to address the research question. Analysis of the opinion of respondents was presented in Table 4.9.

Table 4.9 Mean score on relevance of shorthand skills in report writing in automated offices in North East Geo-political zone of Nigeria

S/N	Items	Mean	Std.dev	Std. Err	Decision
41	Shorthand skills helps secretaries to write statement of subjects in investigations	2.6	0.9	.0555	**Agreed**
42	Shorthand skills helps secretaries in to write terms of reference of an investigations	3.2	0.8	.0442	**Agreed**
43	Shorthand skills enable secretaries to write description of how information are obtained in an investigations	3.6	0.9	.0528	**Agreed**
44	Shorthand skills do not help secretaries to state difficulties uncounted in an investigations	3.7	0.8	.0484	**Agreed**
45	Shorthand skills help secretaries to write acknowledgment of assistance in an investigations	3.5	1.2	.0686	**Agreed**
46	Shorthand skills do not provide secretaries with confidence to apply their skills in report writing in an investigations	3.3	1.2	.0727	**Agreed**
47	Shorthand skills helps secretaries to summarize the main part of a report in an investigations	3.3	0.9	.0515	**Agreed**
48	Shorthand skills are not relevant to secretaries in recording of investigations	3.6	0.9	.0534	**Agreed**
49	Shorthand skills helps secretaries to write clear recommendations in an investigations	3.5	1.0	.0587	**Agreed**
50	Shorthand skills do not help secretaries in manipulating data in an investigations	3.1	1.3	.0737	**Agreed**
	Cumulative mean	**3.4**	**1.0**		

Source: Field Study, (2014)

The Table 4.9 revealed the opinion of respondents on the relevance of Shorthand skills on report writing of Secretaries in Automated office in the North East geo-political zone. From the Table, all the ten items used to answer the research question had a mean score above the criterion benchmark of 2.5 for agree. The cumulative mean score was 3.4 with standard deviation value of 1.0. Based on the result, the cumulative mean score was greater than the index score for agree (3.4>2.5), hence the result indicates that Shorthand skill is relevant to secretaries when writing a report in North East geo-political zone.

Research Question Six

What is the relevance of shorthand skills to confidentiality of Secretaries in automated office?

Questionnaire items 51 to 60 in appendix III section G were used to answer the research question. Summary of the analyses of data collected was as presented in Table 4.10.

Table 4.10 Mean score of opinions of respondents on the relevance of shorthand skill on confidentiality of Secretaries in Automated office in North East Geo-political zone of Nigeria

S/N	Items	Mean	Std.dev	Std. Er	Decision
51	Shorthand skills helps secretaries, to keep office document confidential	3.3	1.2	.0727	**Agreed**
52	Shorthand skills helps secretaries to take official records confidentially which can only be read by them	3.2	0.8	.0442	**Agreed**
53	Shorthand skills helps secretaries to manipulate data and information clearly and confidentially	3.6	0.9	.0534	**Agreed**
54	Shorthand skills do not help secretaries to produce records professionally and confidentiality	3.7	0.8	.0484	**Agreed**
55	Shorthand skills do not create privacy and confidentiality in office work	3.1	1.3	.0737	**Agreed**
56	Shorthand skills helps secretary's work to be produced with all confidentiality	3.6	0.9	.0528	**Agreed**
57	Shorthand skills help secretaries to keep confidential document in shorthand rather than longhand	3.3	0.9	.0515	**Agreed**
58	Shorthand skills perform excellently in office routine especially in keeping records confidentially	3.5	1.2	.0686	**Agreed**
59	Shorthand skills help secretaries take dictation confidentially anywhere either villa or urban without anybody getting access to it except the secretary	3.5	1.0	.0587	**Agreed**
60	Shorthand skills is no longer relevant in keeping confidential matters by secretaries	2.6	0.9	.0555	**Agreed**
	Cumulative mean	**3.4**	**1.0**		

Source: Field Study, (2014)

The result of data used in answering research question presented in Table 4.10 shows the cumulative score of 14722 with mean score of 3.4 with standard deviation of 1.0 for those that opined that shorthand is relevant on the confidentiality of Secretaries in Automated office in North East geo-political zone of Nigeria. Based on the result, the calculated value was found to be greater than the benchmark score for agreed (3.4>2.5),

hence the researcher concluded that shorthand is relevant to confidentiality of Secretaries in automated office in North East geo-political zone of Nigeria.

Research Question Seven

What is the difference between opinion of managers and secretaries on relevance of shorthand skills to secretarial duties in automated offices?

To answer this research question, all the sixty questionnaire items were used. The analysis of the result is presented in Table 4.11.

Table 4.11 Mean difference in the score of secretaries and that of managers on the relevance of shorthand skills to secretarial duties in automated offices

Objective.	Statement	Secretaries				Office managers			
		C. A.	C.D.	C.M	C.S.D	C.A.	C.D	CM	C.S.D
1	Relevance of shorthand skill on secretaries accuracy in the minutes taking in the automated office in North East geo-political zone of Nigeria.	7520	1342	3.4	0.9	7425	1300	3.4	0.9
2	Relevance of shorthand skill on secretaries speed in minutes taking in the automated office in North East geo-political zone of Nigeria	7053	1600	3.5	1.2	6940	1601	3.9	1.2
3	Relevance of shorthand skill on secretaries ability to compose correspondence in the Automated office in North East geo-political zone of Nigeria.	7476	1384	3.5	1.2	7300	1320	3.4	1.0
4	Relevance of shorthand on secretaries communication skill in the automated office in North East geo-political zone of Nigeria	8178	1200	3.5	1.2	7001	1128	3.4	1.1
5	Relevance of shorthand skill on report writing ability of secretaries in the automated office North East geo-political zone of Nigeria.	7757	1001	3.5	1.3	7001	1816	3.2	1.0
6	Relevance of shorthand skill on confidentiality of secretaries in the automated office in North East geo-political zone of Nigeria	8222	999	3.6	1.3	6500	1727	3.2	1.0
	Total	**46,206**	**7,526**	**3.4**	**1.2**	**42,167**	**8,892**	**3.3**	**1.1**

Source: Field work (2014)

The result of data used to answer research question seven was presented in Table 4.11. From the Table, the cumulative mean score of the six groups of questionnaire items used to answer the research questions were greater than the benchmark score of 2.5 for agree. Cumulative score of secretaries was 46,206 against 42,167 for the office managers with mean score of 3.4 and 3.3 respectively. Based on the result, the calculated mean values (3.4 & 3.3) were found to be greater than the criterion index score of (2.5) for agree. The result therefore indicates that both the secretaries and office manager agreed that shorthand is relevant to secretarial duties in automated offices in North-east geo-political zone of Nigeria, hence the opinions of the two groups of respondents was similar with regard to research question seven.

4.3 Test of Hypotheses

The null hypotheses were tested using Pearson product moment correlation coefficient (PPMC) for hypotheses 1-6 while null hypothesis 7 was tested using independent t-test to determine the relevance of shorthand skills to secretarial duties at 0.05 level of significance. The details were as shown in appendix V.

Null Hypothesis One

Shorthand skills have no significant relevance to secretaries' accuracy in taking minutes in automated office in North East geo-political zone of Nigeria

The test of relevance of shorthand skills on secretaries' accuracy in minutes taking is presented in Table 4.12.

Table 4.12 Test of the relevance of shorthand skill on secretaries` accuracy in minutes taking

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skills	576	2.52	0.73				
Secretaries' accuracy in taking minutes	576	2.66	0.86	1150	0.311*	.195	0.001*

Source: Field work (2014)

Result of data used to test null hypothesis one in Table 4.12 revealed a mean score of 2.52 with standard deviation of 0.73 for shorthand skill, against a mean of 2.66 with standard deviation of 0.86 for secretaries' accuracy in minutes taking. The calculated r value was greater than the critical r value (0.311*>0.195). The result indicated that shorthand skill is relevant to secretaries' accuracy in minutes taking in the automated office in North East Geo-political zone of Nigeria. Based on the result, null hypothesis one was therefore rejected.

Null Hypothesis two

Shorthand skills have no significant relevance to secretaries' speed in taking minutes in automated office North East geo-political zone of Nigeria.

The result of test of relevance of shorthand skills to secretaries' speed in minutes taking is presented in Table 4.13.

Table 4.13 Test of the relevance of shorthand skill on secretaries' speed in minutes taking

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skill	576	2.52	0.73	115	0.201*	.195	0.000*
Secretaries' speed in minutes taking	576	2.49	0.71				

Source: Field work (2014)

Result of data in Table 4.13 revealed mean scores of 2.52 and 2.49 for shorthand skill and secretaries' speed in minutes taking, with standard deviation of 0.73 and 0.71, respectively. The outcome was significant (r-cal of 0.201> r-crit of 0.195). This implied that the shorthand skill is relevance to Secretaries' speed in minutes taking in automated office North East Geo-political zone of Nigeria. The r-calculated value of 0.201 was an indication of a very high and positive relevance. The null hypothesis was therefore rejected.

Null Hypothesis Three

Shorthand skills have no significant relevance on Secretaries' ability to compose correspondence in automated office in North East Geo-political zone of Nigeria

Analysis of data used to test null hypothesis three is presented in Table 4.14

Table 4.14 Test of relevance of shorthand skill on secretaries' ability to compose correspondence

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skill	576	2.52	0.73				
Secretaries' ability to compose correspondence	576	3.01	1.01	1150	1.82*	.195	0.002

Source: Field work (2014)

Table 4.14 shows shorthand skill had mean of 2.52 with standard deviation of 0.73 while secretaries' ability to compose correspondence had mean score of 3.01 with standard deviation value of 1.01. The result of test of hypothesis one revealed the r-calculated value of 1.82 against the 0.195 for r-critical. This is also seen in probability value greater than the alpha value (0.002<0.05). The result revealed that shorthand skill is relevant to Secretaries' when composing a correspondence in automated office in North East Geo-political zone of Nigeria. To this end, the null hypothesis was rejected.

Null Hypothesis Four

Shorthand has no significant relevance to Secretaries' communication skill in automated office in North East Geo-political zone of Nigeria.

Result of test of null hypothesis four was as presented in Table 4.15.

Table 4.15 Test of relevance of shorthand on secretaries' communication skills

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skill	576	2.52	0.73	1150	1.92*	.195	0.000
Secretaries' communication skill	576	2.89	0.82				

Source: Field work (2014)

Analysis of data used to test null hypothesis four showed mean scores of 2.52 and 2.89 with standard deviation of 0.73 and 0.82, for shorthand and secretaries' communication skill respectively. The r-calculated value was greater than the r-critical value (1.92>0.195). The result was positively, indicating that shorthand has significant relevance on secretaries' communication skill in automated office in North-East Geo-political zone of Nigeria. The null hypothesis was thus rejected.

Null Hypothesis Five

Shorthand skills have no significant relevance on report writing ability of secretaries in automated office in North East geo-political zone of Nigeria.

Result of test of null hypothesis five was presented in Table 4.16.

Table 4.16 Test of relevance of shorthand on secretaries' report writing ability

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skill	576	2.52	0.73				
				1150	2.09*	.195	0.000
Secretaries' report writing	576	2.57	0.77				

Source: Field work (2014)

Pearson Product Moment Correlation used to test null hypothesis five in Table 4.16 indicates the mean of 2.52 with standard deviation of 0.73 for shorthand skills while secretaries report writing had the mean of 2.57 with standard deviation of 0.77. The calculated r-value was 2.09* against the critical value of 0.195. This was also seen in probability value less than the alpha value ($P<0.05$). This therefore indicates that shorthand is relevance to report writing ability of secretaries in automated office in North East Geo-political zone of Nigeria. The null hypothesis was therefore rejected.

Null Hypothesis Six

Shorthand skills have to significant relevance on confidentiality of secretaries in automated office in North East geo-political zone of Nigeria.

The result of test of relevance of shorthand skill on secretaries' confidentially in the automated office was presented in Table 4.17.

Table 4.17 Test of the relevance of shorthand skill to secretaries' confidentiality in taking minutes

Variables	N	Mean	S.D	Df	r-cal	r-cri	Sig. of r
Shorthand skill	576	2.52	0.73	115	1.19*	.195	0.001*
Secretaries' confidentiality in automated office	576	2.87	1.01				

Source: Field work (2014)

The Pearson Product Moment correlation used to test null hypothesis six in Table 4.17 revealed mean scores of 2.52 and 2.87 for shorthand skill and secretaries' confidentiality in automated offices with standard deviation of 0.73 and 1.01 respectively. The outcome was significant (r-cal of 1.19*) was higher than critical value of 0.195). This implied that shorthand skill is relevant to secretaries' confidentiality in automated offices North-East Geo-political zone of Nigeria. The r-calculated value of 1.19* was an indication of a very high and positive relevance. The null hypothesis was therefore rejected.

Null Hypothesis Seven

There is no significant difference between the opinions of managers and secretaries on relevance of shorthand skill on the secretarial duties in automated offices in North East geo-political zone of Nigeria.

Data collected to address the null hypothesis seven was as presented in table 4.18.

Table 4.18 The t-test of the difference in the Opinions of Secretaries and that of office Managers on the relevance of Shorthand skill on secretaries' duties in automated offices in North East Geo-Political Zone of Nigeria

Respondents	N	Mean	S.D.	Df	t-cal	t-crit	Sig. (p)
Secretaries	290	2.58	1.10	574	097	1.96	0.52
Office Managers	286	2.53	0.99				

Source: Field study 2014

Outcome of the independent t-test statistics on Table 4.18 showed the mean score of 2.58 and 2.53 for secretaries and that of managers with standard deviation value of 1.1 and 0.99 respectively. The probability value was higher than the alpha level (0.52>0.05) while the calculated t value was found to be lower than the critical t value (0.97<1.96) at df 574. The result therefore indicated that there is no significant difference in the opinions of Secretaries and managers on the relevance of shorthand skill to secretarial duties in automated offices in North-East geo-political zone; hence the null hypothesis seven was therefore retained.

4.4 Summary of Major Findings

The study established that:

1. Shorthand skill had significant relevance to secretaries' accuracy in taking minutes (p=0.001).
2. Shorthand skill had significant relevance to secretaries speed in taking minutes (p=0.000).
3. Shorthand skill had significant relevance to secretaries' ability to compose correspondence (p=0.002).
4. Shorthand skill had significant relevance to secretaries' communication skills (p=0.000).
5. Shorthand skill had significant relevance to secretaries' report writing ability (p=0.000).
6. Shorthand skill had significant relevance to secretaries' confidentiality (p=0.001).

7. There was no significant difference between the opinion of managers and secretaries on the relevance of shorthand skills to all forms of secretarial duties in automated office (p=0.052).

4.5 Discussion of the Major Findings

The study was conducted to find out the relevance of shorthand skills to secretarial duties in automated offices in North east Geo-political zone of Nigeria Shorthand is a skill that prepares one for an occupations as a secretary. Its many application include taking of minutes, comparing of letters, report writing with accurate speed for effective and efficient service delivery. The study revealed the followings:

The finding of research question one revealed that, shorthand is relevant to secretarial duties in the area of speed in minutes taking for effective and efficient service delivery. This was further confirmed by hypothesis one which showed that the outcome was significant. Implying that shorthand skill is relevant to secretaries' accuracy in minutes taking in automated offices. This obtained support form the observation of Amoor (2010) who opinion, that shorthand skills developed secretarial students consciousness for speed and accuracy. As student continues to strike to write and transcribe shorthand with speed and with minimum errors, it creates in them the consciousness for speed and accuracy. Any secretary that possesses these skills handles his/her functions efficiently and effectively.

The result of the finding of research question two also showed that shorthand skill is relevant to the speed of secretaries in the taking of minutes. This was further confirmed by hypothesis two which the outcome was also significant. Implied that shorthand skill is relevant to secretaries' speed in minute taking in automated offices. The finding obtained

support from Ambrose (2011) who affirmed that shorthand skills is still relevant in composition of correspondence with speed and effective in communication skills despite the introduction of sophisticated machines in office.

The result of the finding of research question three revealed that, shorthand skill is relevant to secretaries in composing of correspondence in automated offices. This was further confirmed from hypothesis three which indicated that the outcome was also significant. Implying that shorthand is relevant to secretaries' when composing a correspondence in automated offices. The finding obtained support from Sunday (2005) who opined that, shorthand skills is indispensable to secretarial profession, as it helps secretaries in composing of correspondence including minute meetings. Ogunyinka (2007) also affirmed that shorthand has come to stay, though seen as a vocational and not educational course yet it has been discovered that it has educational values. This contradicts Barnes (2004) who was of the opinion that, with recent advances in the area of office technology, the use of shorthand skill will be de-emphasized. Therefore, in order to help secretaries perfect on these shorthand skills and avoid it become obsolete, it would be expedient for stakeholder in the educational sector to continue to give a continuous workshop, seminars and conferences to train the trainers.

The result of the finding of research question four revealed that, shorthand skill is relevant to secretaries in communication process. This was further confirmed from hypothesis four that shorthand was significantly relevance on secretaries' communication skills in automated offices. This was further confirmed by Adebayo (2006) who opined that, good communication skills makes secretaries more productive and ability to communicate well allows secretaries to better compose correspondence to capture what is expected of them by their management.

The findings of research question five revealed that, shorthand skills is relevant to secretaries when writing report in automated offices. This was further confirmed from hypothesis five that shorthand was significantly relevance to secretaries' reportorial writing ability. This was further confirmed by Amoor (2004) who said listening skills acquired through teaching and learning of shorthand helps the secretary to cultivate the habit of good report writing and composing of correspondence including minutes of meetings in automated offices. This, to a large extent helps the manager to concentrate on others issues. Agbionu (2014) affirmed that, shorthand skills enhance secretaries ability to write a detailed report, by describing how the information in reports are obtained, difficulties encountered and acknowledgement of help and assistance. He further emphasized that only secretaries with shorthand skill can follow the steps involved in report writing one at a time.

The findings of research question six revealed that, shorthand skill is relevant to confidentiality of secretaries in record keeping in automated offices. This was further confirmed from hypothesis six that shorthand has significant relevance on secretaries' confidentiality in automated offices. This was further confirmed by Roe, (2014) who stated that, shorthand skills tends to reduce the burden of workload in the office and promote confidentiality in service delivery. Inline with this, Teeline (2010) affirmed that, shorthand is a vital tool for secretaries in keeping secret and confidential matter of the organization. He stressed that despite the digital age, shorthand skills are still regarded as an absolutely essential skill that make secretaries more productive in automated offices. This obtained support from Adebayo (2011), who affirmed that, shorthand skill is still very relevant in maintaining documents than automated machines that can be operated by anyone who is literate in manipulating the office machines. This is in contrast to the

opinion of Barnes (2004) who reported that improvement in automated equipment may render shorthand less useful in automated offices especially in the area of confidential record keeping. Based on this, schools that offer shorthand, should constantly organize seminars/workshop and invite seasoned business educators who are office – biased and professional counselors to educate business education student on the relevance of shorthand skills in an era of automated equipments.

The findings of research question seven revealed that, shorthand is relevant to all forms of secretarial duties. This was further confirmed from hypothesis seven that shorthand has significant relevance to all forms of secretarial duty in automated offices. This was affirmed by Fasami (2014) who said, secretaries needs shorthand skill to carry out the day to day responsibilities and routine in offices, in area of receiving instructions and getting update information and good listening skills, accuracy, speed composing of correspondence, communication, report writing and confidentiality in minutes taking and correspondence, report writing and communication skills. He also pointed out the ways, through which both secretaries and manager can realize a higher level of success in achieving the organizational goals. To affirm this, Aromolaran (2014) said shorthand skill, is much the "cherry on the cake" and a skill set for the forward – looking contemporary personal assistant. Shorthand skill according to him is a skill that help a secretary stand out from the crowd when looking for that career progression. He stressed that recruitment agencies go weak at the knees when they see shorthand on a curriculum vitae because it is very rare to get secretaries with shorthand skills. Supporting the opinion of Aromolara, Chip (2014) opined, that secretaries with shorthand skills are regarded as the "life – blood" of the organization, because is the link between the manager and the office workers. He also said that, any disagreement between the

secretary and the manage will affect the whole organization. He further stressed that, shorthand skills help secretaries to establish a good working rapport with their boss through dictation of issues and problems with the boss and that shorthand skills of secretaries also contribute to the wider aspect of work and relieving a lot of pressure on others. This contradicts the opinion of Prince (2014) who said, it is difficult now to secure the post of a secretary in business organization without excellent word processing and computer skills.

Chip (2014) affirmed that nobody can qualify as a professional secretary without adequate skills in shorthand, but Fasami (2014) disagrees with Chip by pointing out that, secretaries now have many technologically advanced office gadgets to ease their jobs and enhance proficiency such as computer software programmes, which helps the secretary to write and edit memos, letters and report, data management prgorammes or data bases, which help the secretary to use long list of data and spreadsheet programmes which handles tables and number instead of driving and drawing with shorthand skills.

Prince (2014) went further to state that, shorthand skills will continue to be needed. He also stressed that, it is noteworthy that the purpose of training development is to enable an individual acquire the skills that will be relevant for his/her job performance and that every curriculum is expected to make beneficiaries apply the skills acquired in solving problems in the work place, stressing that shorthand skill has been a saving grace for many graduated roaming the streets without jobs. In view of this, curriculum designers should re-design the curriculum for secretarial education; simplify the teaching of shorthand by breaking down the course into modules that would attract the interest of the business education students.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter focuses on summary, conclusion and recommendations, as well as suggestions for further studies under the following sub-headings:

5.1 Summary

5.2 Conclusion

5.3 Recommendations

5.4 Suggestions for further studies

5.1 Summary

The study was carried out to find out the relevance of shorthand skills to secretarial duties in automated offices in North-East Geo-political zone of Nigeria. The problem of the study was that proponents of automated equipment in offices and the increased use of automated equipment by business executives and secretaries have prompted the assumption that, the use of shorthand will be phased out and modern machines and equipment will take over the role of shorthand writer. This is because efficient and sensitive recorders which are less dependent on shorthand are in the market. The major objective of the study was to find out the relevance of shorthand skills to secretarial duties in automated offices. Based on the seven specific objectives raised in the study, seven research questions were generated with seven null hypotheses formulated to achieve the purpose of the study.

A review of related literature in line with the research topic was done under eleventh sub-headings. Descriptive survey research design was employed for the study. The population for the study was 1,200 secretaries and office managers. The researcher

used proportionate stratified random sampling techniques to determine the sample size of 600 from the population which comprised of 300 secretaries and 300 office managers in public organizations who participated in the study by responding to the research instrument divided into section A – G, with 64 questionnaire items. The instrument was designed to obtain information on the respondents' bio-data and relevance of shorthand skills to secretarial duties in automated offices. Six hundred (600) copies of the instrument were administered, but 576 were duly filled and collected which was used as data for this study.

In order to analyze the data collected, both descriptive and inferential statistics were used. Percentages and frequencies were used to present the bio-data of the respondents. The research questions were answered using mean, and standard deviations. Moreover, for the research questions, a four-point-scale were categorized into two categories such as 'Agree' and 'Disagree' with a score of 2.5 as bench mark for 'Agree' and less than 2.5 for 'Disagree'.

Null hypotheses one – six were tested using Pearson Product Moment Correlation Coefficient (PPMC) to determine the relevance of shorthand skills to secretarial duties, while null hypotheses seven was tested using independent t-test to determine differences between secretaries and managers on the relevance of shorthand skills to secretarial duties in automated offices. The result of the study revealed that, there was overall agreement that shorthand skills are relevant for secretaries in the area of taking minutes with accuracy and speed, composing correspondence and effective communication skill and report writing. These enhance secretaries' responsibility for effective and efficient service delivery in automated offices. The result of the null hypotheses tested showed that, there

was no significant difference in the opinions of secretaries and managers on the relevance of shorthand skills to secretarial in automated office.

The following results and findings were obtained from the research study:

1. The accuracy of secretaries in taking minutes in shorthand was relevant in enhancing their responsibilities in automated offices.
2. Effective and efficient shorthand skill of secretaries is relevant in enhancing secretaries speed in taking minutes of meetings in automated offices.
3. Shorthand skills enhance the correspondence composition ability of secretaries in automated offices.
4. Shorthand skills are relevant in boosting the reportorial writing of correspondence and minutes of meetings by secretaries in automated offices.
5. Shorthand skills bring about the effectiveness and efficiency of secretaries' communication skills in automated offices.
6. Shorthand skills of secretaries are very relevant in boasting their confidentiality for effective service delivery in automated offices.
7. Secretaries and managers are in agreement that shorthand skills are relevant to all forms of secretarial duties in automated offices. This is a clear indication that secretaries in automated offices needs shorthand skills to carry out their day to day activities and that shorthand skills is relevant and should not be compromised with automated equipment which was the gag that this study has filled

5.2 Conclusion

Based on the major findings of the study, the researcher wishes to conclude that shorthand skills still has relevance even with the automated offices

5.3 Recommendations

In view of the inherent value skills acquired through shorthand and its impact on secretarial duties in office occupation in an automated office environment, the researcher made the following recommendations that:

1. Shorthand should not be expunged from the school curriculum of secretarial education both at secondary schools and post secondary institutions of learning because of its relevance to secretaries in taking accurate minutes of meetings.
2. The institutions / organizations that offer shorthand should constantly organize seminars / workshops and invite seasoned business educators who are office – biased and professional counselors to educate business education students on the relevance of shorthand skills in an era of automated equipments. If business education students are well informed on the relevance of shorthand, they will be interested in offering the course and perform well in it.
3. Organizations and employers of labour should educate people on the relevance of shorthand through appropriate seminars and workshops because shorthand skills still serves as a means of confidential writing in close door meetings.
4. Ministries of education should collaborate with the Education Trust Fund (ETF) to enable them supply equipment and teaching materials in shorthand laboratories. This will enhance the teaching of shorthand to be more practical and that will help in bringing out the needed secretarial skills for boosting students' speed and accuracy in composing of reports and taking of minutes even when out of school.
5. The equipment and materials already in use in shorthand laboratories should be effectively handled by teachers and students under the supervision of the

administrators for update and good maintenance which can yield good results in carrying the practical aspects while in school.

6. Secretaries in offices should always take dictations in shorthand so that administrators can appreciate the use of these rare skills especially the aspect of good communication, speed, accuracy and confidentiality of handling office correspondence and matters.
7. Constant training and retraining of secretaries should be based mainly on shorthand skills rather than other criteria.

5.4 Suggestions for Further Study

In view of the limitation of this study, the following are suggested for further studies:

1. Relationship between secretarial duties and computer operations in modern offices.
2. Factors militating against the use of shorthand skills by secretaries in private establishments.
3. Similar study should be conducted in different parts the country.

Contributions of the Study to Knowledge

The research work has contributed to knowledge, because it has helped in correcting the misconception of many organizations and institutions that shorthand is relevant to secretarial duties despite the automated machines in offices. It could also be of help to curriculum planners and implementers in carrying out their job of design and implementation as it concerns shorthand in the school system.

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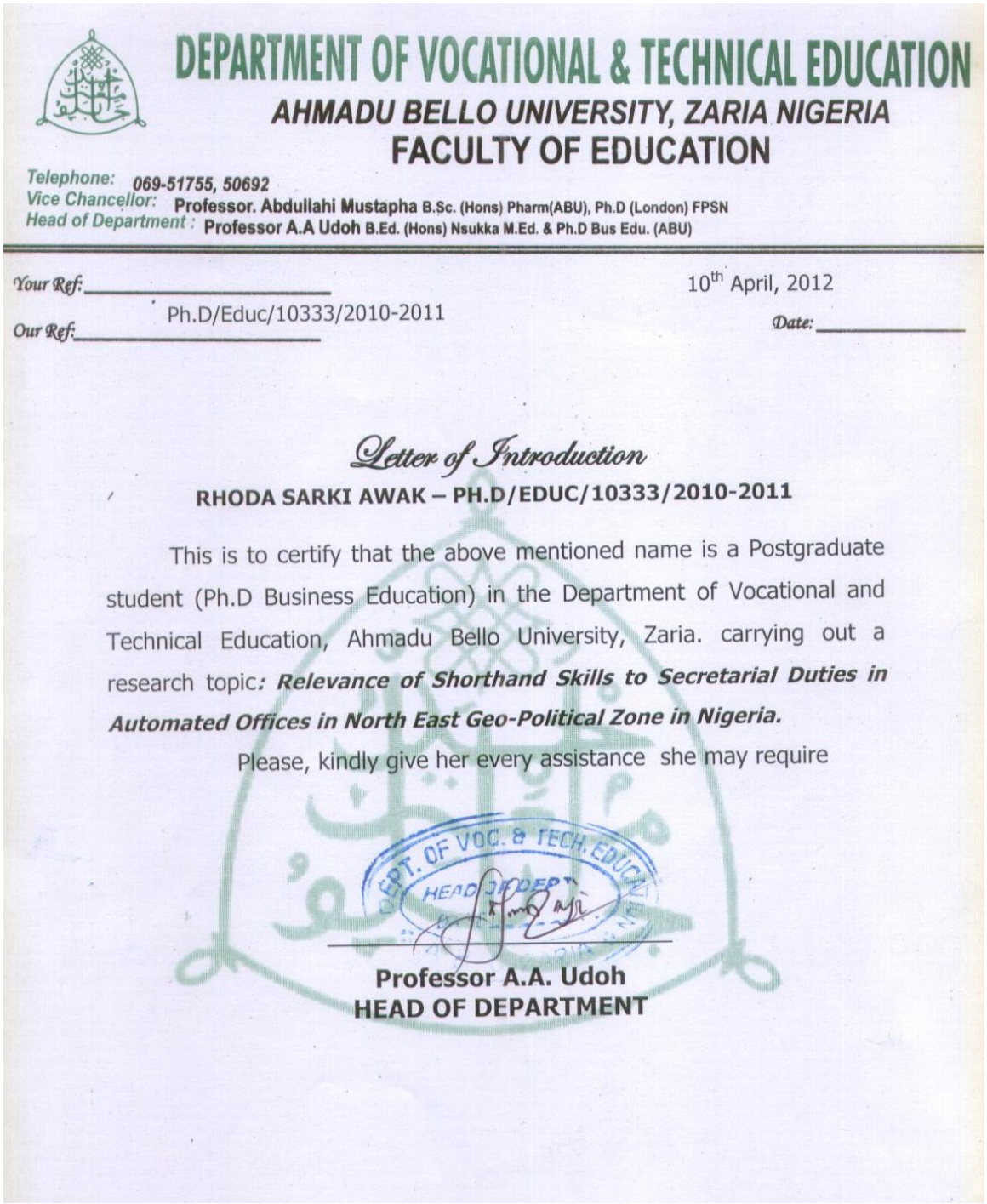
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APPENDIX I

Letter of Introduction



DEPARTMENT OF VOCATIONAL & TECHNICAL EDUCATION
AHMADU BELLO UNIVERSITY, ZARIA NIGERIA
FACULTY OF EDUCATION

Telephone: 069-51755, 50692
Vice Chancellor: Professor. Abdullahi Mustapha B.Sc. (Hons) Pharm(ABU), Ph.D (London) FPSN
Head of Department : Professor A.A Udoh B.Ed. (Hons) Nsukka M.Ed. & Ph.D Bus Edu. (ABU)

Your Ref: _____ 10th April, 2012
Our Ref: Ph.D/Educ/10333/2010-2011 Date: _____

Letter of Introduction

RHODA SARKI AWAK – PH.D/EDUC/10333/2010-2011

This is to certify that the above mentioned name is a Postgraduate student (Ph.D Business Education) in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria. carrying out a research topic: ***Relevance of Shorthand Skills to Secretarial Duties in Automated Offices in North East Geo-Political Zone in Nigeria.***

Please, kindly give her every assistance she may require

DEPT. OF VOC. & TECH. EDUC.

Professor A.A. Udoh
HEAD OF DEPARTMENT

APPENDIX II

Request to Fill Questionnaire

Department of Vocational and Technical Education,
Faculty of Education,
Ahmadu Bello University,
Zaria.

12th April, 2012.

Dear Sir/ madam,

Request to fill Questionnaire

The researcher is a post – graduate student of the above department, undergoing a Ph.D programme in Business Education. As part of the requirements for the award of the degree, the researcher is undertaking a research study titled: "On Relevance of Shorthand skills to secretarial duties in Automated Offices in North East Geo-Political Zone of Nigeria.

You are requested to help complete the attached questionnaire which is meant to elicit information on the above research topic 'your response shall be kept strictly confidential and use for academic purpose only.

Thanks for your cooperation,

Yours Faithfully,

Rhoda Sarki AWAK

APPENDIX III

Questionnaire for Secretaries and Managers

QUESTIONNAIRE FOR SECRETARIES AND MANAGERS IN AUTOMATED

OFFICES IN NORTH EAST GEO-POLITICAL ZONE OF NIGERIA

SECTION A: PERSONALDATA

Please find below a list of items. Kindly tick [√] the once that are appropriate to you.

1. Gender

   Male [ ]

   Female [ ]

2. Designation

   Secretary [ ]
   Manager [ ]

3. Your highest qualification

   NCE [ ]
   OND [ ]
   HND II [ ]

   First degree and above [ ]

   Others (specify) _____

INFORMATION ON RESEARCH QUESTIONS

NB: Indicate by ticking [✓] the options that agrees with your view/assessment on the statements, whether you 'Strongly Agree' (SA); Agree (A); Disagree (D); and Strongly Disagree (SD)

SECTION B

S/N	Relevance of Shorthand skill to Secretaries accuracy in the taking of minutes in Automated offices	SA	A	D	SD
1.	Shorthand skills are helpful in taking minutes of meetings accurately.				
2.	Shorthand skills help the secretaries to accurately follow the steps involves in taking minutes of meetings.				
3.	Accuracy of secretaries in taking of minutes does not depends on their skills in shorthand				
4.	Shorthand skills enable secretaries to achieve a greater accuracy and fluency in meetings				
5.	Shorthand skills do not help secretaries to develop minutes of meetings to reflect major points discussed				
6.	Shorthand skill is important to accurately translate outlines into full notes quickly after a meeting				
7.	Shorthand skill enables secretaries to accurately write clear sentences and paragraphs in minutes of meetings				
8.	Secretaries do not require shorthand skills to help them take minutes of meetings accurately				
9.	Secretaries use shorthand skills to display their professional image in taking minutes of meetings				
10.	Shorthand skills helps secretaries to accurately summarized minutes of meetings in an organization				

SECTION C

Relevance of shorthand skill to secretaries' speed in minutes taking in the automated offices?					
11	Shorthand skills helps secretaries with speed in using symbols and abbreviations in taking minutes of meetings				
12	Shorthand skills helps secretaries to speedily follow the steps involves in taking of meetings				
13	Shorthand skills helps secretaries to speedily take information when taking minutes of meetings				
14	Shorthand skills enable secretaries to achieve greater speed in taking minutes of meetings				
15	Shorthand skills do not help secretaries to speedily take minutes of meetings to reflect major points discussed				
16	Shorthand skills helps secretaries to speedily translate outline into full notes quickly after a meeting				
17	Shorthand skills enable secretaries to speedily writes clear sentences and paragraphs in minutes of meetings				
18	Secretaries use Shorthand skills to speedily display their professional image in taking minutes of meetings				
19	Secretaries do not require speed in shorthand skills to take minutes of meetings				
20	Shorthand skills help secretaries to speedily summarize minutes of meetings.				

SECTION D

Relevance of shorthand skill to secretaries' ability to compose correspondence in the automated office?					
21	Shorthand skills helps secretaries to easily with compose correspondence				
22	Shorthand skills helps secretaries to compose letters				
23	Shorthand skills do not helps secretary when writing memo				
24	Shorthand skills helps secretaries in writing circulars				
25	Shorthand skills provides secretaries with technical skills needed in written communication writing				
26	Shorthand skills help secretaries in Planning and organizing correspondence easily				
27	Secretaries do not require shorthand skills for collecting and analyzing information in a correspondence				
28	Shorthand skills help secretaries in sorting and writing appropriate mail in the office and present it in a useful way.				
29	Shorthand skill do not help to increase secretary's ability of writing correspondence				
30	Shorthand skills help Secretaries to compose correspondence error- free which create cordial relationship with managers in the office.				

SECTION E

Relevance of shorthand skill to secretaries' communication skill in the Automated office					
31	Shorthand skills helps secretaries with the ability necessary in communication				
32	Shorthand skills help secretaries to communicate effectively with others using the range of spoken, written, and other non- verbal means of expression				
33	Shorthand skills helps secretaries to communicate clearly				
34	Shorthand skills have no relevance to secretaries ability to interact effectively in the office				
35	Shorthand skills helps secretaries while communicating ideas and information				
36	Shorthand skills help secretaries to interact effectively with other people both one-to-one basis and in group.				
37	Shorthand skills are not relevant to secretaries ability to evaluate information and communicate effectively in the office				
38	Shorthand skills helps to secretaries to persuade groups so as to achieve desired results				
39	Shorthand skills enable Secretaries to have good command of English language and writing skills				
40	Shorthand do not help secretaries in communication processes				

SECTION F

Relevance of shorthand skill to report writing ability of secretaries in the automated office?					
41	Shorthand skills helps secretaries to write stamen of subjects in investigations				
42	Shorthand skills helps secretaries in to write terms of reference of an investigations				
43	Shorthand skills enable secretaries to write description of how information are obtained in an investigations				
44	Shorthand skills do not help secretaries to state difficulties uncounted in an investigations				
45	Shorthand skills help secretaries to write acknowledgment of assistance in an investigations				
46	Shorthand skills do not provides secretaries with confidence to apply their skills in report writing in an investigations				
47	Shorthand skills helps secretaries to summarize the main part of a report in an investigations				
48	Shorthand skills is not relevant to secretaries in recording of investigations				
49	Shorthand skills helps secretaries to write clear recommendations in an investigations				
50	Shorthand skills do not help secretaries in manipulating data in an investigations				

SECTION G

Relevance of shorthand skills to confidentiality of secretaries in the automated office?					
51.	Shorthand skills helps secretaries, to keep office document confidential				
52.	Shorthand skills helps secretaries to take official records confidentially which can only be read by them				
53.	Shorthand skills helps secretaries to manipulate data and information clearly and confidentially				
54.	Shorthand skills do not help secretaries to produce records professionally and confidentiality				
55.	Shorthand skills do not create privacy and confidentiality in office work				
56.	Shorthand skills helps secretary's work to be produced with all confidentiality				
57.	Shorthand skills help secretaries to keep confidential document in shorthand rather than longhand				
58.	Shorthand skills perform excellently in office routine especially in keeping records confidentially				
59.	Shorthand skills help secretaries take dictation confidentially anywhere either villa or urban without anybody getting access to it except the secretary				
60.	Shorthand skills is no longer relevant in keeping confidential matters by secretaries				

APPENDIX IV

Details for Appointment and Promotion of Secretaries

Details of requirements for Appointments and Promotion of Secretary Cadre for Universities/Medical Centres and establishments.

Promotions from CONTISS 7 to 13 which is the terminal grade, candidates must possess: either HND or 120, WPM

Confidential Secretary I	CONTISS 7
Senior Confidential Secretary	CONTISS 8
Principal Confidential Secretary II	CONTISS 9
Principal Confidential Secretary I	CONTISS 11
Assistant Chief Confidential Secretary	CONTISS 12
Chief Confidential Secretary	CONTISS 13

Requirements for Appointments and Promotion of Confidential Secretary Cadre for States establishments

For promotions from USS 7 to 14 which is the terminal grade, candidates must possess: either HND/OND/NCE or 80 to 120, WPM

Confidential secretary IV	05	USS4	80 WPM Shorthand	35WPM typing
Confidential secretary III	06	USS5	100 WPM Shorthand	35WPM typing
Confidential secretary II	07	USS6	120 WPM Shorthand	35WPM typing
Confidential secretary I	08	USS7	120 WPM Shorthand	35WPM typing
Senior Confidential Secretary	09	USS8	120 WPM Shorthand	50WPM typing
Senior Confidential Secretary II	10	USS9	120 WPM Shorthand	60WPM typing + 3 yrs and above
Principal Confidential Secretary I	12	USS10	120 WPM Shorthand	60WPM typing + 3 yrs and above
Asst. Chief Confidential Secretary	13	USS11	120 WPM Shorthand	60WPM typing+3 yrs and above
Chief confidential secretary	14	USS12	120 WPM Shorthand	60WPM typing + 3 yrs and above

Source Staff Recruitment/Training offices of FMC, Gombe; ATBU, Bauchi and Adamawa State Ministry of Establishment, 2012

APPENDIX V

Details of Analyses

Mean score on relevance of shorthand skill on secretaries accuracy in taking minutes in automated offices

S/N	Items	Response categories					
		SA	A	D	SD	TA	TD
1	Shorthand skills are helpful in taking minutes of meetings accurately.	840	495	256	63	1335	319
2	Shorthand skills help the secretaries to accurately follow the steps involved in taking minutes of meetings.	616	762	230	53	1378	283
3	Accuracy of secretaries in taking of minutes does not depend on their skills in shorthand	904	387	334	56	1291	390
4	Shorthand skills enable secretaries to achieve a greater accuracy and fluency in meetings	1316	390	128	55	1706	183
5	Shorthand skills do not help secretaries to develop minutes of meetings to reflect major points discussed	1060	405	178	67	1465	245
6	Shorthand skill is important to accurately translate outlines into full notes quickly after a meeting	1124	393	160	84	1517	244
7	Shorthand skill enables secretaries to accurately write clear sentences and paragraphs in minutes of meetings	700	540	310	86	1240	387
8	Secretaries do not require shorthand skills to help them take minutes of meetings accurately	1208	471	148	43	1679	191
9	Secretaries use shorthand skills to display their professional image in taking minutes of meetings	1240	399	164	51	1639	215
10	Shorthand skills helps secretaries to accurately summarized minutes of meetings in an organization	1296	399	132	53	1695	185
	Cumulative mean					**14,945**	**2642**

Mean score on the relevance of shorthand skill on secretaries' speed in minutes taking in the automated offices

S/N	Items	Response categories					
		SA	**A**	**D**	**SD**	TA	TD
11	Shorthand skills helps secretaries with speed in using symbols and abbreviations in taking minutes of meetings	696	477	358	64	1173	422
12	Shorthand skills helps secretaries to speedily follow the steps involves in taking of meetings	552	759	300	35	1311	335
13	Shorthand skills helps secretaries to speedily take information when taking minutes of meetings	972	396	340	31	1368	371
14	Shorthand skills enable secretaries to achieve greater speed in taking minutes of meetings	1284	366	204	31	1650	235
15	Shorthand skills do not help secretaries to speedily take minutes of meetings to reflect major points discussed	756	393	248	82	1149	330
16	Shorthand skills helps secretaries to speedily translate outline into full notes quickly after a meeting	1372	327	204	22	1699	226
17	Shorthand skills enable secretaries to speedily writes clear sentences and paragraphs in minutes of meetings	620	528	430	30	1148	460
18	Secretaries use Shorthand skills to speedily display their professional image in taking minutes of meetings	732	636	340	11	1368	351
19	Secretaries do not require speed in shorthand skills to take minutes of meetings	1134	393	294	14	1527	308
20	Shorthand skills help secretaries to speedily summarize minutes of meetings.	1228	372	260	13	1600	273
	Cumulative mean					**13,993**	**3201**

Source: Field Study, (2014)

Mean score of Relevance of shorthand skills on ability to compose correspondence in automated offices

S/N	Items	Response categories					
		SA	**A**	**DS**	**SD**	**TA**	**TD**
21	Shorthand skills helps secretaries to easily with compose correspondence	1320	192	178	91	1512	269
22	Shorthand skills helps secretaries to compose letters	1472	323	166	44	1795	210
23	Shorthand skills do not helps secretary when writing memo	772	363	422	51	1135	476
24	Shorthand skills helps secretaries in writing circulars	364	912	314	29	1276	343
25	Shorthand skills provides secretaries with technical skills needed in written communication writing	1388	162	154	98	1550	252
26	Shorthand skills help secretaries in Planning and organizing correspondence easily	1272	213	156	104	1484	260
27	Secretaries do not require shorthand skills for collecting and analyzing information in a correspondence	1856	168	54	29	2024	83
28	Shorthand skills help secretaries in sorting and writing appropriate mail in the office and present it in a useful way.	1372	195	130	103	1567	233
29	Shorthand skill do not help to increase secretary's ability of writing correspondence	584	477	438	62	1061	500
30	Shorthand skills help Secretaries to compose correspondence error- free which create cordial relationship with managers in the office.	424	948	248	30	1372	278
Cumulative mean						**14,776**	**2704**

Source: Field Study, (2014)

Mean score of relevance of shorthand skills on communication skills in the automated office

S/N	Items	Response categories					
		SA	**A**	**D**	**SD**	**TA**	**TD**
31	Shorthand skills helps secretaries with the ability necessary in communication	1640	201	130	32	1841	162
32	Shorthand skills help secretaries to communicate effectively with others using the range of spoken, written, and other non-verbal means of expression	1801	126	60	31	1927	91
33	Shorthand skills helps secretaries to communicate clearly	1376	207	130	98	1583	128
34	Shorthand skills have no relevance to secretaries ability to interact effectively in the office	1276	204	126	126	1480	252
35	Shorthand skills helps secretaries while communicating ideas and information	416	326	378	70	742	448
36	Shorthand skills help secretaries to interact effectively with other people both one-to-one basis and in group.	240	957	248	29	1189	277
37	Shorthand skills are not relevant to secretaries ability to evaluate information and communicate effectively in the office	1396	225	206	44	1651	250
38	Shorthand skills helps to secretaries to persuade groups so as to achieve desired results	1792	156	96	28	1948	124
39	Shorthand skills enable Secretaries to have good command of English language and writing skills	1220	210	198	102	1430	300
40	Shorthand do not help secretaries in communication processes	1208	207	182	114	1415	296
Cumulative Mean						**15,179**	**2328**

Source: Field Study, (2014)

Mean score on relevance of shorthand skills in report writing in automated offices in North East Geo-political zone of Nigeria

S/N	Items	Response categories					
		SA	**A**	**D**	**SD**	**TA**	**TD**
41	Shorthand skills helps secretaries to write statement of subjects in investigations	460	474	481	62	934	543
42	Shorthand skills helps secretaries in to write terms of reference of an investigations	344	948	284	29	1292	312
43	Shorthand skills enable secretaries to write description of how information are obtained in an investigations	1572	201	170	31	1773	201
44	Shorthand skills do not help secretaries to state difficulties uncounted in an investigations	1752	177	100	29	1929	129
45	Shorthand skills help secretaries to write acknowledgment of assistance in an investigations	1316	201	170	95	1517	265
46	Shorthand skills do not provide secretaries with confidence to apply their skills in report writing in an investigations	1232	130	164	121	1362	285
47	Shorthand skills helps secretaries to summarize the main part of a report in an investigations	400	873	208	81	1273	289
48	Shorthand skills are not relevant to secretaries in recording of investigations	1448	270	132	58	1718	190
49	Shorthand skills helps secretaries to write clear recommendations in an investigations	1296	324	146	71	1620	217
50	Shorthand skills do not help secretaries in manipulating data in an investigations	1088	252	134	153	1340	386
	Cumulative mean					**14,758**	**2817**

Source: Field Study, (2014)

Mean score of opinions of respondents on the relevance of shorthand skill on confidentiality of Secretaries in Automated office in North East Geo-political zone of Nigeria

S/N	Items	Response categories					
		SA	A	D	SD	TA	TD
51	Shorthand skills helps secretaries, to keep office document confidential	1200	136	160	129	1336	289
52	Shorthand skills helps secretaries to take official records confidentially which can only be read by them	352	954	280	29	1306	309
53	Shorthand skills helps secretaries to manipulate data and information clearly and confidentially	1440	276	130	59	1716	189
54	Shorthand skills do not help secretaries to produce records professionally and confidentiality	1700	177	118	29	1877	147
55	Shorthand skills do not create privacy and confidentiality in office work	1096	258	130	150	1354	280
56	Shorthand skills helps secretary's work to be produced with all confidentiality	1572	201	172	30	1773	202
57	Shorthand skills help secretaries to keep confidential document in shorthand rather than longhand	408	873	208	80	1281	288
58	Shorthand skills perform excellently in office routine especially in keeping records confidentially	1312	201	170	96	1513	266
59	Shorthand skills help secretaries take dictation confidentially anywhere either villa or urban without anybody getting access to it except the secretary	1300	324	146	70	1624	216
60	Shorthand skills is no longer relevant in keeping confidential matters by secretaries	468	474	481	60	942	541