INFLUENCE OF AVAILABILITY OF INSTRUCTIONAL FACILITIES AND TEACHERS' INSTRUCTIONAL METHODS ON STUDENTS' ACADEMIC PERFORMANCE IN SHORTHAND IN COLLEGES OF EDUCATION

BY

Evelyn Duniya GEORGE

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
AHMADU BELO UNIVERSITY, ZARIA

AUGUST, 2016

INFLUENCE OF AVAILABILITY OF INSTRUCTIONAL FACILITIES AND TEACHERS' INSTRUCTIONAL METHODS ON ACADEMIC STUDENTS' PERFORMANCE IN SHORTHAND IN COLLEGES OF EDUCATION

BY

Evelyn Duniya GEORGE

M.Ed/EDUC/716/ 2011 – 2012

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
AHMADU BELO UNIVERSITY, ZARIA

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,
AHMADU BELLO UNIVERSITY, ZARIA
IN PERTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF
MASTER OF BUSINESS EDUCATION DEGREE

AUGUST, 2016

DECLARATION

I hereby declare that this work has been researched and written by me, and that it is a true record of my work except where reference is made to published literature.

The researcher also declare that all the articles used in this research work are appropriately acknowledged.

Evelyn D. George | Date

CERTIFICATION

This Dissertation entitled: INFLUENCE OF AVAILABILITY OF INSTRUCTTIONAL FACILITIES AND TEACHERS' INSTRUCTIONAL METHODS ON STUDENTS' ACADEMIC PERFORMANCE IN SHORTHAND IN COLLEGES OF EDUCATION by Evelyn Duniya GEORGE meets the regulations governing the Award of the degree M. Ed (Business Education) of the Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

-- ----------------------------

Prof. A. A. Udoh Date
Chairman, Supervisory Committee

-- ---------------------------.

Dr. T. J . Adeshina Date
Member, Supervisory Committee

--- ----------------------------

Dr. E. E. Adamu Date
Head of Department
Voc. & Tech. Education

--- ---------------------------

Prof. Kabir Bala Date
Dean Postgraduate School

DEDICATION

This work is dedicated to the glory of the Almighty God.

ACKNOWLEDGEMENT

A good academic work can never be the effort of an individual. Many people are bound to offer help, advice, encouragement and active support. It is however impossible in a brief acknowledgement such as this to mention the names of all the researcher's supervisors and others who shared in making this research a reality. Therefore, the researcher wishes to use this opportunity to express her immense and profound gratitude to them all.

Specifically, the researcher's great appreciation and thanks go to her able, and tireless supervisors, Prof. A. A. Udoh, and Dr. T. J. Adeshina her internal examiner Prof. Mrs. Ojo for their pains -taking and constructive criticisms, which greatly improved the quality of this work. The researcher's thanks are also due to the HOD, Vocational and Technical Education Dr. Mrs. E. E. Adamu, the Postgraduate Coordinator Dr. Mrs., all Lecturers and other staff of the department of Vocational and Technical Education Ahmadu Bello University Zaria, for their cooperation.

The researcher also acknowledged her parents Dr. B. D George and Mrs. Angelina D. George, her brothers and sisters Mr. Theophilus, Mr. Abel, Mr. Louis, Miss Yosi, Miss Koni all of the Georges' family, who have all been great inspiration to her. Their love, moral and financial support cannot be over emphasized.

This research work cannot be complete without the researcher acknowledging her dearest husband Mr. Sheriff Dauda, my little daughter Miss Delight Zidyep, all my postgraduate mates and my friends.

TABLE OF CONTENTS

	Page
Title Page	i
Declaration	ii
Certification	iii
Dedication	iv
Acknowledgement	v
Table of Contents	vi
Abbreviations	x
List of Tables	xi
List of Appendices	xii
Operational Definition of Terms	xiii
Abstract	xv
CHAPTER ONE: INTRODUCTION	
1.1 Background to the Study	1
1.2 Statement of the Problem	3
1.3 Objectives of the Study	4
1.4 Research Questions	4
1.5 Research Hypotheses	5
1.6 Significance of the Study	5
1.7 Basic Assumption	6
1.8 Delimitation of the Study	7

CHAPTER TWO : REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework for the Study. 8

2.2 Conceptual Framework 13

2.3 Instructional Method 20

2.4 Instructional Method and Students' Performance . . 23

2.5 Instructional Facilities 24

2.6 Instructional Facilities and Students' Performance . . . 26

2.7 Empirical Studies 27

2.8 Summary of Literature Review 32

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design 34

3.2 Population for the Study 35

3.3 Sample Size, and Sample Technique 35

3.4 Instrument for Data Collection 35

3.4.1 Pilot Study 36

3.4.2 Validity of the Instrument 36

3.4.3 Reliability of the Instrument 37

3.5 Procedure for Data Collection 37

3.6 Procedure for Data Analysis 38

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

4.1 Analysis of Data to Answer the Research Questions . . 39

Research Question 1 39

Research Question 2 42

Research Question 3 43

Research Question 4 44

4.2 Hypotheses Testing 45

Hypothesis 1 45

Hypothesis 2 47

Hypothesis 3 48

Hypothesis 4 49

4.4 Summary of Major Findings 51

4.5 Discussion of Findings 52

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATI ONS

5.1 Summary 55

5.2 Contribution to Knowledge 55

5.3 Conclusion 56

5.4 Recommendations 56

5.5 Suggestion for further studies 57

References 58

Appendices 63

ABREVIATIONS

FGRs	-	First Group of Respondents
NBTE	-	National Board for Technical Education
NCE	-	National Certificate of Education
NCCE	-	National Commission for Colleges of Education
NPC	-	National Population Commission
TVE	-	Technical and Vocational Educators
UBE	-	Universal Primary Education
NUC	-	National University Commission
US	-	Unsatisfied
S	-	Satisfied

LIST OF TABLES

Page

Table 1: Shorthand Instructional Facilities 1 25

Table 2: Shorthand Instructional Facilities 2 26

Table3: Shorthand Teaching Aid 26

Table 3.1 Population of the Study 35

Table 4.1 Staff Educational Qualification 40

Table 4.2 Mean and Standard Deviation of Available Shorthand Teachers and Their Influence on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 41

Table 4.3 Mean and Standard Deviation of Teachers' use of Instructional Method and their Influence on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 42

Table 4.4 Mean and Standard Deviation of Available Instructional Facilities and their Influence on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 43

Table 4.5 Mean and Standard Deviation of the differences between College of Education Akwanga and College of Education Pankshin on the influence of Instructional Facilities and Teachers' use of Instructional Methods on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 44

Table 4.6 Correlation Test of Available Shorthand Teachers and their Influence on Students' Academic Performance in Shorthand in Colleges of of Education Akwanga and Pankshin 46

Table 4.7 Correlation Test of Teachers' use of Instructional Methods and their Influence on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 47

Table 4.8 Correlation Test of Available Instructional Facilities and their influence on Students' Academic Performance in Colleges ofEducation Akwanga and Pankshin 48

Table 4.9 t-test of the differences between College of Education Akwanga and College of Education Pankshin on the influence of Instructional Facilities and Teachers' use of Instructional Methods on Students' Academic Performance in Colleges of Education Akwanga and Pankshin 50

LIST OF APPENDICES

	Pages
Appendix ‘A’ Letter of Introduction	63
Appendix ‘B’ Introductory Letter to the Respondents	64
Appendix ‘C’ Questionnaire for the Teachers	65
Appendix ‘D’ Introductory Letter to the Respondents	70
Appendix ‘E’ Questionnaire for Students	71
Appendix ‘F’ Akwanga College of Education Business Education Department Students’ Shorthand Academic Result 2011 – 2014	75
Appendix ‘G’ Pankshin Federal College of Education, Business Education Department Students’ Shorthand Academic Result in Shorthand Examinations 2011 – 2014	76
Appendix ‘H’ Correlation Analysis of Hypotheses	77

Operational Definition of Terms

Academic Performance in Shorthand:

Refers to the students' ability to pass the prescribed test or examination with high grade in shorthand.

Adequate: In this research, adequate means the availability of instructional facilities in qualitative and quantitative terms, and also qualified shorthand teaching staff.

.**Equipment**: This term refers to the things needed for a particular purpose. They are tangible things. For the purpose of this study, equipment refers to typewriters, ICT accessories like computers, stop watch, chalkboard, student chair and desks, standby electric plant /generator, textbooks, file cabinets, radios, television, students dictating machine, typewriters, electric plant /generator, etc.

Instructional Facilities: For the purpose of this study, facilities refer to shorthand studio , typing pool, model office, library, ICT components such as network services: ICT Laboratory, staff offices, Classrooms/lecture theatres, tables, desks, computers typewriters, shorthand textbooks (they are shorthand instructional facilities)

Influence:: For the purpose of this study, influence refers to the force with which facilities and equipment have affected students' academic performance in shorthand.

Student's Performance: This term refers to the achievement of students in shorthand test or examination in relation to academic grades.

Shorthand: Is a core course in office education option. It is the Pitman Shorthand The act of representing spoken sound by written signs.

Instructional Method: In this study, it means the effective ways/styles of teaching skill Subjects such as shorthand. These are demonstration, drilling, lecture, Cooperative learning, drama, dictation, reading rate etc.

ABSTRACT

This study investigated the influence of availability and use of instructional facilities and teacher's instructional methods on students' academic performance in shorthand in Colleges of Education Akwanga and Pankshin. Two sets of questionnaire were raised to guide the study, while two hypotheses were formulated and tested at 0.05 level of significance. The study assessed the variables responsible for students' poor performance in shorthand examinations. our research questions were raised to guide the study, while four null hypotheses were formulated and tested at 0.05 level of significant. The primary data for the study were collected through the use of questionnaire, while the secondary data for literature review were collected from available literature on the topic. Since the population of the study was not too large, the study did not adopt any sampling technique to select the respondents. The population of fifty which was manageable enough was used as sampled population for the study. The data were presented using table tabular statistical system, and analysis of the research questions was done using simple 2.50 mean criterion for acceptance of items. The Pearson Product Moment Correlation Coefficient (PPMCC) was used to test hypotheses 1, 2, and 3, while the t-test statistical analysis was used to test hypothesis 4. The findings of the research revealed that inadequate qualified shorthand teaching staff, inadequate laboratory facilities, and the use of ineffective teaching techniques by shorthand lecturers were the major causes of students' poor academic performance in shorthand examinations. It was also revealed that some of the few available shorthand laboratory facilities in the colleges were not functioning. The study further revealed that there was no significant difference between College of Education Pankshin and College of Education Akwanga on the impact of available laboratory facilities and teaching techniques. In view of this, the research recommended that government and college managements should equip shorthand

laboratories with adequate functional facilities, qualified shorthand lecturers should be employed while the unqualified ones should be encouraged to go for further study and attend conferences and workshops to update their knowledge on shorthand. Lecturers teaching shorthand should adopt effective teaching techniques in teaching shorthand, They are encouraged to improvise teaching-aids locally and to develop techniques of encouraging students that are hardworking so as to stimulate the weak ones to wake up.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Business education as a component of technical and vocational education is said to be a set of instructions that prepare students for jobs in the business world. Business education, like many other courses is aimed at providing an individual with knowledge, skills, aptitudes and methods required in business training. Thus, Business Education is the preparation of individuals for enterprises or employment. The philosophy behind business education is to prepare its graduates for work and for the development of the society. Aliyu (2004) explained that business education programme is a programme that incorporated all business courses. These include Business Administration, Marketing, Accounting, purchase and Supply, Business Studies, Secretarial Studies etc, while at the teacher education level three major components are identified, thus: Accounting Education, Distributive/Marketing Education, Office Tecchnology Management.

Adeshina and Aliyu (2011) stated that Office Education is part of Business Education programme that equips students with all office technology management domain in order to be effective and efficient. Office Education as a programme of study in Business Education programme is expected to be equipped with instructional facilities such as typewriters, computers, photocopier, scanners, projectors, standby electric plant/generator, air-conditioners, radios/tape-recorders, video recorders, television, executive tables and chairs, executive cushiness, stop watch, console head phones among others, with qualified teachers that could use varied teaching methods and techniques for teaching and learning. A pilot survey and interaction with some Business Educators and students (Office Option) in College of Education Gidan Waya

Kaduna State, revealed that some of the lecturers are ill-prepared as they are not aware of some facilities and equipment especially the emerging technologies in ICT. They seem to be aware of some of them in theory not in practice. The teaching of skill courses has shifted from traditional emphasis in chalk and talk to practical knowledge and manipulation of machines and equipment for skill acquisition.

The 2012 NCCE Minimum Guideline Standard states in clear terms the facilities and equipment required for teaching and learning office education courses at NCE level to include: Shorthand laboratory, Model Office fully equipped, Functional Typing Pools, Functional ICT laboratory, Comfortable Students Waver chairs and desks, Standby electric plant/generator, Fully equipped Staff Offices and Standard lecture theatres, Functional toiletry facilities among others. Osuala (2004) and Udoh (2010) are of the view that many colleges of education tend to prepare students with inadequate facilities and equipment, thereby, making office education graduates half-baked and incompetent to compete effectively in today's world of work which is full of challenges of modern equipment and facilities.

Shorthand a course taught under the Office Education option as the major thrust of this study has suffered tremendously in view of lack of adequate instructional facilities, qualified teachers and use of correct teaching methods. This has consequently led to students' mass failure, resulting into their mass defection from Office Option to Accounting Option. The poor academic performance in shorthand subject ma be attributed to the reason that students have preference for accounting option than secretarial option. To a large extend, it has not contributed to the achievement of the objectives for which the programme was designed.

Teaching Technique has to do with the methods and styles the teachers adopted to accomplish a desired purpose of teaching the students effectively. it implies that effective teaching must be characterized by the use of teaching methods that are best for the attainment or development of required shorthand skills. Teaching skill requires varieties of methods such as lecture method, demonstration method. Generally, skill development requires practical demonstration and constant practice.

Based on the variables of this study upon which the background is built, the study therefore sets out to evaluate the influence of laboratory facilities, equipment and teaching methods on students' academic performance in shorthand in colleges of education in the North Central Zone of Nigeria.

1.2 Statement of the Problem

The increasing level of poor performance of students in shorthand in tertiary institutions calls for assessing the instructional and environmental facilities and teaching method that would improve the teaching of shorthand in colleges of education in North Central Zone in Nigeria. The poor performance of students in shorthand skill is evident on apparent poor performance in shorthand. Students' apparent poor performance in shorthand could be observed in appendices F and G which showed clearly five years shorhthand results (2010 – 2014). The results showed five years average performance of 34.33% and 27.07%. As shown from the five years' statistics in the two institutions, it cannot be clearly stated what factors that influence the students' poor performance in the skill. The researcher therefore wants to know which particular factors are responsible for the low students' performance in the two colleges.

1.3 Objective of the Study

The general objective of this study is to establish the influence of availability and use of instructional facilities and the teachers' instructional method on students' academic performance in shorthand in Colleges of Education in Akwanga and Pankshin. The specific objectives of this study are to:

1. find out the extend the available shorthand teachers influence students' academic performance in shorthand in colleges of education in Akwanga and Pankshin.
2. find out the extend the teaching methods used by teachers influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.
3. find out the extend that the teachers' use of the available instructional facilities influence students'academic performance in shorthand in colleges of education Akwanga and Pankshin.
4. establish the difference that exists between Colleges of Education Akwanga and Pankshin on the influence of teachers' use of available instructional facilities and instructional methods on students' academic performance in shorthand.

1.4 Research Questions

Considering the specific objectives of the study, the following research questions were generated with particular focus on Colleges of Education Akwanga and Pankshin.

1. To what extent does the available shorthand teachers influence students' academic performance in shorthand in Colleges of Education Akwanga and Pankshin?
2. To what extent does the teachers' use of instructional methods influence students' academic performance in shorthand in colleges of education Akwang and Pankshin ?
3. To what extent does the available instructional facilities affect students' academic performance in shorthand in colleges of education Akwang and Pankshin ?
4. establish the difference that exists between College of Education Akwanga and College of Education Pankshin on the influence of teachers' use of available instructional facilities, and instructional methods on students' academic performance in shorthand in colleges of education Akwang and Pankshin ?

1.5 Research Hypotheses

The following four null hypotheses are formulated to aid this study:

Ho_1

The available shorthand teachers in the two colleges of education will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

Ho_2

The shorthand teachers' instructional methods will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

.

Ho_3

The teachers' use of available instructional facilities will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

Ho_4

There will be no significant difference between College of Education Akwanga and College of Education Pankshin on the Influence of teachers' use of available instructional Facilities and Instructional methods on students' academic Performance in Shorthand.

1.6 Significance of the Study

It is hoped that the results of this research will be useful to the following: government, college managements, lecturers, students and future researchers in the following ways;

The government will benefit from this study as it will be an eye opener for it on the type of instructional facilities and office technology management teachers' training programmes for effective teaching and learning of shorthand.

Colleges of Education managements will understand the reasons for poor students academic performance in shorthand and thereby make effort to employ adequately qualified shorthand teachers and also provide the required instructional facilities for the teaching of shorthand.

Shorthand teachers would realize their weaknesses in teaching shorthand, and therefore, adopt effective instructional methods and effectively use available shorthand instructional facilities to teach shorthand.

The provision of appropriate shorthand instructional facilities, teaching aids and adequate shorthand teachers in the colleges of education studied will go a long way in stimulating shorthand students to develop interest in shorthand and work hard for improved shorthand academic performance.

This study would be a document of reference to students and scholars in general.

1.7 Basic Assumptions

This study assumed that:

i. The available shorthand teachers in the two colleges of education Akwang and Pankshin were not adequately qualified to teach shorthand at NCE level.

ii. Shorthand teachers in the two colleges, Akwanga and Pankshin used ineffective instructional methods to teach students shorthand.

iii. Teachers' use of available instructional facilities in teaching shorthand in the two Colleges of Education has no influence on students' academic performance in shorthand.

iv. There is no significant difference on the influence of teachers' use of available instructional facilities and instructional methods on students' performance in shorthand in colleges of education Akwanga and Pankshin

1.8 Delimitation of the Study

This research covered the influence of the state of laboratory facilities, and teaching techniques on students' academic performance in shorthand in Colleges of Education Akwanga, Nassarawa State and Pankshin, Plateau State with particular reference to shorthand, a course offered within the Office Education Option in Business Education Department. It concerns itself with all the lecturers teaching shorthand, Heads of Departments and 300 level students' five years (2010 – 2014) results Business Education Departments in Akwanga and Pankshin Colleges of Education.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This study is aimed at assessing the factors affecting student's academic performance in shorthand and examinations in Federal College of Education Pankshin and College of Education Akwanga. The chapter is discussed under the following sub-headings:

2.1 Theoretical Framework

2.2 Conceptual Framework

2.3 Teaching Techniques

2.4 Teaching Techniques and Students' Performance

2.5 Laboratory Facilities

2.6 Laboratory Facilities and Students' Performance

2.7 Empirical Studies

2.8 Summary of Literature Review

2.1 Theoretical Framework

This research is hinged on Social Learning Theory Approaches propounded by Albert Bandura (1977). In social learning theory Albert Bandura (1977) agrees with the behaviourist learning theories of classical conditioning and operant conditioning. He developed two important ideas:

1. Behavior is learned from the environment through the process of observational learning.

2. Mediating processes occur between stimuli and responses.

3. Observational Learning

Children observe the people around them behaving in various ways. This is illustrated during the famous Bobo doll experiment (Bandura, 19610.

Individuals that are observed are called models. In society, children are surrounded by many influential models, such as parents within the family, characters on children's TV, friends within their peer group and teachers at school. These models provide examples of behavior to obpro and antiserve and imitate, e.g. masculine and feminine, pro and anti-social etc.

Children pay attention to some of these people (models) and encode their behavior. At a later time they may imitate (i.e. copy) the behavior they have observed. They may do this regardless of whether the behavior is gender appropriate or not, but there are a number of processes that make it more likely that a child will reproduce the behavior that its society deems appropriate for its sex.

First, the child is more likely to attend to and imitate those people it perceives as similar to itself. Consequently, it is more likely to imitate behavior model behavior modeled by people of the same sex.

Second, the people around the child will respond to the behaviour it imitates with either reinforcement or punishment. If a child imitates a model's behaviour and the consequences are rewording, the child is likely to continue performing the behaviour. Her behaviour has been reinforced or strengthened.

Reinforcement can be external or internal and can be positive or negative. If a child wants approval from parents or peers, this approval is an external reinforcement, but feeling happy about being approved of is an internal reinforcement. A child will behave in a way which it believes will earn approval because it desires approval.

Positive or negative reinforcement will have little impact if the reinforcement offered externally does not match with an individual needs. Reinforcement can be positive or negative, but the important factor is that it will usually lead to a change in a person's behaviour.

Third, the child will also take into account of what happens to other people when deciding whether or not to copy someone's actions. A person learns by observing the consequences of another person's behaviour or models. Example, if a younger sister observing an older sister being rewarded for a particular behaviour is more likely to repeat the bahaviour herself. This is known as vicarious reinforcement.

This relate to attachment to specific models that possess qualities seen as rewarding. Children would have a number of models with whom they identify. These may be people in their immediate world, such as parents or older siblings, or could be fantasy characters or people in the media. The motivation to identify with a particular model is that they have a quality which the individual would like to possess.

Identification occurs with another person being a model and involves taking on or adopting observed behaviours, values, beliefs, and attitudes of the person with whom you are identifying.

The term identification as used by Social Learning Theory is similar to the Freudian term related to the Oedipus complex. For example, they both involve internalizing or adopting another person' behviour. However, during the Oedipus complex the child can only identify with the same sex parents, whereas with Social Learning Theory the person whether child or adult can potentially identify with any other person.

Identification is different to imitation as it may involve a number of behaviours being adopted, whereas imitation usually involves coping a single behaviouring.

The Social Learning Theory approach is adopted in this research because as the theory emphasized shorthand students need to imitate behaviour modeled by experts and their teachers. The primary goal of this theory is to teach a deep understanding of disciplines and simultaneously fostering and developing skills. The theory is adopted because it highlights important requirements for effective teaching and learning, which are relevant to this research. These requirements are:

The theory provides an understanding of the goals, context and challenges of what is to be taught and learned, It emphasizes the need to bridge gaps between theory and skills, it advocates for variety of motivations, helps students develop shared mental models of what is to be learned, encourages team work and exchange of ideas, students are provided with perspectives of experts, complete skill-building lessons are required, multiple effective evaluation techniques that provide realistic standards of performance are required so that the teacher can effectively evaluate students and the students can equally know their progress. The theory helps set standard for achievement and motivates students to do well.

2.1.2 Constructivist Learning Theory Propounded by Jonassen (1992)

The primary goal of this theory is to foster problem-solving and conceptual development. It is intended for ill-defined or ill-structured domains. It consists of six steps:

1. **Select Problem:**

a) Problem should be interesting, relevant and engaging, to foster learner ownership

b) Problem should be ill-defined or ill-structured

c) Problem should be authentic (what practitioners do)

d) Problem design should address its context, representation, and manipulation

2. **Provide Related Cases** or worked examples to enable case-based reasoning and enhance cognitive flexibility

3. **Provide Information**

a) Provide learner-selectable information just-in-time

b) Available information should be relevant and easily assessable

4**. Provide cognitive Tools** that scaffold required skills, including problem representation, knowledge-modeling, performance-support, and information-gathering tools

5. **Provide Conversation and Collaboration Tools** to support discourse, communities, knowledge-building communities, and/or communities of learners

6. **Provide Social/Contextual Support** for the learning environment

Additional Instructional Activities to Support Learning:

1. Model the performance and the covert cognitive processes

2. Coach learners by providing motivational prompts, monitoring and regulating the

3. Learners performance, provoking reflection, and/or perturbing learners' models.

   Scaffold the learner by adjusting task difficulty, restricting the task, and/or Providing alternative assessments.

2.2 Conceptual Framework

2.2.1 History and Application of Shorthand

Shorthand is mostly used in business offices around the world. According to Ahukannah and Ugoji (2009), most offices in the past had stenographers or secretaries who write shorthand and type daily (their modern equivalent is much like today's administrative assistance) who take dictation from the boss and typed up the dictation into letter format. Prior to the 1880s, before the typewriter took the business world by storm, transcription from shorthand was done in longhand. The boss would sign a typed letter only if there were no errors. Both shorthand and typewriting are faster and clearer process than having longhand draft from the boss. Shorthand and typewriting are special skills possessed by able secretaries.

Shorthand is not dead by any means, however, it is not experiencing the glory days it had in the past. Ajao (2005) states that there are thousands or millions of those who still use shorthand for employment purpose, there are those who use it on personal basis to make their lives easier and more productive, or who enjoy using it as a hobby. What then is shorthand? Shorthand is a means of rapid writing; it is an abbreviated symbolic writing method that increases speed and brevity of writing as compared to a normal method of writing a language. Danduwa (2009) opined that a typical shorthand system provides symbols or abbreviations for words and common phrases, which can allow someone well trained in the system to write as quickly as people speak. Many forms of shorthand exist. The pitman shorthand system introduced in 1837 has been the most accepted type worldwide especially in the English-speaking world.

Shorthand is a core course in Business Education Office Technology and Management option. Many colleges of Education have Business Education Department where Business Education is offered at the National Certificate of Education (NCE) Level. Business Education comprises two options: According Option and Secretarial Option. The students are expected to specialize in one of these options at 300 Level.

The Accounting option in addition to education courses has the following business courses: Book-keeping, Accounting, Cost accounting, Financial accounting, Auditing, statistics, Taxation, Entrepreneurship, Business Law, Mathematics, Computer Appreciation, Economics etc.. The secretarial option in addition to Shorthand and Typewriting has the following secretarial courses; Office practice, Secretarial Duties, word processing, office management, Business Law, Mathematics, Economics, Entrepreneurship Education etc. Graduates of Business Education in Colleges of Education are awarded NCE. They are trained as middle Level Business Educators. The National Policy on Education (2004) spelt out the objective of Vocational and technical Education which Business Education is inclusive.

1. To provide trained manpower in the applied sciences, technology and Commerce.

2. To provide the technical Knowledge, technology and vocational skills necessary for Industrial, commercial, economic development and economic reliance of Nigeria.

3. To give training and impart the necessary skills to individual who shall be Self-reliant economically.

4. To give training and impart the necessary skills for the production of and other skilled personnel who shall be enterprising and self reliant;

5. To train people who can apply scientific knowledge to solve environmental for the convenience of man.

Graduates of Business Education are not only trained to be Business Educators in

Primary and Secondary Schools, but they are also employed in both public and private establishments as confidential secretaries /Personal Assistance. Some developed themselves and become self – employed. No wonder then that Egele (2004) opined that students that go through any of the specialized options in business education become intelligent buyers, sellers, consumer of goods and services.

According to Osuala (2004) and Udoh (2010), the objectives of Business Education (Office Education in particular) cannot be achieved as many Colleges of Education are preparing students with inadequate facilities and equipments, thereby, making office education graduates half-baked and incompetent to compete effectively in today's world of work which is full of challenges of modern equipments and facilities.

This research therefore sets to address this issue by stating that the above objectives of Business Education (Office Education in particular) cannot be achieved without adequate facilities and equipments.

2.2.2 Shorthand Teachers

Who is a teacher? The Oxford Advance learners Dictionary (2007), defines a teacher as "a person whose Job is teaching.'' According to Garba, (2012), the society has set ideals for a teacher, seeing the teacher as a prospector, inspirer, critic and appreciator of excellence and enemy of shoddiness, above reproach, indefatigable, dedicated, zealous and self controlled. Jokthan (2008) view a teacher as one whose primary occupation is to impart knowledge into the learners mind, bring facts and situation before the learner in a way that he is led to make effort to get hold of those facts and to enter into those situations for him.

2.2.2.1 Teaching Qualification of Shorthand Teachers

The shorthand teachers have the same responsibilities just like other teachers as mentioned above. Teachers are the resources person that provide the skills, ideas, knowledge, values and direct the teaching learning situations or process. They have to help their students who desire to work in business to develop those skills and knowledge of shorthand. Okebukola (2011) states that the objectives of the programme, availability of equipment, and well defined curriculum are all very important, but the most important one with the possible exception of well defined objectives is the teacher. Robert et al (2011) observe that business education teachers should posses the knowledge, skill and attribute desired of all educated persons, the technical competencies required in one or more area of business education (shorthand and typewriting in office education), a knowledge of the principle and methods of teaching and some practical experience of one of the business occupations. Eze (2009) opined that every good secretarial teacher must possess the mastery of shorthand and typewriting skill and in addition the following qualities:

Good Qualification: An adage goes thus "you cannot give what you don't have'', so therefore every teacher must be qualified to teach before doing it. Eze added that '' the teacher must know his/her subject matter very well and always prepare well for his/her lessons.

Good delivery/teaching technique: it is unfortunate to observe that some lecturers /teachers deficiencies do not arise from their qualification, but find it difficult to get across to their students, this may be a lack in their pedagogical knowledge.

The teacher being the major actor in a school setting, Okebukola (2011) noted that;

There is plethora evidence (UNESCO) suggesting that the teacher quanlity, and motivation excerpts note worthy effects on a host of school variable. These include enrolment, participation *and achievement of pupils. The shortfall in teacher number translates to high pupil/teacher ratio and serve stress on teachers on ground, the link between teachers stress and productivity has been established. Inadequately number of Teachers in the school system could account for the declining quantity of education.*

The availability of qualified shorthand teachers becomes imperative and necessary in the recruitment of teachers especially at the tertiary institution level of our educational sector. According to Abenga (1998) skill subjects in most schools are taught by unqualified teachers. For instance, holders of B. Ed Business Education optioning in Financial Acconting or HND in Accounting are often appointed to teach shorthand and typewriting. In this kind of improper arrangement and academic abuse, it is glaring that poor performance of the teachers will definitely result in poor results of the students or learners.

Teachers quality, efficiency and professional competence revolve around the experience, personal competence and specialization. These among others are the most important traits and characteristics that competent teachers must possess in order to contribute meaningfully towards educational development. The dearth of technical and vocational teachers in the national education system has reached a crises proportion. The impact of the crises had been manifested in examinations conducted by the National Business and Technical Examination Board (NABTEB), the National Examination Council (NECO) and the West African Examination Council (WAEC) in vocational subjects. In 1988 the Aina Panel Report established an overall shortage of 96.4% of technical and vocational (TVE) teachers and recommended Accelerated Technical and Vocational Teacher production for the Country. In 1997, a survey report by Nigerian Education Research and Development Council (NERDC) on the State of demand and supply of TVE teachers nationwide indicated that about 270,000 representing 74% of total need were not available in 23 different subjects. A similar survey carried out by NBTE in respect to technical and vocational colleges indicated a supply shortfall of 78% (Aina 2000). Nwaokolo (2008) opined that despite the expression of faith in the teacher, the educational system is plagued with inadequacies in teacher supply, both in quantitative and qualitative terms".

One of the areas that had a lack right from the colonial government administration to date is the vocational teacher education, and this is not to say that the government then was not aware of the important role qualified vocational teachers could play in technical manpower development. Its posture on the issue could have been the general negative attitude towards technical vocational education as a whole and not as though there was no school for vocational teacher education at all, but the number of such teachers actually trained by those institutions was too insignificant to make any impact on vocational teacher supply needed. The then Dike committee Report called on the government of Eastern Nigerian to initiate urgent action for the training of technical and vocational teachers. In Western Nigeria the Banjo Commission Report recommended the establishment of a college for the training of technical and business teachers. All these recommendations were not implemented by the government and thus: the inadequate supply of technical vocational teacher in their right specifications and number of the different vocational and technical programme e.g. Accounting Education, Home Economics, Agriculture, Technical and Secretarial Studies both at the tertiary, secondary and teacher training Levels has continued to stand out a major impediment to smooth policy on teaching vocational education (Oborah 2011). All levels of teachers need adequate training and motivation for proper implementation of our educational programmes, and shorthand teachers are not exceptional.

2.2.3 Shorthand Skill

Shorthand as already defined is the act of representing spoken sound by written signs. The signs which consist of the consonants of the subject are represented by a series of simple strokes, selected to provide the most facile joining with one another. It is the writing of these strokes that make shorthand a skill course. Learning and writing shorthand demands daily and continuous drilling. Shorthand contains wealth of drill material for each unit of instruction. Thus, learners of the subject have to develop skill in reading and writing shorthand. It is only through reading, drilling and writing shorthand outlines that learners will have self courage and progress.

2.2.4 Shorthand Skill Development

Shorthand skill can be developed only through constant practice. There are varieties of ways to develop the skill. First, the course is presented in logical arrangement. It is divided into units, and each unit is followed by an adequate amount of application. The principles in each unit are stated briefly and simply. The learner needs to understand the principle very well and apply it practically as demonstrated practically and skillfully after each theoretical principle. Most of the exercises in the "Pitman Shorthand New Course text book" are in shorthand. Drilling and reading correct shorthand is valuable to the student/learner, and this approach makes it possible for the student to write shorthand outlines correctly, and also prevents him from writing or seeing incorrectly written outlines. Dictation is also one of the important ways of developing shorthand skill. There are many shorthand textbooks containing simply arranged dictation exercises to help learners develop shorthand skills. Learners will find shorthand simple and interesting if they follow the right techniques of learning the course.

2.3 Instructional Methods

Teaching is an inculcation of knowledge for positive change in the learners. Teaching are planned series of action for achieving something (Longman 2003). Therefore, teaching methods and techniques are planned series of action for transmitting knowledge to the learner. This includes the methodology and the management techniques adopted by the teacher during the process of teaching. The ultimate aim of the teacher is to organize conditions necessary for effective learning to take place.

Teaching metthods are detailed list of rules or guideline for teaching activity. It is based on the description of steps, or a set of do's and don'ts when teaching. Teaching method is therefore a procedure or skill for completing a specific task; especially those that involve skills. Teaching methods consist of games, activities, actions etc that are practical which the teacher can use to achieve certain goals in the classroom. There are various methods and techniques a teacher can adopt in presenting the lesson to the students depending on the subject matter being taught. The most effective methods which are adopted in teaching shorthand according to scholars as Patnerson 2004, Ericson 2000, among others are discussed as follows:

(a) **Demonstration**: This is usually a (traditional method) used by the teacher to illustrate a procedure to be followed Leroy and Herbert (2002). This invariably means the way and manner problems ought to be followed to the logical conclusion. According to Ndanwu and Ukwo (2005), all agreed that shorthand, typewriting and accounting to be properly taught, the teachers' demonstration by all means is very important. This enables the teachers to show the students the various manipulations of machines, figures, symbols and even signs which include what is to be done and why it is done.

(b) Practice and Drilling: Shorthand is a practical skill subject that demand practical approach. In this method, students repeatedly drill shorthand outlines and passages in shorthand until they reach an acceptable degree of competency so that they can drill very fast. Shorthand experts agreed that this method is necessary when students are expected to acquire shorthand skill or some proficiency in performing some specific act. This method is therefore very effective in the teaching and learning of shorthand.

(c) Speed/Dictation: The main objective of learning shorthand is to be able to take down fast spoken speech in shorthand. Speed development in shorthand is an act of taking down in shorthand dictated passages, speech etc at a fast rate. Normally, dictation is timed using stop watch so as to measure the number of words a shorthand writer can take down per minute. Dictation normally lasts for one or more minutes depending on the passage and the time desired. Speed development through dictation is an effective method of learning shorthand.

(d) Reading Rate: Reading Rate is also an effective method of learning shorthand. Just as speed and dictation technique, reading rate is timed using the stop watch to measure the number of words a student can read shorthand printed passages per minute. It is also timed for one or more minutes depending on the desire of the teachers and the passages being read. Reading Rate enables the students to know the shorthand outlines, comprehend the method of writing them and the logic behind their writing. It is generally believed by shorthand experts that the faster a student can read shorthand outlines, the faster also he can write them in speed dictation.

Daudawa (2009) said that any good teacher will probably use several teaching methods during the course of a class period, changing from one to another and using them in various combinations as the demands of the total situation changed from moment to moment. Other techniques of learning shorthand include, teacher's introduction of the lesson, cooperative group learning, students develop positive interdependency, taking responsibility in group work, drama method which consists formal and informal drama and role play, students design thinking, self learning, gamification, using free online learning tools, utilizing the social media and individual assignments, excursion, using shorthand to take down notes during lectures, shorthand experts demonstrating the experts' styles, etc.

Teachers' effective teaching method implies the use of materials in an orderly and efficient way to produce certain desired growth, skills and development in the life of the students as a consequence of his being stimulated and guided in the making of proper responses. Agbo (2010) opined that method is a utilization of activities and materials, or it is in other words, arranging of opportunities for learning. He adds that methods always have double reference to the learning on the one hand and the materials on the other hand. It is a way in which the teacher uses materials, equipments, and or facilities to accomplish a desired purpose in the life of the students, and it is determined on the one hand by the requirements of the learner and on the other hand by the requirements of teaching aids/materials. This shows that method consists in bringing about those conditions under which enrichment, skill development and control of experience can best take place. It also implies that good teaching is characterized by the use of the method that is best for the attainment of the goal in mind.

Richey (2009) contends that teaching is a matter of bringing students and subject matter together and making connection between new experience awaiting the learner and the student who is to do the degree that proper connection is made and the choice of method is a most important factor especially in skill development subjects like shorthand. Method therefore becomes the most important factor in determining the kind of connection, which the method used, like the subject matter is a means to an end, never an end in itself. Method according to him is without meaning or value except if it serves the purpose. He who accomplishes the best results in the best way is he who uses the method that is best for the attainment of the goal in mind.

2.4 Instructional Methods and Students' Performance

Walkins (2005) states that students' performance has a correlation with teaching pedagogy that the teacher adopts in presenting his lessons. He opined further that wrong teaching pedagogy cannot produce realistic standard performance. According to him, students' performance is the level of students' achievement in the course of teaching and learning. He therefore identifies factors to be considered in selecting teaching pedagogy for effective teaching and learning. In his own opinion, all methods are not equally good for all situations. There is no best technique for all settings. It is impossible to say that any particular method is always superior to any other.

A good teacher will probably use several techniques in teaching–learning processes especially skill subjects like shorthand. Walkins further asserts that while none can always be certain concerning what technique to use, the following are some factors that will serve to guide the teacher in the conscious selection and use of the best attitude of the students towards learning:

i. Previous study in the same field
ii. Nature of the subject/materials
iii. Physical equipments and facilities available/ required
iv. Time for teaching and
v. Skill and qualification of the teacher.

According to Edge (2005) the worst method is the one used all the time. If one methode is used day after day with no variation, it leads to boredom and kills the interest of the students. Shorthand is a practical skill subjects endowed with several teaching methods. Bryant (2005), maintains that if students are to perform well in skill subjects, the teacher who desires to present practical skill subject to his students must also be very skillful in the subjects. He must indeed be able not only to approach his teaching with varieties of methods, his approach, materials, methods, questions and illustrations should varied according to the individual or group of students. Cox (2010) expresses the same opinion that a skillful teacher must be a constant student of method in general and of his own method in particular. He adds that no good method can be attributed to some clever invention.

From the above discussions, the importance of teacher's use of varieties of methods in teaching learning process to achieve maximum performance from his students cannot be over emphasized. Good teaching methods and in fact varieties of methods especially in skill subjects actually provoke thought, develop skill, test judgment, not merely the memory, but also challenge the students to give evidence of understanding what they have been taught, read or studied, lead to realistic standard performance among learners..

2.5 Instructional Facilities

One of the problems confronting better performance in shorthand by students in tertiary institutions is lack of instructional facilities. Educational experts assert that students remember about 70% of what they hear and see. Shorthand instructional facilities play important role in the teaching learning situation as they enable students to develop shorthand skill, functional knowledge as well as shorthand manipulation skills, technical and innovative appreciation. The question of provision of adequate facilities, equipment and teaching aids in our educational institutions has been blamed on government and school administrations by many people. Some of the factors responsible for the lack of adequate functional shorthand laboratory facilities in our schools are, lack of adequate fund, lack of proper storage facilities, lack of maintenance culture and worst of all is lack of appropriate skills on the part of shorthand teachers. Ejanavi (2007) writing on the teacher and school organization makes some important observation in respect of school facilities. He observed that in response to teachers demand, the school Administrator recommends and secures Board of Education approval to spend large sum of money for the provision of facilities for the use of class instructions. Experience has shown that some expensive equipments are sometimes neglected because the teacher does not know how to use them. The same criticism applies to the nature and the use of equipments provided in workshops, Laboratories and home-making suites. Much of these wastes according to Chamberlain may be attributed to the classroom teacher in many ways. He shows a lack of discrimination in his requests for various kinds of equipments. Although the teaching of shorthand demands some equipments and facilities, the teachers may not have sufficient knowledge of how to utilize or operate the equipment for effective teaching of shorthand skil. The teacher is expected to make use of varied teaching facilities and equipment during the course of his lessons. It is not very easy to classify all items that come within the framework of facilities, equipment and teaching aids into one distinct compartment. However, the NCCE Minimum Standard 2012 has made it clear that the following facilities, equipments and teaching aids are required for the teaching and learning of shorthand;

Table 1

Shorthand Instructional Facilities and Equipment Required

Shorthand Equipments Required
Manual and Electric Typewriters, Computers, Photocopier machines, Scanning Machines, Projectors, Standby Electric Plant/Generator, Air-conditioners, Radios Tape-recorders, Video Machines, Television, Executive Tables and Chairs, e Machines, Executive cushiness, Stop Watch, A Console Head phones etc

Table2
Shorthand Facilities

Shorthand Facilities Required
Model office facility, Lighting facility, Ventilation facility, Photocopy facility, Internet facility, Telephone facility, Current news facility, Library facilities/services etc.

Table 3
Shorthand Teaching Aids

Shorthand Teaching Aids
Charts, textbooks, shorthand pen/pencil, Shorthand note book, Well displayed picture of the right sitting position of shorthand writer, Well displayed solved shorthand tasks, Shorthand memos, etc.

2.6 Instructional Facilities and Students' Performance

There is no doubt that if shorthand facilities, equipment and teaching aids are made available, academic performances in both depth and breadth will be achieved. Dele (2006) sharing the same view comments on the importance of facilities, equipments and teaching aids to the overall development of education. He remarks that when properly used in the teaching-learning of skill situation, they can supply a concrete basis for conceptualizing thinking and a degree of interest for studies, making learning more permanent, develop a continuity of thought, provide experiences not easily gained through the use of other sources and thereby resulting to students' great performance. The NCCE NCE Minimum Standard (2012) made it mandatory for all Colleges of Education in the country to have certain types of facilities, equipment and teaching aids if they are to offer Business Education at NCE level. The reason is that some practical courses in Business Education which include shorthand are skill courses. Therefore, the importance of the teacher who is in the centre between the learner and the laboratory facilities, equipments and teaching techniques through his role of developing and effectively utilizing the material for implementation in the classroom teaching-learning of skill cannot be over emphasized. Without these equipment students cannot perform well in examinations and canot be properly equipped with the required skills for industries and teaching career. The purpose of any education system is to produce competent grandaunts that have gone through the system. It will therefore become a waste of

time and resources if NCE grandaunts are not able to perform well in their skill courses which include shorthand. Shorthand teacher should however not take the advantage of inadequate facilities and lack of equipment as scape-goat or excuses to poor teaching, but instead they should learn to improvise.

2.7 Empirical Studies

Many studies have been reviewed for this study. The researcher unraveled many relevant researches that have been conducted in this area, among such studies are:

Madaki, (2009) conducted a research on the relevance and impact of office

machines and equipments on secretarial training. The study investigated the relevance and

influence of office machines and equipment on secretarial training. A survey research design was adopted for the study, Questionnaire made up of five (5) questions and interview were the instruments used for collecting data. A total of 50 respondents constituted the population of the study who were mainly students. A test-retest reliability method was used to test the reliability of the instrument, two research questions were generated for the study. The researcher formulated two research hypotheses which were tested using the ANOVA statistics at 0.05 level of significance. The result from the test revealed significantly that office machines and equipment were relevant for effective teaching and learning of secretarial courses. In addition, it was also discovered that office machines and equipment have influence on the training of secretaries. In reviewing this research, it was

discovered that the research mainly used the secretarial students as its population was investigated in Federal Polytechnic Kaduna, however, the author failed to include the secretarial lecturers as part of the population for the study which does not give balance reportage on the topic in question, in addition, it was also discovered that there was discrepancy in the total of the respondents as the abstract of the research has a total population of fourty (40) as against the body of the work which carries fifty (50) respondents. However, the researcher is in agreement with the author's findings that secretarial training requires adequate functional office machines and equipment; many institutions running programme in secretarial studies lack adequate functional machines and equipment. The author's recommendations such as a call for collaborative efforts by major stakeholders and in particular the government to be more socially responsible by assisting institutions in the area of acquisition of office modern office machines and equipment. The current research is relevant to this past study because it focuses on influence of the state of facilities, equipment and teaching technique on students' academic performance in shorthand and typewriting examinations just as this past research focused on relevance and impact of modern machines and equipment on the training of secretaries.

Babat, (2010), researching on the Problems of Business Education in an Era of Modern Technology used a purposive sample technique used fourty (40) businesses educators in tertiary institutions in Kogi State. The instrument for data collection was the questionnaire; while the analysis of data was done using the mean, standard deviation, only one research question was spelt out and the only hypothesis stated was tested using t-test at a 0.05 level of significance and was rejected. The result of the study revealed among others indicated lack of adequate functional machines and equipment for teaching and learning business education; lack of adequate qualified teachers/lecturers of business education. The researcher agrees with some of the findings and recommendations of the author, but observed some lapses such as the inadequacy of the null hypothesis; the research was conducted at Gombe State but the author was silent about the location of the sampled population and the distribution of the population was not given. The current study is relevant to this past study because it is concerned with the influence of state of facilities, equipment and teaching technique on students' academic performance in shorthand and typewriting examinations, while this past study is concerned with problems of business education in an era of modern technology. Its findings revealed inadequate functional modern machines and equipment and lack of adequate qualify teaching staff, which are also parts of the variables of this study.

Oliver and Bernard (2010) assessed the state of acquisition, availability and adequacy of equipment and resources to support Business Education Teacher delivery in tertiary institutions in Adamawa State. Survey research design was used for the study, Questionnaire instrument was used for data collection, a total of fourty eight (48) respondents was the population of the study which was made up of Educators, Business Managers and Information Technology experts. A test-retest reliability method was used to test the reliability of instrument, three (3) research questions and two (2) hypotheses were tested using Chi-Square statistics at 0.05 level of significance. The result from the test revealed significance difference in respect of differences of resources and equipment in affected institutions. The research was limited as students were not included in the sampled population. Thus it fails to give balance reportage on the topic on the topic in question and there was no sampling technique for the study and neither was there any reason advanced for the lapses. The author's findings revealed lack of planned method and effort of acquisition of adequate resources and equipment to support teacher education programme; no pedagogical considerations were given to curriculum in use; Business Educator lack cognate conceptual and technical skills. The author recommended continuous training and retraining of business educators and the purchase of adequate functional resources and equipment. The present research is however relevant to this past study in spite of its lapses as it focused on the acquisition, availability and adequacy of resources and equipment in tertiary institutions.

Oganto (2011) conducted a research on the evaluation of teaching methods on students' performance in accounting in Business Education Department of Kaduna State College of Education Gidan Waya. His sampled population of 120 students was randomly selected from Accounting Option students. Questionnaire instrument was used to collect data and simple frequency table was used to interpret the result of the research which has no research question, no purpose of the study and has only one hypothesis. The items in the questionnaire were tested using mean statistics. Any item that scored a mean of 2.0 and above was accepted, while any that scored below 2.0 was rejected. Many of the items in questionnaire which had ten (10) questions were rejected as they scored below the acceptable mean of 2.0. Despite the lapses in the study, The present research is still relevant to this past study as the main variables of this past study: 'evaluation of the impact of teaching methods on students' performance are also part of the variables of this present research.

Another research was conducted by Amoor (2009) on “An Evaluation Challenges of Secretarial Education Programme in Nigerian Universities between 2000 – 2009. A sampled population of 215 final year students and 38 lecturers were used. Questionnaire was the research instrument used, three questions and three null hypotheses were generated. The three hypotheses were all rejected at 0.05 level of significance. The study recommended for the establishment of Resource Mobilization Centre for each University that will be responsible for sourcing for fund to purchase modern technology facilities, machines and equipment and their installation. The research has some shortcomings in terms of population distribution among the universities, no sampling technique adopted, no major findings and all the null hypotheses were rejected. Eventhough the study has many setbacks; the current study is still very relevant to this past study as both studies have some common identical variables.

George (2012), conducted a research on the importance of ICT in business education. He emphasized that business education requires modern technology and ICT services which all business education learners should know and be familiar with in order to be relevant for employment and self-reliance. His sampled population was drawn from students of business education in Kaduna State College of Education Gidan Waya. He developed and tested only one hypothesis. The research result revealed that ICT programmes are relevant and necessary in business education. The study recommended that ICT equipments, facilities and services should be made incorporated in business education programme. He had no research questions, neither had he clear research objective. His research work is relevant to this research in the sense that his emphasis was on equipment, facilities and effective services.

2.8 Summary of Review of Related Literature

Some teaching and learning theories have been explored in this chapter which include the role of nature and nurture controversy in an attempt to discover which influenced a person's behavior more. Some psychologists argued in favour of nature while others argue in favour of nurture. There was however a consensus that both play important role in shaping the child. Children learn through their parents, peer group, community, school, church and mosque. They explore by observation, manipulating, listening etc.

It has been discussed that shorthand is a core course in secretarial/office education option. The concept of shorthand has been defined as the representation of spoken sound by written sign. It was discussed that shorthand is used in organizations by executives who employ confidential secretaries knowledgeable in shorthand skills and business information technology. Shorthand teachers are expected to be very competent and professionalized in office education so that they can effectively train students in the profession. They should be able to apply varieties of effective teaching/learning techniques to develop their students.

Some of the key concepts of this research also discussed include, shorthand teachers, shorthand skills, shorthand skill development, shorthand laboratory equipment, teaching techniques, teaching techniques and students' performance, laboratory facilities, laboratory facilities and students' performance.

As discussed in this chapter, Business Education is a broad and diverse discipline that is in all levels of the educational system from primary to secondary and tertiary institution. Office Education has been said to be an integral part of business education with programme of instructions for developing office skills, knowledge and understanding. Office Education programme has shorthand as a core course. It is therefore important that the teaching and learning of shorthand requires modern facilities, equipments, effective teaching methodology and qualify professionals.

Empirical studies related to the work were reviewed which include the works of Madaki (2009), Babat (2010), Oliver and Bernard (2010), Oganto (2011), Amoor (2009) and George (2012). On the whole, the gap noticed from the review were that their work had to do with the academic performance of students in other disciplines, but not in laboratory facilities and teaching techniques on students' academic performance in shorthand which this study has covered.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter explained the methodology that was used in the collection of data for the study under the following sub heads:

3.1 Research Design

3.2 Population of the Study

3.3 Sample Size and Sample Technique

3.4 Research Instrument

3.5 Procedure for Data Collection

3.6 Procedure for data Analysis

3.1 Research Design

For the purpose of this study, the researcher employed the survey research method. This entailed gathering of data about targeted population from a sample and generalizing the findings obtained from an analysis of the sample to the entire population. Survey according to Obioma (1988) is a type of research method which involves among others specifying the properties of a given phenomena". In this case, aspects of the problem being investigated are done through the use of sample. Some properties/variables of the study must inevitably enter into survey work if it is to be of value (Nisbet and Entwish,1970). The researcher is motivated to choose this character of survey research because the study primarily investigated the relationship between the variables of the study and their influence on students' poor academic performance in shorthand. Students' scores already available in the two Colleges of Education under study were used.

3.2 Population of the Study

The target population for this study comprised 12 shorthand teachers, 74 OTM Option students in Business Education Departments of Colleges of Education Akwanga and Pankshin. The population breakdown is shown in table 3.1.

Table 3.1: Population of the Study

Name of College	No. of Lecturers	No. of Students	Total
F.C.E. Pankshin	5	16	21
C.O.E. Akwanga	7	22	29
Total	**12**	**38**	**50**

Source: Field Survey February 2015

3.3 Sample Size and Sample Technique

The sample selection for this study is all the population of the study. The researcher decided to use all the population of the study because they are not large enough to warrant selection.

3.4 Instrument for Data Collection

The instrument used for data collection embraced two sets of questionnaire for the population. One set of questionnaire was meant for shorthand lecturers, while the second set was meant for the students of Departments of Business Education in the two Colleges of Education. The questionnaire used to obtain the respondents' own opinions on the research topic and to gather broad range of views on the problem under examination. The two sets of questionnaire were divided into two major sections: 'A' and 'B'. Section 'A' contained personal information about the respondents, while section 'B' demanded information on the major variables.

In the two sections described, the responses to the test items followed a 4 point Scale as:

Very Adequate (VA)	4 points
Adequate (AD)	3 points
Inadequate (IA)	2 points
Very Inadequate (VIA	1 point

3.4.1 Pilot Study

After designing and validating the instrument, to ensure that the questionnaire is reliable, the researcher distributed twenty (20) copies of the questionnaire to shorthand Lecturers and Head of Department and correlated data obtained with the students' results of Business Education Department, College of Education Gidan Waya Kaduna State. The pilot study was meant to ascertain the clarity, authenticity or otherwise of the instrument. Based on the outcome of the pilot study, the instrument was more simplified. It was reduced to a four point scale instead of five. It was therefore modified this way taking into consideration the necessary adjustments required.

3.4.2 Validity of the Instrument

The idea of content validity is a check of test item efficiency and suitability to measure what is expected, so as to minimize errors and misinterpretation. For this study, the test item content was based on the researcher's insight from the literature review on the major topic in chapter 2. Miri Citing Horst (2010) maintained that psychological measure may be said to have content validity if it measures something of which some authority or groups of authorities asserts that it does measure. Students' shorthand examination results for five years (2010 – 2014) were collected from the examination officers of Business Education

Departments of the two Colleges of Education Akwanga and Pankshin.

3.4.3 Reliability of the Instrument

The split half method was used to compute the reliability co-efficient of the instrument. The instrument was divided into two half of odd and even numbers. The Spearman Rank Order Correlation Coefficient formula was used to calculate the reliability estimate of zero point eightysix (0.86). This reliability coefficient was positive and very high, hence the instrument was adjudged reliable and stable based on Nworgu (2007) recommendation, who stated that reliability estimate of 0.80 and above is very high and the instrument for which it is tested is reliable and stable.

Spearman Rank Order Correlation Coefficient Formula:

$$R = \frac{2r}{1+r} \text{ or } R = \frac{2\ (\text{correlation between half test})}{1+\ (\text{correlation between half test})}$$

Where R i

In addition, the reliability of the five years shorthand results collected from the colleges was established as stated in 3.4.1.

3.5 Procedure for Data Collection

Seven weeks were used to collect data for this study.The researcher used the first week to introduce herself to the Principal Officers of the two Colleges of Education and the Heads of Business Education Departments purposively selected for the study with the former letter collected from the department for identification (See Appendix). The researcher engaged the services of research assistants in the Colleges who assisted in the distribution of the questionnaire to the respondents. The researcher supervised the questionnaire filling sessions and offered explanations on the questionnaire where necessary. The researcher then collected the completed questionnaire and students' shorthand results for five years (2010 -2014) from the

Departmental Examination Officers of the Business Education Departments Colleges of Education Akwanga and Pankshin.

3.6 Procedure for Data Analysis

The data collected were presented using tables to determine the frequency of occurrence of particular responses to questions asked. Percentages helped to organize and present data collected. Pearson Product Moment Correlation Coefficient (PPMCC) was used to test hypotheses 1, 2 and 3. The decision rule was that if the calculated correlation was higher than the table correlation value the hypothesis will be rejected. On the other hand, if the calculated correlation value was less than the table correlation value the hypothesis was retained at a 0.05 significant level.

Independent t-test statistical analysis was used to test null hypothesis four because the independent t-test is one of the most effective methods of comparing two groups mean (Nworgu 1991). Hypothesis four deals with comparing elements. The researcher believed that using these statistical tools of analysis can reduce or avoid major errors in the course of testing the hypotheses. If the calculated value of null hypothesis was greater than the critical table value, the null hypothesis was rejected. On the other hand, if the calculated value was less than the critical table value, the null hypothesis was accepted.

The point of decision for accepting test items in the research questionnaire was fixed at 2.5, since the questionnaire is a four point scale. Therefore, items that attracted a mean score of 2.5 and above were regarded as accepted, while items that attracted a mean score of less than 2.5 were regarded as rejected. The mean score expected for a good performance of students in shorthand examination was 40.00, and anything less than this is a poor performance in shorthand examinations.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

The presentation and analysis of data was carried out under the following sub headings:

4.1 Answering the Research Questions

4.2 Hypotheses Testing

4.3 Summary of Major Findings

4.4 Discussion of Findings

4.1 Answering the Research Questions

The responses from the two groups of respondents were jointly presented and analyzed. In order to achieve the research objectives, both descriptive and inferential statistical techniques were used.

4.1.1 Research Question One

To what extent does the available shorthand teachers influence students' academic performance in shorthand in Colleges of Education Akwanga and Pankshin

The data collected on section A, questions 2 – 7 in teachers' questionnaire and section B, question 1table B1 of the students' questionnaire were used to answer research question one. The data were analyzed in table 4.1.

Table 4.1 **Staff Educational Qualification**

Qualification	Frequency	Percentage
PhD (Bus Ed) (OTM/ACCT/MARKETING	1	8.33
M. Ed (Bus Ed) (OTM/ACCT/MARKETING	2	16.67
B. Ed (Bus Ed) (OTM/ACCT/MARKETING	1	8.33
M.A/M. SC. (OTM/ACCT/MARKETING	3	25.00
BA/B SC) (OTM/ACCT/MARKETING	2	16.67
HND (OTM /ACCT/MARKETING	3	25.00
Total	**12**	**100**

The data presented in table 4.1, shows that there, was one (8.33%) PhD lecturer in the college of education, two teachers (16.67%) had Master degree in Business Education, one teacher (8.33%) had a degree in Business Education, three teachers (25%) had MA/MSC in OTM/ ACCT/ MARKETING, two had BA/BSC in OTM/ ACCT/ MARKETING while three (25%) had HND in OTM/ACCT/MARKETING. This further revealed that majority of majority of shorthand teaching staff in the Colleges of Education were of other disciplines and not Business Education. This is an unhealthy trend. In this kind of improper arrangement and academic abuse, it is glaring that inadequate qualified shorthand teachers will definitely lead to students' poor performance in shorthand examination.

Table 4.2 **Mean and Standard Deviation of available shorthand teachers and their influence on students' academic performance in colleges of education** Akwanga and Pankshin.

School	N	Mean	SD	Decision
Teachers	12	1.86	75277	Unsatisfied
Students' Academic Performance	38	13.5000	4.08656	Unsatisfied

Source: Field Survey February, 2015

The data in table 4.2 revealed that there were twelve (12) shorthand teachers and thirty eight shorthand students in the Colleges of Education. The teachers means score is 1.86 and .75277 as standard deviation, while the students' performance mean score was 13.50 and had standard Deviation of 4.08. The Colleges of Education had unsatisfactory level of adequacy of teachers as their mean score of 1.86 and students' academic performance mean of 13.50 and 4.08 respectively. In addition, the data in table 4.1 revealed that majority of shorthand teachers in the two Colleges of Education were unqualified. The responses of shorthand teachers on question 3 of the teachers' questionnaire also revealed that only one (1) lecturer belonged to a Professional Association. It therefore implied that the available inadequate shorthand teachers in the colleges of education influenced students performance in shorthand. In this type of unhealthy educational situation, it is impossible for students to perform well in shorthand examinations.

Research Question Two:

To what extent does the teachers' instructional methods influence students' academic performance in shorthand in colleges of education Akwang and Pankshin?

The data collected on items 8 table B2 of the teacherss' questionnaire and question at table 2 items 2 of the students' questionnaire were used to answer research question two. The data were analyzed in table 4.3.

Table 4..3: Mean and Standard Deviation on teachers' use of instructional methods and their influence on students' academic performance in shorthand in colleges of education Akwang and Pankshin

School	N	Mean	SD	Decision
teachers	12	2.00	3.83	Unsatisfied
Students' Academic Performance	38	17.33	13.83	Satisfied

Source: Field Survey February, 2015

The outcome of table 4.3 revealed that there were twelve teacherss and thirty eight students in Akwanga and Pankshin colleges of education. The table further revealed that the teachers instructional method used had a mean score of 2.00, with 3.83 as standard deviation, while the students had academic performance mean score of 17.33 and 13.83 as standard deviation. The mean score of the teachers' instructional methods fell below the acceptable mean of 2.50 in this study. This implied unsatisfactory. However, the students' performance mean score stood at 17.33 and standard deviation of 13.83 implying satisfactory performance. This therefore implied that the teachers were aware that they were not using the right shorthand teaching pedagogy. The students' good performance could be attributed to other variables such as background, experience, personal effort, etc.

Research Question Three:

The teachers' use of available 18 instructional facilities will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

The data collected on question 9, items 9 table B3 item 3 and question 10 table B4 item 4 of the teachers' questionnaire and items 7,table B3 items 3 and question 8 table B4 item 4 of the students' questionnaire were used to answer research question three. The data were analyzed in table 4.4.

Table 4.4: Mean and Standard Deviation of the Available Instructional Facilities' Influence on students' Academic Performance in shorthand in colleges of education Akwanga and Pankshin.

School	N	Mean	SD	Decision
teachers	12	2.33	.8165	Unsatisfied
Students' Performance	38	13.50	4.0866	Unsatisfied

Source: Field Survey February, 2015

The outcome of table 4.4 revealed that there were twelve teachers and seventy four students in Akwanga and Pankshin Colleges of Education. The table also revealed that the teachers had a mean score of 2.33 and a standard deviation of .8165, while the students' mean score was 13.50 and a standard deviation of 4.08656. Both had unsatisfactory mean scores of 2.33 and 13.50 which were below the acceptable means of this study.

Research Question Four:

To what extent does College of Education Akwanga differ from College of Education Pankshin on the influence of the available instructional facilities and instructional methods on students' academic performance in shorthand?

The data collected on all the questions in the teachers' and students' questionnaire were used to answer research question four. The data were analyzed in table 4.5.

Table 4.5

Mean and Standard Deviation on the Differences between Akwange College of Education and Pankshin College of Education on the influence of the available instructional facilities and instructional methods on students' performance.

School	N	Mean	SD	Decision
Akwanga teachers	7	2.33	2.42	
				Insignificant
Students' Performance	22	36.00	18.12	
Pankshin teachers	5	2.22	2.14	
				Insignificant
Students' Performance	17	31.64	12.86	

Source: Field Survey February, 2015

Table 4.5 revealed that Akwanga had a mean score of 2.33 and a standard deviation of 2.42, while Pankshin had a mean score of 2.22 and a standard deviation of 2.14. The table also revealed that Akwangab students had a mean score of 36.00 and 18.12 as standard deviation, while Pankshin students had a mean score of 31.64 and standard deviation of 12.86. The difference between the mean and standard deviation of the teachers and students in the two colleges stood at 0.11 and 0.28 respectively, which were statistically insignificant, while the differences between the mean and standard deviation of students in the two colleges of education were 4.36 and 5.26 respectively. Thus, their mean differences of 0.11 and 0.28 were statistically insignificant. This therefore implied that there was no significant difference between Akwanga College of Education and Pankshin College of Education on the influence of the available instructional facilities and instructional methods.

4.2 Hypotheses Testing

Four null hypotheses were postulated for the study to further probe into the research questions. Hypotheses 1, 2, and 3 were tested using Pearson Product Moment Correlation Coefficient (PPMC), while hypothesis 4 was tested using independent simple t-test statistics. The Decision Rule for the acceptance or rejection of hypothesis was that: if the calculated correlation is greater than the table correlation, the hypothesis was rejected, but if the calculated correlation is less than the table correlation, the hypothesis was accepted. The test of hypotheses were presented in tables 4.3.1 to 4.3.4.

Null Hypothesis One:

The available shorthand teachers in the two colleges of education will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin

Data collected on section A, questions 2 – 7 in teachers' questionnaire and section B, question 1table B1 of the students' questionnaire were used to test hypothesis one. The summary of this is as presented in table 4.6

Table 4.6:

Correlation analysis of available shorthand teaching staff significant influence on students' academic performance in shorthand in Colleges of Education.

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Shorthand Teachers Adequacy	**12**	**2.86**	**.75277**	**.067, 079**	
					Significant
Students Performance	**38**	**13.50**	**4.08656**	**.078, .625**	

Source: Field Survey February, 2015

Table 4.6 Showed the result of the PPMCC correlation test used for testing the correlation of shorthand teachers' influence on students' academic performance in shorthand The data in the table revealed that shorthand teachers had a mean score of 2.86 and a standard deviation of .75277, while students had a mean score of 13.50 and standard deviation of 4.08656. The Pearson Correlation calculated in the table was 0.067 while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (0.067) was greater than the table tabulated (0.05), it implied that shorthand teachers had significant influence on students' academic performance in shorthand.. Therefore, null hypothesis one which stated that The available shorthand teachers in the two colleges of education will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin was rejected.

Null Hypothesis Two:

The shorthand teachers' instructional methods will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

The data collected on items 8 table B2 of th e teacherss' questionnaire and table 2 items 2 of the students' questionnaire were used to test hypothesis two. The summary of the test is presented in table 4.7.

Table 4.7:

.

Correlation analysis of shorthand teachers' instructional Methods and their significant influence on students' academic performance in shorthand in Colleges of Education Akwanga and Panksin

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Teachers' Instructional Method	**12**	**2.00**	**1.55**	**.108, .139**	**Significant**
Students' Performance	**38**	**17.33**	**13.83**	**.0169, .821**	

Table 4.7 showed the result of the PPMCC correlation test used for testing the correlation **of shorthand teachers' instructional method and their significant influence on students' academic performance in shorthand in Colleges of Education.**

The data in the table revealed that shorthand Teachers' instructional method had a mean score of 2.00 and a standard deviation of 1.55, while students had a mean score of 17.33, and standard deviation of 13.83. The Pearson Correlation calculated in the table was 0.108, while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (0.067) was greater than the table tabulated (0.05), it implied that shorthand teachers' instructional method used had a significant influence on students' performance. Therefore, null hypothesis two which stated that the shorthand teachers' instructional methods will not significantly influence students' performance in shorthand in colleges of education Akwanga and Pankshin. Was rejected

Null Hypothesis Three:

The teachers' use of available instructional facilities will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin.

The data collected on question 9, items 9 table B3 item 3 and question 10 table B4 item 4 of the teachers' questionnaire and items 7,table B3 items 3 and question 8 table B4 item 4 of the students' questionnaire were used to test hypothesis 3. The test of hypothesis 3 is as presented in table 4.8.

Table 4.8:

Correlation test of the influence of the 18 Available instructional Facilities on Students' Academic Performance in Shorthand.

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)
Instructional Facilities	**22**	**2.33**	**.8165**	**.180, 0.102 Significant**
Students' Performance	**38**	**13.50**	**4.0867**	**.733, 0.613**

Source: Field Survey February, 2015

Table 4.8 showed the result of the PPMCC correlation test of the relationship between laboratory facilities and students' performance in shorthand examinations. The data revealed that instructional facilities had a mean score of 2.33 and a standard deviation of .8165, while the students had a mean score of 13.50 and standard deviation of 4.0867. The Pearson Correlation calculated in the table was .180, while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (.185) was greater than the table tabulated (0.05), it then implied that the available instructional facilities had significant influence on students' academic performance in shorthand. Therefore, null hypothesis three which stated that The teachers' use of available instructional facilities will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin. Was rejected.

Null Hypothesis Four:

There is no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available Instructional Facilities and Teachers' Instructional Methods on students performance in shorthand.

Data collected on the three items; adequacy of shorthand teachers, shorthand teachers' instructional methods and available instructional facilities were used to test hypothesis four. It then means that all the data received from shorthand teachers and students in the questionnaire were used to test hypothesis four. The summary is presented in table 4.9.

Table 4.9

t-test of the differences between College of Education Akwanga and College of Education Pankshin on the influence of the available instructional facilities and teachers' instructional methods on students' academic performance in shorthand.

. College	No	Mean	SD	DF	T-Value	T-Critical	Alpha level	Decision
COE Akwanga Teachers	**7**	**2.33**	**2.42**					
Students' Response	22	37.00	12.08					
				132	**1.20**	**1.65**	**0.05**	**insignificant**
COE Pankshin Teachers	5	2.22	2.14					
Students' Performance	16	36.03	10.46					

Source: Field work February 2015

The test of hypothesis four in table 4.9 showed no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available instructional facilities and teachers' instructional methods. The table indicated that Akwanga teachers had a mean score of 2.33 with standard deviation of 2.42, its students' had a mean score of 37.00 and standard deviation of 12.08. Pankshin teachers had a mean score of 2.22 and standard deviation of 2.14, its students had a mean score of 36.03 and standard deviation of 10.46. The computed t-value was 1.20 at alpha level of 0.05 with degree of freedom of 132, while the t-critical was 1.65. Thus, the calculated t-value is less than the critical table value, hence, the difference is insignificant. Thus, the null hypothesis of no significant is retained. It could therefore be concluded that there was no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available instructional facilities and teachers' instructional methods on students' academic performance in shorthand. However, College of Education Akwanga teacher's mean score of 2.33 and standard deviation of 2.42 were slightly higher than College of Education Pankshin teacher's mean score of 2.22 and standard deviation of 2.14. Again, Akwanga students' mean score of 37.00 and standard deviation of 12.08 were also slightly higher than Pankshin. students' mean score of 36.03 and standard deviation of 10.46. This therefore means that COE Akwanga's influence of instructional facilities and teachers' instructional methods were slightly higher than that of COE Pankshin. The two colleges' slight differences in mean scores and standard deviation stood at 0.11 and 0.28 for teachers, and 0.97 and1.62 for students', which are statistically insignificant.

4.4 Summary of Major Findings

The following were the major findings of the study:

1. Analysis of research question one showed that shorthand teachers in both Colleges of Education were unqualified to teach shorthand as shown in tables 4.1 and 4.2. The result obtained from the test of hypothesis one in table 4.5 also confirmed this. The result showed significant influence of the available shorthand teachers and students' academic performance shorthand in both Colleges of Education.
2. The analysis of research question two in table 4.3 showed that shorthand teachers' Instructional methods had influence on students' academic performance in shorthand in the two Colleges of Education. This was further confirmed by the result of the test of hypothesis two in table 4. 6 which showed significant influence of the available instructional facilities on students' academic performance in

shorthand in the two Colleges of Education.

3. Analysis of research question three in table 4.4 showed that the available instructional facilities affected students' performance in shorthand examinations in the two Colleges of Education. The result of hypothesis three tested in table 4.7 also confirmed that there was significant relationship between the available laboratory facilities and students' academic performance in shorthand examinations in the two Colleges of Education.

4. The analysis of research question four in table 4.5 and hypothesis four tested in table 4.9 showed no significant difference between the two Colleges of Education on the influence of instructional facilities and teachers' instructional method on students' academic performance in Colleges of Education Akwang and Pankshin.

   The computed t-value was 1.20 at alpha level of 0.05 with degree of freedom of 132, while the t-critical was 1.65. Thus, the calculated t-value was less than the critical table value with 0.45. Hence. the difference of 0.45 was statistically insignificant. The slight insignificant difference was in favour of Akwanga College of Education.

4..5 Discussion of Findings

The study showed that the available shorthand teachers significantly influence students' academic performance in shorthand. This could be seen from the calculated correlation in table 4.6 which stood at 0.067 higher than 0.05 the table tabulated correlation. This implied that hypothesis one which stated that The available shorthand teachers in the two colleges of education will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin was rejected. The explanation for this could be that the college managements do not encourage their teachers to go for further studies. This findings agreed with the assertion of Aina (2000) who opined that no teacher can enlighten his students if he himself is ignorant.

The study also revealed that the instructional methods used by the teachers had significant influence on students' academic performance in shorthand, as the calculated correlation of .166 in table 4.7 was higher than the table tabulated correlation of 0.05. This implied the rejection of hypothesis two which stated that The shorthand teachers' instructional methods will not significantly influence students' academic performance in shorthand in colleges of education Akwanga and Pankshin. This may be due to inadequate shorthand teachers adopting theoretical approach in teaching shorthand rather than practical approach. This finding agreed with Temidayo (2009) who pointed out that the use of ineffective instructional methods in most cases is responsible for ineffective teaching and learning. He further stated that the teaching profession has no boundary, as such, many unqualified teachers get in to the profession without knowing the effective instructional methods for imparting skill and knowledge. Unfortunately according to him, students are at disadvantage of their ignorance.

The research finding also revealed that there was significant influence of the available instructional facilities on students' academic performance in shorthand as the calculated correlation of .077 in table 4.8 was higher than the table tabulated correlation of 0.05. It was unraveled that instructional facilities were inadequate in terms of quantity and quality. The reason for this finding could be that the colleges lack finance to purchase the required facilities. Insufficient resources to equip educational laboratories/studios has always been great problem in schools. This finding is in line with Sholes (2008) who opined that instructional facilities and equipment are required in the teaching of vocational and technical courses. Many facilities and equipment required for the teaching of Office Technology and Management Education courses are capital intensive, as such, many Vocational and Technical Institutions hardly afford the purchase of these facilities and equipment.

The research finding further revealed that there was no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available instructional facilities and teachers instructional methods as shown in table 4.9. However, College of Education Akwanga teacher's mean score of 2.33 and standard deviation of 2.42 were slightly higher than College of Education Pankshin teacher's mean score of 2.22 and standard deviation of 2.14. Akwanga students' mean score of 37.00 and standard deviation of 12.08 were also slightly higher than Pankshin students' mean score of 36.03 and standard deviation of 10.46. This therefore implied that COE Akwanga's influence of instructional facilities and teachers' instructional methods were slightly higher than those of COE Pankshin. The two colleges' slight differences in mean scores and standard deviation stood at 0.11 and 0.28 for teachers, 1.097 and1.62 for students are statistically insignificant.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Basically, this study investigated the influence of availability and use of instructional facilities and teachers' instructional methods on students' academic performance in shorthand in Colleges of Education Akwanga and Pankshin. The study assessed the variables responsible for students' poor academic performance in shorthands. The primary data for the study was collected through the use of questionnaire, while the secondary data for literature review was collected from available literature on the topic. Since the population of the study was not too large, the study did not adopt any sampling technique to select the respondents. The population of twelve teachers and 38 students which was manageable enough was used as sampled population for the study. The data were presented using table tabular statistical system, and the analysis of the research questions was done using simple 2.50 mean criterion for acceptance of items and 40% for acceptance of students' performance.

The Pearson Product Moment Correlation Coefficient (PPMCC) was used to test hypotheses 1, 2, and 3, while the t-test statistical analysis was used to test hypothesis 4.

5.2 Contribution to Knowledge

1. The effectiveness and efficiency of teachers in teaching shorthand determine student's performance in shorthand.
2. The state of laboratory teaching facilities in qualitative and quantitative terms determine student's performance in shorthand.
3. Using appropriate instructional teaching methods to teach students shorthand lead to

effective teaching and learning of shorthand

5.3 Conclusion

In view of the findings of the study, the researcher wishes to draw the following conclusion ; that availability and usage of instructional facilities and teachers' instructional methods have a significant influence on students' academic performance in shorthand in colleges of education Akwanga and Pankshin, Inadequate qualified shorthand teachers, inadequate instructional facilities, and the teachers' use of ineffective instructional methods were the major causes of students' poor academic performance in shorthand. There was also no significant difference between Colleges of Education Akwangs Pankshin on the influence of available instructional facilities and teachers' instructional methods.

5.4 Recommendations

In the light of the discovery and conclusion of the study, the following recommendations are made;

1. The two college managements need to employ qualified shorthand teaching staff and train the present staff in the college so that they will be able to perform better in teaching shorthand.
2. Shorthand teachers should employ effective instructional methods in teaching shorthand so that students will not only learn fast but also perform well in shorthand examinations.
3. The Federal and State governments who are the proprietors of the colleges and the managements of the two colleges need to provide necessary instructional facilities such as typewriters, computers, model office, Electric plant, television, ICT facilities projector, scanner machine among others. This will go a long way in improving teaching and learning which will also improve

students' performance in shorthand examinations.

4. The National Commission for Colleges of Education (NCCE) which is the supervisory and regulating body of all NCE programmes in Colleges of Education should ensure that all Colleges of Education comply with the required minimum standard before they are accredited.

5.5 Suggestion for Further Studies

(i) The researcher suggests that further studies can be carried out on similar topic in other geo-political zones of Nigeria for the purpose of generalization.

(ii) Influence of School Management on Students' Academic Performance in shorthand

REFERENCES

A survey Report (1997) by Nigeria Educational Research and Development Council (NEDDC) on *The State of Demand and Supply of Technical Vocational Teacher (TVE) Nationwide.*

Abenga, O. L. (1998), *Foundations of Vocational Education. A Behavioural Objective Approach.* Centaur Press Limited London

Abiola, O. O. (2007), *Procedures in Education Research*, Kingo (Nig.) Ltd Lagos Street Kaduna

Adamu, T. Y. (2009), *Classroom Management for Effective Teaching and Learning in Schools in Kaduna State.* Unpublished Postgraduate Thesis, Bayaro University Kano.

Adebayo, T. O. (2006), *Information Technology and the Secretarial Profession: Implications and the Way Forward;* J. Office Managment Technology. Auchi Polytechnic Auchi.

Adelstian, M.E. (1998), *Business Communication for the Information Age:* Chicago. Harcart Brince Jaranorich Publishers.

Adeshina, T. J. & Aliyu, M. M. (2011), Curriculum Innovation for Office Education Programme in view of the growing Information Technology (IT). A Case Study of the NCE Programme. *International Journal of Education Administration and Policy Studies:Vol. 4*

Afolabi, M. (1998), *Introduction To Research Method For Proposal Projects and Unpublished Theses*, hand book.

Agbo, T.O. (2010), Secretarial Profession and Technological Development in Nigeria Expectation in the year 2010. *Journalof the National Association of Professional Secretarial Staff of Nigeria, (NAPSSON).*

Ahukannah, L.I. and Ugoji, E.I. (2009), *Applied Office Administrative Procedure and Business Communication.* African First Publishers Plc, Book House Trust, Onitsha, Nigeria.

Aina, O. (1988), Panel Report on Vocational and Technical Education.

Aina, O. (2000), Nigeria Technical and Vocational Education in the Near future. A key

Note address at the *National Seminar on Technical and Vocational Education in Nigeria: Vision and action. At Abuja, on 31-10-200.*

Ajao, J.A. (2005), Designing National Training and Retraining Programmes in Office Education,Paper Presented at the *Annual National Conference of National Association of Business Educators (NABE) at the Federal Polytechnic Okoko, 24th – 27th May.*

Ajetunmmobi, S.S. and Edan, B.A., (2002) *Secretarial Practice and Office Management Today.* Ibadan University Press Ltd.

Aliyu, M.M. (2004), *Business Education in Nigeria (Trends and Issue)* Goshen Printer Media Ltd. Ilorin, Kwara State.

Aliyu, M. M. (2002), Business Education and Its Relevance in the 21st Century. *Business Education Journal Vol. III No 5*

Amoor, F (2009), An Evaluation of the Challenges of Secretarial Education Programme in Nigerian Universities. *Journal of Educational Research Vol 7*

Babat, T. (2010), Problems of Business *An Introduction Philosophy* Education in an Era of Modern Tecnology: *Gidan Waya Multi-disciplinary Journal of Education Vol. 9*

Bernard, S. & Oliver H. (2010), State of Acquisition, Availability and Adequacy of Equipment and Resources to Support Business Education Teacher Delivery in Tertiary Institutions in Adamawa State.

Bryant, J.A (2005) *Exposition and Illustration in Teaching.* The Macmillan Company: London.

Bandura, A. (1977), Social Learning Theory. Englewood Cliffs, NJ.Prentice Hall.

Chamberlian, S.A. (1969): Oxford University Press, London.

Cornelius, R. (2010), *Changing Aims in Education.* London Routlege and Regan Paul Limited London.

Daudawa, A.L. (2009), Education Needs of Secretary in the 21st Century. The Challenges. *Journal of Vocational Technical and Business Education Volume (1), 21 – 27.*

Davisor, S. (1982), *An Introduction to Education Psychology:* Oxford University Press. London.

Dele, D. (2006), *Understanding Educational Research.* New York, Mc Graw-Hill Books Company. New York

Edge, F.B. (2005), *the Teacher.* London Nashville Broadman Press, London. Egele (2004)

Ejaravi, F.B. (2007), *Helping the Teacher.* London Double and Braqnon Ltd London.

Eni, O.O. (1987), Business Education in a Developing Economy, The Nigeria Case. *Business Education Journal Vol. 2 No.*1

Erickson, S. C. and Kkick, J. A. (1974), "Evaluation of Teaching" Memo to Faculty of Education ABU, Zaria.

Essein, J.F. (1975), *Education and The Challenge of Quality*. Benin City Ethiope Publishing Corporation Benin.

Eze, M.M. (2009), Diversifying Secretarial Training in the 21st century and Beyond; Introduction of Special Area *Journal NAPSSON*

Fafunwa, B. *History of Education in Nigeria.* London. George Allen and Unwin Ltd London.

Farrant, J.S. (1964), *Principles and Practice of Education* London. George Allen and Unwin Ltd London.

Gana, T.C. (2000), *Continuous Assessment in Schools in Nigeria* Ilorin University Press Limited. Ilorin

Ganang, J. (1990), *An Evaluation of Business Education Programme: A Case Study of College of Education Jalingo Unpublished M. Ed thesis, Faculty of Education* A.B.U. Zaria.

George, B. (2012), The Importance of ICT in Business Education Programme; *Jouranal of Vocational and technical Educators.*

Giwa, O.C. (2007), *The Role of Teaching Methods on the Overall Development of all Students,* Unpublished Thesis, Faculty of Education, ABU, Zaria.

Groulund, L. (2006), *Stating Objectives for Classroom Instructions* News York, Macmillian Publishing Company Inc.

Garba, H. J. (2012), Role and Challenges of the Secretarial Teacherin Modern Technology, *OBEG Journal of Business Education. Ilorin (2002)*

Harrison, J. (2000), *Teaching Office Practice:* England, Unwiin Brothers Ltd.

Ihakwoaba, M. E. (2009), Procedure in Teaching Skill Courses. *Journal of Educ.*

Ilorin, J.A. (1992), *Principles and Methods of Teaching.* Ayodapo Printing Works, Kaduna

Iyorchia, A. (2010), Restoring the Falling Standard of Education *The Democrat, January 23, Pg. 11*

Itse, M. I. (2007), *Methods of Teaching in Higher Schools:* Union London, England.

Jakthan, E.T. (2008). *The Challenges of the Teacher and Teacher Education in the 21st Century.* A Paper Presented at Teachers Day Celebration at FCE (T).

Jonassen, G. (1992) *The Theory of Constructivist Learning.* Atsusi "2c" Hirumi © 2005

Lero, B. and Herbert, Y. (2002), Changing Methods of Teaching Business Subjects: *National Business Education Association, Washington.*

Longman, (2003), Dictionary of Contemporary English, 4th Edition, Edinburgh Gate, Pearson Education Limited.

Madaki, E. (2009), The Relevance and Importance of Office Machines and Equipment on Secretarial Training. *Gidan Waya Journal of Vocational and Technical Education Vol.5*

Miller, C.R. (1959), *Education For Living* England Wood Cliff, Prentice-Hall. England. Miri (2010)

Mills, H. R. (2000), *Teaching and Training.* A Handbook for Instructions. London, Macmillan Press Ltd.

Musaazi, J.C.S. (1982), *The Theory and Practice of Educational Administration. Studies in Nigeria Educational Series.* Hong KongMacmillan Publishers. Hong Kong.Nisbet, Entistle

National Commission for Colleges of Education (NCCE) (2012) Nigerian Certificate of Education (NCE) Minimum Standard

Nwaokolo, P.O.(2008), *Instructional Strategies in BusinessEducation*. Asaja Precious Publishers Nigeria.

Nworgu, B. G. (2006), *Educational Research: Basic Issues and Methodology.* 2nd Edition University Trust Publishers Nsukka.

Obioma, G.O. (1988), *Research Methodology:* Nigeria Heineman. Ibadan

Oborah,J.O. (2011), *The Relevance of Secretarial Studies in Information Technology Era. Business Education Book of Reading.* Nigerian Heineman Ibadan.

Oganto, A. (2011), Evaluation of Teaching Methods on Students' Performance in Accounting Business Education Department, Kaduna State College of *Education Gidan Waya. Unpublished Master Thesis.*

Okebukola, P. (2011), Office Education Competencies for Effective Enterpreneurial Development, *Delta Business Education Journal. Vol. 3*

Olaitan, S.O. (2003), *Understanding Curriculum,* Nsukka, Ndelidian Printing and Publishing Company Nsukka.

Onakanowoja, E. (2008), *Perception of Lecturers of their own Instructional Skills and Personal Social Qualifications*. Unpublished M. Ed. Thesis ABU Zaria.

Osuala, E.C.(1995), *Foundation for Educational Education* Fulladu Publishing Company Nsukka.

Osuala, E. C. (2004), *Foundation of Vocational Education*. Enugu Cheston Books.

Isaac, P.(1837), *Pitman Shorthand, New Era*, Great Britain. Pitman Publishing Ltd.

Richey, W.R. (2009), *Planning for Teaching: Introduction to Education* New York Mcgraw Hill Books Company. New York

Robert, R. (2011) *Principle and Problems of Business Education*. Cincinnati, Ohio, South Western Publishing Company.

Schwortz,T. et al (2002), *Learner-Centered Approaches to Teaching and Learning:* Adoptive Instructional Design. Atsusi "2c" Hirumi © 2005

Sofolahan, A. (2010), Why Education Standard falls. *The Democrat, March 25, 1993, pg 4*

Temidayo, A. O. (2009). Skill Development in Vocational and Technical Courses. International Journal of Educational Development

The Oxford Advanced Learners Dictionary (2007), New York Oxford University Press.

Tony, E. A. (2006), *Managerial Behaviour: Programme and Effectiveness.* New York, MCGrand-Hill.

Udoh, A.A. (2010), Business Education for Economic Device And Investment Opportunities. *Journal of Business Educational Research and Development Vol. 1*

Universal Basic Education *(UBE), (2004) Handbook.*

APPENDIX A

AN INTRODUCTORY LETTER RECEIVED FROM THE UNIVERSITY TO THE PROVOST OF COLLEGES OF EDUCATION AKWANGA AND PANKSHIN

APPENDIX B

INTRODUCTORY LETTER TO THE RESPONDENTS

Business Education Section,
Department of Voc. And Tech. Educ.,
Ahmadu Bello University,
Zaria

February, 2015

Dear Respondents

I am a postgraduate student in the above institution. I am conducting a research on the topic ‘ Influence of Availability of Instructional Facilities and Teachers Instructional Methods on Students’ Academic Performance in Shorthand in Colleges of Education Akwanga and Pankshin. I am soliciting for your cooperation by filling the attached questionnaire.

Please do not write your name on the questionnaire. Endeavour to answer the questions as truthfully as possible.
Your answers will be treated confidentially as they will be used only for academic purposes.

Boxes are provided beside the statements for you to indicate your responses. Read each statement carefully and put a tick the *column* that best expresses your opinion.

Thank you for your cooperation.

Sincerely yours

Sign: Evelyn Duniya George

APPENDIX C

QUESTIONNAIRE FOR TEACHERS

Section A: Biodata

Instruction: Kindly tick the appropriate boxes provided below, as it relates to you.

1. Name of your institution……………………………………………………………
2. What is your highest Educational qualification?

HND/ND ( )

BA/BSC ( )

B. Ed. ( )

MA/M SC. ( )

M. Ed. ( )

PHD ( )

Others (specify) …………………………………………………

3. Which of the following professional association do you belong?

NABE ( ) BEAVA ( ) Others (please specify) ………………………….

4. How many periods do you have for shorthand per week?

One period ( )

Two period ( )

Three Period ( )

Four period ( )

5. How would you rate your students' performance in shorthand examination?

Excellent ( )

Very Good ( )

Good ( )

Fair ( )

Poor ( )

6. How many times do you give CA to your students in a semester?

Once ( )

Twice ( )

Thrice ( )

Four and above

Section B

Instruction: B1 : Item 1: Staffing situation of shorthand teachers in the two Colleges of Education

7. The staffing situation of shorthand teachers in the Business Department is

Very Adequate ( )

Adequate ( )

Inadequate ( )

Very Inadequate ( )

8. **Adequacy of Instructional facilities**

At the end of each statement are columns numbered 4, 3, 2, 1 which represents Very Adequate, Adequate, Inadequate, Very Inadequate. Please tick the column that represents your opinion.

How often do you use the following Instructional Methods for teaching shorthand?

Table B2: Item 2 Instructional Methods

Techniques	**Very Often**	**Often**	**Not Often**	**Very Not Often**
Group				
Drilling				
Dictation/Speed				
Transcription				
Reading Rate				
Question/Answer				
Assignment				
Drama				
Excursion				
Firm				
Display work				
Invite Experts				

9. **Adequacy of Instructional facilities**

At the end of each statement are columns numbered 4, 3, 2, 1 which represents Very Adequate, Adequate, Inadequate, Very Inadequate. Please tick the column that represents your opinion. Rate the adequacy of the following Instructional facilities in Business Education department.

Table B3: Item 3: Level of Adequacy of Instructional Facilities for teaching Shorthand

Facilities	**Very Adequate**	**Adequate**	**Inadequate**	**Very Inadequate**
Relevant textbook				
Writing board				
Shorthand lab.				
ICT Lab/Services				
Model Office				
Staff offices				
Library services				
Lecture halls/theatre				
Students' tables and chairs				
Ventilation Facilities				
Air conditioners				

10. Instruction:

Please carefully read the statement below and tick the column that agreed with your view.

Table B4: Item 4: Level of Adequacy of Related Studio Facilities for teaching Shorthand

Equipment	**Very Adequate**	**Adequate**	**Inadequate**	**Very Inadequate**
Opaque projector				
Typewriters				
Computers				
Electric plant/Generator				
Television				
File cabinets				
Scanning machine				
Stop watch				
Photocopier and Printer				
Radio and tape recorder				
Video/cassettes				

APPENDIX D

INTRODUCTORY LETTER TO RESPONDENTS

Business Education Section,
Department of Voc. And Tech. Educ.,
Ahmadu Bello University,
Zaria

February, 2015

Dear Respondents

I am a postgraduate student in the above institution. I am conducting a research on the topic: ‘‘ Influence of Availability of Instructional Facilities and Teachers Instructional Methods on Students’ Academic Performance in Shorthand in Colleges of Education Akwanga and Pankshin I am soliciting for your cooperation by filling the attached questionnaire.

Please do not write your name on the questionnaire. Endeavour to answer the questions as truthfully as possible.
Your answers will be treated confidentially as they will be used only for academic purposes.

Boxes are provided beside the statements for you to indicate your responses. Read each statement carefully and put a tick the column that best expresses your opinion.

Thank you for your cooperation.

Sincerely yours

Sign: Evelyn Duniya George

APPENDIX E

QUESTIONNAIRE FOR STUDENTS

Section 'A' Biodata

Instruction:

Please carefully read the statements below and tick the box that agrees with your opinion.

1. Name of your institution: ……………………………………..

2. Sex: Male ( ) Female ( )

3. Age:

15	-	20	( )
21	-	25	( )
26	-	30	( )
31	-	35	( )
36	-	40	( )
Above		40	( )

4. Do your parent/guidance always care to see your result? Yes ( ) No ( )

5. Are your parent/guidance happy about your performance in shorthand? Yes ( ) No ( )

Section B: Item 1: Extent of adequacy of Office Technology Management Staff.

1. The staffing situation of shorthand teachers in my department is:

Table B1: Adequacy of Shorthand Teachers

Very Adequate ( )	Adequate ( )	Inadequate ( )	Very Inadequate

Table B2: Items 2 : Extend of Shorthand Teachers' Instructional Methods

Instructional Methods	Very Adequate	Adequate	Inadequate	Very Inadequate
Systematic introductory Approach to shorthand	( )	( )	( )	( )
Skill Development	( )	( )	( )	( )
Demonstration	( )	( )	( )	( )
Dictation	( )	( )	( )	( )
Reading Rate	( )	( )	( )	( )
Lectures	( )	( )	( )	( )
Drilling	( )	( )	( )	( )
Speed Development	( )	( )	( )	( )
Transcription	( )	( )	( )	( )
Varied approach	( )	( )	( )	( )
Homework approach	( )	( )	( )	( )

Tick ( ) the column that clearly indicates your opinion on the statement.

Rate the adequacy of the following facilities used for teaching shorthand in your department.

7. **Table B3: Items 3: Extent of Adequacy of Shorthand Studio facilities**

Facilities	**Very Adequate**	**Adequate**	**Inadequate**	**Very Inadequate**
Relevant textbook				
Writing board				
Shorthand lab.				
ICT Lab/Services				
Model Office				
Staff offices				
Library services				
Lecture halls/theatre				
Students' tables and chairs				
Ventilation Facilities				
Air conditioners				

8. **Table B4 - Items 4: Extent of Adequacy of Instructional Facilities**

Equipment	**Very Adequate**	**Adequate**	**Inadequate**	**Very Inadequate**
Opaque projector				
Typewriters				
Computers				
Electric plant/Generator				
Television				
File cabinets				
Scanning machine				
Stop watch				
Photocopier and Printer				
Radio and tape recorder				
Video/cassettes/CD plates				

APPENDIX F

AKWANGA COLLEGE OF EDUCATION
Business Education Departments

STUDENTS'ACADEMIC RESULTS IN SHORTHAND EXAMINATIONS 2010 – 2014

Students	2010	2011	2012	2013	2014	Total	Mean
A	26	40	36	54	62	218	43.60
B	30	34	38	24	46	172	34.40
C	28	42	44	32	32	178	35.60
D	10	20	58	56	28	172	34.40
E	40	50	16	42	24	172	34.40
F	24	30	28	32	42	156	25.20
G	52	42	42	50	20	206	30.80
H	12	18	32	20	46	134	25.60
I	20	64	34	30	50	198	39.60
J	62	32	22	46	30	192	36.40
K	18	42	53	37	44	194	38.80
L	46	56	40	51	43	228	45.60
M	48	12	40	23	30	153	30.60
N	15	17	31	42	53	158	31.60
O	60	42	18	32	20	172	34.40
P	18	21	40	46	42	167	33.40
Q	40	50	39	32	28	189	35.56
R	11	14	23	27	51	126	25.20
S	41	38	37	41	27	184	36.80
T	12	30	20	42	46	150	30.00
U	57	40	31	35	40	203	40.40
V	40	21	28	41	42	152	30.40
Tot al	654	755	746	805	816	3776	34.33

Source: Field Survey February, 2015

The table above shows Akwanga College of Education students' Academic Performance in shorthand examinations 2010 - 2014

The Mean score for the five years (2010 - 2014) was 34.33 which was a poor performance.

APPENDIX G

FEDERAL COLLEGE OF EDUCATION PANKSHIN

Business Education Department

STUDENTS'ACADEMIC RESULTS IN SHORTHAND EXAMINATIONS 2010 – 2014

Students	2010	2011	2012	2013	2014	Total	Mean
A	40	20	32	40	52	184	36.80
B	10	14	12	22	40	98	19.60
C	40	16	32	40	30	158	31.60
D	10	38	32	28	21	129	25.80
E	50	15	42	36	20	163	32.60
F	30	28	27	40	28	153	30.60
G	13	40	11	19	48	131	26.20
H	38	42	46	13	17	156	31.20
I	20	32	26	15	42	135	27.00
J	50	43	31	20	30	174	34.80
K	12	38	14	46	20	130	26.00
L	44	28	42	32	38	184	36.80
N	18	24	30	41	10	123	24.60
O	10	12	14	38	21	95	19.00
P	23	32	12	09	13	89	17.80
Q	12	16	20	22	31	101	20.20
Total	425	456	439	491	485	2296	27.07

Source: Field Survey February, 2015. Five years (2010 – 2014 was 27.07% poor performance

APPENDIX H

TEST OF HYPOTHESES

Correlation analysis of available shorthand teaching staff significant influence on students' academic performance in shorthand in Colleges of Education.

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Shorthand Teachers Adequacy	12	2.86	.75277	.067, 079	Significant
Students Performance	38	13.50	4.08656	.078, .625	

.

Correlation analysis of shorthand teachers' instructional Methods and their significant influence on students' academic performance in shorthand in Colleges of Education Akwanga and Panksin

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Teachers' Instructional Method	12	2.00	1.55	.108, .139	Significant
Students' Performance	38	17.33	13.83	.0169, .821	

Correlation test of the influence of the Available instructional Facilities on Students' Academic Performance in Shorthand.

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	
Instructional Facilities	22	2.33	.8165	.180, 0.102	Significant
Students' Performance	38	13.50	4.0867	.733, 0.613	

\

t-test of the differences between College of Education Akwanga and College of Education Pankshin on the influence of the available instructional facilities and teachers' instructional methods on students' academic performance in shorthand.

. College	No	Mean	SD	DF	T-Value	T-Critical	Alpha level	Decision
COE Akwanga Teachers	**7**	**2.33**	**2.42**					
Students' Response	22	37.00	12.08					
				132	**1.20**	**1.65**	**0.05**	**insignificant**
COE Pankshin Teachers	5	2.22	2.14					
Students' Performance	16	36.03	10.46					

NO STOP NO

INFLUENCE OF AVAILABILITY OF LABORATORY FACILITIES AND TEACHING TECHNIQUES ON STUDENTS' ACADEMIC PERFORMANCE IN SHORTHAND IN COLLEGES OF EDUCATION

M. Ed BUSINESS EDUCATION

EXTERNAL DEFENCE

BY

Evelyn Duniya GEORGE

pM.Ed/EDUC/716/ 2011 – 2012

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
BUSINESS EDUCATION SECTION
FACULTY OF EDUCATION
AHMADU BELO UNIVERSITY ZARIA

SUPERVISORS:

PROF. A. A. UDOH

DR. T. J. ADESHINA

MARCH, 2016

DECLARATION

I hereby declare that this work has been researched and written by me, and that it is a true record of my work except where reference is made to published literature.

I also declare that all the articles used in this research work are appropriately acknowledged.

______________________________ ______________________________

Evelyn D. George Date

ii

DEDICATION

This work is dedicated to the glory of the Almighty God.

CERTIFICATION

This Dissertation entitled: INFLUNCE OF AVAILABILITY OF LABORATORY FACILITIES AND TEACHING TECHNIQUES ON STUDENTS' PERFORMANCE IN SHORTHAND IN COLLEGES OF EDUCATION by Evelyn Duniya GEORGE meets the regulations governing the Award of the degree of M.Ed (Business Education) of the Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

Prof. A. A. Udoh Chairman, Supervisory Committee	--------------------- (Signature)	------------------------ (Date)
Dr. T. J. Adeshina Member, Supervisory Committee	--------------------- (Signature)	------------------------- (Date)
Dr. E. E. Adamu	---------------------	-------------------------

Head of Department (Signature) (Date)
Voc. & Tech. Education

Prof. Kabir Bala --------------------- ------------------------
Dean Postgraduate School (Signature) (Date)

iv

ACKNOWLEDGEMENT

A good academic work can never be the sole effort of an individual. Many people are bound to offer help, advice, encouragement and or active support. It is however impossible in a brief acknowledgement like this to mention the names of all the researcher's colleagues, comrades and relations who shared in making this research a reality. Therefore, the researcher wishes to use this opportunity to express her immense and profound gratitude to them all. There are however, certain persons who adequately cannot be thanked in this way.

The researcher's great appreciation and thanks goes to her able, tireless supervisors, Prof. A. A. Udoh, and Dr. T. J. Adeshina, my internal Examiner, Prof. Mrs. Ojo for their pain-staking and constructive criticisms, which greatly improved the quality of this work. The researcher's thanks are also due to the HOD, Vocational and Technical Education, Dr. Mrs.E. E. Adamu, the Postgraduate Coordinator, all Lecturers and other staff of the department of Vocational and Technical Education Ahmadu Bello University Zaria for their gentleness and cooperation.

The researcher also acknowledged her parents Dr. B. D George and Mrs. Angelina D. George, her brothers and sisters Mr. Theophilus, Mr. Abel, Mr. Louis, Miss Yosi, Miss Koni all of the Georges' family, who have all been great inspiration to her. Their love, moral and financial support cannot be over emphasized.

This research work cannot be complete without the researcher acknowledging her dearest husband Mr. Sheriff Dauda, her little daughter (Miss Delight Zidyep) and son (Mr.Israel Yason), all her postgraduate mates and friends for their patient and encouragement.

v

ABSTRACT

This study investigated the influence of laboratory facilities and teaching techniques on students' performance in shorthand in Colleges of Education. The study assessed the variables responsible for students' poor performance in shorthand examinations. The primary data for the study were collected through the use of questionnaire, while the secondary data for literature review were collected from available literature on the topic. Since the population of the study was not too large, the study did not adopt any sampling technique to select the respondents. The population of twelve (12) Lecturers and thirty nine (39) Students which was manageable enough was used as sampled population for the study. The data were presented using simple tables. The Pearson Product Moment Correlation Coefficient (PPMCC) was used to test hypotheses 1, 2, and 3, while the t-test statistical analysis was used to test hypothesis 4. The research revealed that inadequate qualified shorthand teaching staff, inadequate laboratory facilities, and the use of ineffective teaching techniques by shorthand lecturers were responsible for students' poor academic performance in shorthand examinations in the two Colleges of Education. It was also revealed that some of the few available shorthand laboratory facilities in the colleges were not functioning. The study further revealed that there was no significant difference between College of Education Pankshin and College of Education Akwanga on the influence of available laboratory facilities and teaching techniques. In view of this, the researcher recommended that government and college managements should equip shorthand laboratories with adequate functional facilities, qualified shorthand lecturers should be employed while the unqualified ones should be encouraged to go for further study and attend conferences and workshops to update their knowledge on shorthand. Lecturers teaching shorthand should adopt effective teaching techniques in teaching shorthand,

TABLE OF CONTENTS

Page

Title Page . . . . . . , ... i

Declaration ii

Dedication iii

Certification iv

Acknowledgement v

Abstract vi

Table of Contents . . . , ... vii

List of Tables . . . . , ... xi

List of Appendices xii

Abbreviations . . . , ... xiii

Operational Definition of Terms xiv

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study 1

1.2 Statement of the Problem 3

1.3 Objectives of the Study 4

1.4 Research Questions 5

1.5 Research Hypotheses 5

1.6 Significance of the Study . . . . , 6

1.7 Basic Assumption 6

1.8 Delimitation of the Study 7

CHAPTER TWO : REVIEW OF RELATED LITERATURE

2.1 Theoretical Framework for the Study. 8

2.2 Conceptual Framework 11

2.3 Teaching Techniques 18

2.4 Teaching Technique and Students Performance . . 21

2.5 Laboratory Facilities 23

2.6 laboratory Facilities and Students' Performance . . . 25

2.7 Empirical Studies 26

2.8 Summary of Literature Review 30

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design 32

3.2 Population for the Study 33

3.3 Sample Size, and Sample Technique 33

3.4 Instrument for Data Collection 33

3.5 Procedure for Data Collection 35

3.6 Procedure for Data Analysis 36

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

4.1 Analysis of Data to answer the Research Questions . . 39

Research Question 1 39

Research Question 2 41

Research Question 3 42

Research Question 4 42

4.2 Testing of Hypotheses 44

Hypothesis 1 44

Hypothesis 2 45

ix

Hypothesis 3 47

Hypothesis 4 48

4.3 Summary of Major Findings 50

4.4 Discussion of Findings 51

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary 54

5.2 Conclusion 55

5.3 Recommendations 55

5.4 Suggestion for further studies 56

REFERENCES 57

APPENDICES 62

ABBREVIATIONS

FGRs - First Group of Respondents

NBTE - National Board for Technical Education

NCE - National Certificate of Education

NCCE - National Commission for Colleges of Education

NPC - National Population Commission

TVE - Technical and Vocational Educators

UBE - Universal Primary Education

NUC - National University Commission

VS - Very satisfactory

SA - Satisfactory

UN - Unsatisfactory

VUNS - Very Unsatisfactory

LIST OF TABLES

Page

Table 1: Shorthand Laboratory Equipment 24

Table 2: Shorthand Facilities 24

Table 3: Shorthand Teaching Aid 24

Table 4.1.1 Staff Educational Qualification 39

Table 4.1.2: Mean and Standard Deviation of shorthand Lecturers' and Student' academic Performance in shorthand. 40

Table 4.1.3 Mean and Standard Deviation on lecturers' choice of teaching techniques and Students' academic Performance in shorthand 41

Table 4.1.4 Mean and Standard Deviation on the available laboratory facilities and Students' academic Performance in shorthand. 42

Table 4.1.5 Mean and Standard Deviation on the difference between Akwanga COE and Pankshin COE on the influence of the available Laboratory facilities and Teaching Techniques on Students' academic Performance in shorthand 43.

Table 4.2.1 Correlation analysis of the Relationship between the adequacy of available Lecturers and Students' academic Performance in shorthand. 45

Table 4.2.2 Correlation Test of the Relationship between Lecturers choice of Teaching Techniques and Students' academic Performance in shorthand. 46

Table 4.2.3 Correlation Test of the Relationship between the Available Laboratory Facilities and Students' academic Performance in shorthand. 47

Table 4.2.4 T-test of the difference between Akwanga College of Education and Pankshin College of Education on the influence of laboratory facilities and teaching Techniques on students' academic performance in shorthand. 48

LIST OF APPENDICES

Pages

Appendix 'A' letter of Introduction: 62

Appendix 'B' Introductory Letter to Respondents 63

Appendix 'C' Questionnaire for Lecturers 64

Appendix 'D' :Introductory Letter to Respondents 70

Appendix 'E' : Questionnaire for Heads of Business Education Departments 71

Appendix 'F' Akwanga College of Education , Business Educations Department: Students Academic Results in Shorthand Examinations 2010 – 2014 77

Appendix 'G' Federal College of Education Pankshin: Business Educations Department: Students Academic Results in Shorthand Examinations 2010 – 2014 79

Operational Definition of Terms

Academic Performance in Shorthand: Refers to the students' ability to pass the prescribed test or examination with high grade in shorthand.

Adequate: In this research, adequate means the availability of something both in Qualitative and quantitative terms. Such things must be functional and available in the required number. It also refers to having professionally qualified shorthand teaching staff.

Equipments: This term refers to the things needed for a particular purpose. They are tangible things. For the purpose of this study, equipment refers to typewriters, ICT accessories like computers, stop watch, chalkboard, student chair and desks, standby electric plant /generator, textbooks, file cabinets, radios, television, students dictating machine, typewriters, electric plant /generator, etc.

Facilities: For the purpose of this study, facilities refers to shorthand laboratory, typing pool, model office, classrooms, library, ICT components such as network services/ICT Laboratory, staff offices, Classrooms/lecture theatres, tables, desks, shopping Facilities, teaching techniques, evaluation techniques, instructional techniques , instructional material such as teaching aids, equipment, etc.

Influence: The term refers to the powerful effect that something has on another. It is the circumstances helping to bring about a result that has caused something To evolve or develop. For the purpse of this study, impact here refers to the force with which facilities and equipment have affected students' academic performance in shorthand.

xiv

Laboratory facilities: These are equipments and teaching aids used for teaching and

Student's Performance: This term refers to the achievement of students in a given test or examination in relation to academic grades.

Shorthand: Is a core course in office education option. It is the act of representing spoken sound by written signs. Pitman Shorthand invented by Isaac Pitman in 1836 is in use today.

Teaching technique: This refers to an effective way of teaching and learning. In this study, it means the effective ways/styles of

teaching skill subjects such as demonstration, practical drilling,

,lecture, cooperative learning, drama, positive interdependence

Typewriting: Typewriting is also a core course in office education option. It is the production of letters/ documents in a very clear legible form by using the typewriter. The person that types is called as typist. Shorthand and typewriting are twin courses that go together. They are the main courses in office education option/ secretarial studies.

xv

Dept. of Voc & Tech. Education,
Ahmadu Bello University,
Zaria.

14th October, 2015,

The Coordinator,
Post Graduate Programme,
Department of Voc. & Tech. Education,
Ahmadu Bello University,
Zaria.

Dear Sir,

PRESENTATION OF EVELYN DUNIYA GEORGE
M. Ed/EDUC/716/2011 – 2012 FOR POST– DATA SEMINAR

Having gone through her work, we wish to present **EVELYN DUNIYA GEORGE FOR POST – DATA SENINAR.** Thanking you for anticipated cooperation.

Sign: ________________________ Date: ___________________________

PROF. A. A. UDOH
1st Supervisor

Sign: _______________________ Date: ___________________________

DR. T. J. ADESHINA
2nd Supervisor
P21599

Library Section,
Department of Sociology,
Ahmadu Bello University,
Zaria.

4th July, 2015

The Ag Registrar,
Ahmadu Bello University,
Zaria.

Through:

The Ag University Librarian,
Kashim Ibrahim Library,
Ahmadu Bello University,
Zaria.

The H.O.D.
Department of Sociology,
Faculty of Social Sciences,
Ahmadu Bello University,

Zaria.

Dear Sir,

APPLICATION FOR CONFIRMATION OF APPOINTMENT

I wish to apply for the above subject matter. I assumed duty on the 28th August, 2012 in Kashim Ibrahim Library (KIL) as a Higher Library Officer.

I have long been over due for confirmation as I have attained the probation period of 3 years in the service. Attached are copies of my appointment and assumption of duty letters.

I hope my application would receive your kind consideration.

Yours faithfully,

Angelina B. Duniya (Mrs)

P 21599

IMPACT OF AVAILABILITY OF LABORATORY FACILITIES AND TEACHING TECHNIQUES ON STUDENTS' PERFORMANCE IN SHORTHAND EXAMINATION IN COLLEGES OF EDUCATION

M. Ed BUSINESS EDUCATION

POST DATA SEMINAR

BY

Evelyn Duniya GEORGE

M.Ed/EDUC/716/ 2011 – 2012

DEPARTMENT OF VOCATIONAL AND TECHNICAL EDUCATION
BUSINESS EDUCATION SECTION

FACULTY OF EDUCATION
AHMADU BELO UNIVERSITY ZARIA

SUPERVISORS:

PROF. A. A. UDOH

DR. T. J. ADESHINA

OCTOBER, 2015

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

This chapter dealt with the presentation, interpretation and analysis of the data collected. It gives the qualitative and quantitative analysis of the data and used these analysis to test the hypotheses. In searching for relevant data, focus was placed on the objective of the study, the critical variables of the hypotheses and the theoretical framework guiding the study. In summary, the objective of the study is to investigate the influence of laboratory facilities and teaching techniques on students' performance in shorthand examinations in colleges of Education Akwanga and Pankshin. The data analysed in this chapter was obtained from the questionnaire administered to two groups of respondents (lecturers and Heads of Departments of Business Education) who constituted the sampled population. A total of twelve (12) copies of questionnaire containing thirty-three items were set and administered to two groups of respondents (shorthand lecturers and Heads of Departments of Business Education). The research questions in the questionnaire were answered using the mean (X^2) adopted by Awotunde and Uguduluwa (2004), who using the formula ELRSW/NLRS computed the interior mean for rating the Liker Scale to be at average. In this study, the researcher used rating scale which has the following weight 4, 3, 2, and 1, the mean being 2.5. This mean served as a basis for accepting or rejecting any of the questionnaire items responded to by the respondents. If any mean of the questionnaire items falls equal or above the mean criterion of 2.50, it was accepted as answering the research questions positively. Otherwise, it was considered as answering the research questions negatively. Similarly, the Pearson Product Moment Correlation (PPMCC) statistics was used to analyse hypotheses, 1, 2, and 3 , while the t-test statistical analysis was used to analyse hypothesis 4. The responses from the two groups of respondents were jointly presented and analyzed. In order to achieve the research objectives, both descriptive and inferential statistical techniques were used.

4.1 Analysis of Data to Answer Research Questions.

Research Question One:

To what extent does the qualifications of the Available Shorthand Lecturers in the Colleges of Education affect students' academic performance in shorthand?

The data collected on items 2, 3 and 7 in lecturers' questionnaire and item 4 in Heads of Business Departments' questionnaire were used to answer research question one. The data were analyzed in tables 4.1.1 and table 4.1.2.

Table 4.1.1 **<u>Staff Educational Qualification</u>**

Qualification	Frequency	Percentage

PhD	1	8.33
M. Ed (Bus. Educ)	2	16.67
MA., MSC.	0	00.00
B. Ed	1	8.33
BA., BSC.	2	16.67
HND	6	50
NCE/OND	0	0
Total	**12**	**100**

Source: Field Survey as at February 2015

Based on the data presented in table 4.1.1, there was one (8.33%) PhD lecturer, two (16.67%) had Master degree in Business Education, one (8.33%) had a degree in Business Education, two(16.67%) had Bachelor of Art/SC. Degree, while six (50%) had Higher National Diploma. This further revealed that majority of shorthand teaching staff in the Colleges of Education were holders of Higher National Diploma. This is an unhealthy trend. In this kind of improper arrangement academic abuse, it is glaring that poor performance of teachers will definitely result in poor results of students.

Table 4.1.2: Mean and Standard Deviation of shorthand Lecturers' and Students' Academic Performance in Shorthand Examinations

School	N	Mean	SD	Decision
Lecturers	12	1.86	2.18	Unsatisfied
Students' Academic Performance	39	32.05	1.78	Unsatisfied

Source: Field Survey February, 2015

The data in table 4.1.2 revealed that there were twelve (12) shorthand Lecturers and Thirty nine shorthand students in the Colleges of Education under study. The lecturers had means score of 1.86 and 2.18 as standard deviation, while the students' performance mean was 32.05 and had standard Deviation of 1.78. The Colleges of Education had unsatisfactory level of adequacy of Lecturers as their mean score of 1.86 and students' academic performance mean of 32.05 and 40.00 respectively. In addition, the data in table 4.1 revealed that majority of shorthand teachers in the two Colleges of Education were unqualified. The responses of shorthand lecturers on question 3 of the lecturers' questionnaire also revealed that only one (1) lecturer belonged to a Professional Association. In this type of unhealthy educational situation, it is impossible for students to perform well in shorthand examinations.

Research Question Two: **To what extent do the types of lecturers' choice of teaching techniques affect students' academic performance in Shorthand Examinations?**

The data collected on items 8 of the Lecturers' questionnaire and question 5 and item 6 of the Heads of Business Education Departments' questionnaire were used to answer research question two. The data were analyzed in table 4.1.3.

Table 4.1.3: Mean and Standard Deviation on Lecturers' teaching techniques and Students' Academic Performance in Shorthand Examinations

School	N	Mean	SD	Decision
Lecturers	12	2.00	11 .16	Unsatisfied
Students' Academic Performance	39	44.08	14.10	Satisfactory

Source: Field Survey February, 2015

The outcome of table 4.1.3 revealed that there were twelve (12) Lecturers and thirty nine students in Akwanga and Pankshin Colleges of Education. The table further revealed that the Lecturers had a mean score of 2.00, with 11.16 as standard deviation, while the students had academic performance mean score of 44.08 and 14.10 as standard deviation. The mean score of the lecturers fell below the acceptable mean of 2.50 in this study, which implied unsatisfactory. However, the students' performance mean score stood at 44.08 and standard deviation of 14.10 implying satisfactory performance. This therefore implied that the lecturers were aware that they were not using the right shorthand teaching pedagogy. The students' good performance could be attributed to other variables such as background, experience, personal effort, etc.

Research Question Three: To what extent does the available Laboratory Facilities affect students' Academic Performance in Shorthand Examinations?

The data collected on items 9 and 10 of the Lecturers' questionnaire and items 7, 8 and 9 in the Heads of Business Education Departments' questionnaire were used to answer research question three. The data were analyzed in table 4.1.4.

Table 4.1.4: Mean and Standard Deviation on the Available Laboratory Facilities and Students' Academic Performance.

School	N	Mean	SD	Decision
Lecturers	12	2.33	8.64	Unsatisfied
Students' Academic Performance	39	23.22	11.34	Unsatisfied

Source: Field Survey February, 2015

The outcome of table 4.1.4 revealed that there were twelve(12) Lecturers and thirty nine students in Akwanga and Pankshin Colleges of Education. The table also revealed that the Lecturers had a mean score of 2.33 and a standard deviation of 8.64, while the students' academic performance mean score was 23.22 and a standard deviation of 11.34. Both had unsatisfactory mean scores of 2.33 and 23.22 which were below the acceptable means of this study.

Research Question Four: To what extent does College of Educatio Akwanga differ from College of Education Pankshin in the impact of the available laboratory facilities and teaching techniques on students' performance in shorthand examinations?

The data collected on all the questions in the Lecturers' and Heads of Business Education Departments' questionnaire were used to answer research question four. The data were analyzed in table 4.1.5.

Table 4.1.5

Mean and Standard Deviation on the Differnces between Akwange College of Education and Pankshin College of Education on the impact of the available laboratory facilities and teachingTechniques.

School	N	Mean	SD	Diferences	Decision

Lecturers and Performance

				Mean	SD	
Akwanga Lecturers	7	2.33	2.42			
				0.11	**0.28**	**Insignificant**
Performance	22	36.00	18.12			
				4.36	**5.26**	**Insignificant**
Pankshin Lecturers	5	2.22	2.14			
Performance	17	31.64	12.86			

Source: Field Survey February, 2015

Table 4.1.5 revealed that Akwanga had a mean score of 2.33 and a standard deviation of 2.42, while Pankshin had a mean score of 2.22 and a standard deviation of 2.14. The table also revealed that Akwangab students' performance had a mean score of 36.00 and 18.12 as standard deviation, while Pankshin students performance had a mean score of 31.64 and standard deviation of 12.86. The differences between the mean and standard deviation of the lecturers in the two colleges were 0.11 and 0.28 respectively, which were statistically insignificant, while the differences between the mean and standard deviation of students' performance in the two colleges of education were 4.36 and 5.26 respectively.Thus, their mean differences of 0.11 and 0.28 were statistically insignificant.

This therefore implied that there was no significant differnce between Akwanga College of Education and Pankshin College of Education on the influence of the available laboratory facilities and teaching techniques on students' performance in shorthand examinations.

4.2 Hypotheses Testing

Four null hypotheses were postulated for the study to further probe into the research questions. Hypotheses 1, 2, and 3 were tested using Pearson Product Moment Correlation Coefficient (PPMC), while hypothesis 4 was tested using independent sample t-test statistics. The Decision Rule for the acceptance or rejection of hypothesis was that: if the calculated correlation is greater than the table correlation, the hypothesis was rejected, but if the calculated correlation is less than the table correlation, the hypothesis was accepted.

.

The test of hypotheses were presented in tables 4.3.1 to 4.3.4.

Null Hypothesis One:

There is no significant relationship between the qualification of shorthand teaching staff and their impact on students' academic performance in shorthand examinations in Colleges of Education.

Data collected on item 2,3 and 7 of lecturers' in questionnaire and items 4 of the HODs' questionnaire were used to test hypothesis one.

Table 4.2.1:

Correlation analysis of Relationship between the Adequacy of lecturers and Students' Academic Performance in Shorthand Examinations

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Adequacy of Lecturers	**12**	**2.48**	**2.45**	**.067, 079**	
					Significant
Performance	**39**	**26.42**	**8.38**	**.078, .625**	

Source: Field Survey February, 2015

Table 4.2.1 Showed the result of the PPMCC correlation test used for testing the correlation between adequacy of lecturers and students' performance in shorthand examinations. The data in the table revealed that adequacy of lecturers had a mean score of 2.48 and a standard deviation of 2.45, while students' performance had a mean score of 26.42 and standard deviation of 8.38. The Pearson Correlation calculated in the table was 0.067 while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (0.067) was greater than the table tabulated (0.05), it implied that there was significant relationship between the qualifications of lecturers and students' academic performance in shorthand examinations. Therefore, null hypothesis one which stated that there is no significant relationship between the qualifications of lecturers and students' performance in shorthand examination was rejected.

Null Hypothesis Two:

There is no significant relationship between the types of teaching techniques used by lecturers and their influence on students' academic performance in shorthand examinations Colleges of Education.

Data collected on items in B2 (teaching techniques) in question 8 in the lecturers' questionnaire and items 5 and 6 in the HODs' questionnaire were used to test hypothesis two.

Table 4.2.2: Correlation test of the Relationship between Lecturers' Teaching Techniques and Students' Academic Performance in Shorthand Examinations

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	Remark
Teaching Techniques	12	2.48	2.45	.108, .139	Significant

Performance	**39**	**38.27**	**6.14**	**.0169, .821**

Table 4.2.2 Showed the result of the PPMCC correlation test used for testing the correlation between adequacy of teaching techniques and students' academic performance in shorthand examinations. The data in the table revealed that Teaching techniques had a mean score of 2.48 and a standard deviation of 2.45, while students' performance had a mean score of 38.27, and standard deviation of 6.14. The Pearson Correlation calculated in the table was 0.108, while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (0.067) was greater than the table tabulated (0.05), it implied that there was significant relationship between the teaching techniques and students' performance in shorthand examinations. Therefore, null hypothesis two which stated that there is no significant relationship between the teaching techniques used by shorthand lecturers and students' performance in shorthand examinations was rejected.

Null Hypothesis Three:

There is no significant relationship between the Laboratory facilities and their impact on students' academic performance in shorthand examinations in Colleges of Education.

Data collected on item B3 (Laboratory facilities and equipment), questions 9 and 10 in the lecturers' questionnaire and questions 7, 8 and 9 in the HODs' questionnaire were used to test hypothesis 3.

Table 4.2.3:

Correlation test of the Relationship between the Available Laboratory Facilities and Students' Academic Performance in Shorthand Examinations

Group	N	Mean Score	SD	PPMCC Sig. (2-tailed)	
Laboratory Facilities	**22**	**2.11**	**11.77**	**.028, 0.102**	
					Significant
Performance	**39**	**28.02**	**9.67**	**.058, 0.613**	

Source: Field Survey February, 2015

Table 4.2.3 Showed the result of the PPMCC correlation test of the relationship between laboratory facilities and students' performance in shorthand examinations. The data revealed that laboratory facilities had a mean score of 2.11 and a standard deviation of 11.77, while performance had a mean score of 28.02 and standard deviation of 9.67. The Pearson Correlation calculated in the table was .028, while the table tabulated correlation was 0.05. Since the Pearson correlation calculated (.028) was greater than the table tabulated (0.05), it then implied that there was significant relationship between laboratory facilities and students' performance in shorthand examinations. Therefore, null hypothesis three which stated that there is no significant relationship between the available laboratory facilities and students' performance in shorthand examinations was rejected.

Null Hypothesis Four:

There is no significant difference between College of Education Akwanga and College of Education Pankshin on the impact of available Laboratory Facilities and teaching techniques on students performance in shorthand examinations.

Data collected on the three items (adequacy of shorthand staff, teaching techniques, and laboratory facilities and equipment), items 2 – 10 in the lecturers' questionnaire and items 4 – 9 of the HODs' questionnaire were used to test hypothesis 4.

Table 4.2.4

t-test of the differences between College of Education Akwanga and College of Education Pankshin on the influence of laboratory facilities and teaching techniques on students' performance in shorthand examinations.

. College	No	Mean	SD	DF	T-Value	T-Critical	Alpha level	Decision
COE Akwanga Lecturers	**7**	**2.33**	**2.42**					
Students' Performance	22	37.00	12.08					
				132	**1.20**	**1.65**	**0.05**	**insignificant**
COE Pankshin Lecturers	5	2.22	2.14					
Students' Performance	22	36.03	10.46					

Source: Field work February 201

The test of hypothesis four in table 4.2.4 above showed no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available laboratory facilities and teaching techniques. The table indicated that Akwanga lecturers had a mean score of 2.33 with standard deviation of 2.42. Its students' performance had a mean score of 37.00 and standard deviation of 12.08. Pankshin Lecturers had a mean score of 2.22 and standard deviation of 2.14, Its students' academic performance had a mean score of 36.03 and standard deviation of 10.46. The computed t-value was 1.20 at alpha level of 0.05 with degree of freedom of 132, while the t-critical was 1.65. Thus, the calculated t-value is less than the critical table value, hence, the difference is insignificant. Thus, the null hypothesis of no significant is retained. It could therefore be concluded that there was no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available laboratory facilities and teaching techniques on students' performance in shorthand examinations. However, College of Education Akwanga Lecturer's mean score of 2.33 and standard deviation of 2.42 were slightly higher than College of Education Pankshin lecturer's mean score of 2.22 and standard deviation of 2.14. Again, Akwanga students' performance mean score of 37.00 and standard deviation of 12.08 were also slightly higher than Pankshin student' performance mean score of 36.03 and standard deviation of 10.46. This therefore means that COE Akwanga's impact of laboratory facilities and teaching technique was slightly higher than that of COE Pankshin. The two colleges' slight differences in mean scores and standard deviation stood at 0.11 and 0.28 for lecturers, and 0.97 and1.62 for students' performance, which are statistically insignificant.

4.4 Summary of Major Findings

The following were the major findings of the study:

2. Analysis of research question one showed that shorthhand lecturers in both Colleges of Education were unqualified to teach as shown in table 4.1.1 and table 4.1.2. The result obtained from the test of hypothesis one in table 4.2.1 also confirmed this. The result showed significant relationship between the qualification of the available shorthand lecturers and students' academic performance in both Colleges of Education.

3. The analysis of research question two in table 4.1.3 showed that shorthand lecturers' choice of teaching techniques affected students' academic performance in shorthand examinations in the two Colleges of Education. This was further confirmed by the result of the test of hypothesis two in table 4.22.2 which showed significant relationship between lecturer's choice of teaching techniques and students' academic performance in shorthand examinations in the two Colleges of Education.

4. Analysis of research question three in table 4.1.4 showed that the available laboratory facilities affected students' performance in shorthand examinations in the two Colleges of Education. The result of hypothesis three tested in table 4.2.3 also confirmed that there was significant relationship between the available laboratory facilities and students' academic performance in shorthand examinations in the two Colleges of Education.

5. Both analysis of research question four in table 4.1 and hypothesis four tested in table 4.2.4 showed no significant differences between the two Colleges of Education on the influence of laboratory facilities and teaching techniques on students' academic

performance in shorthand examinations. The computed t-value was 1.20 at alpha level of 0.05 with degree of freedom of 132, while the t-critical was 1.65. Thus, the calculated t-value was less than the critical table value with 0.45. Hence. the difference of 0.45 was statistically insignificant. The slight insignificant difference was in favour of Akwanga College of Education.

5.5 Discussion of Findings

The study showed that there was significant relationship between the qualification of shorthand teaching staff and students' performance in shorthand examinations. This could be seen from the calculated correlation in table 4.2.1 which stood at 0.067 higher than 0.05 the table tabulated correlation. This implied that hypothesis one which stated that there is no significant relationship between the qualification of shorthand teaching staff and students' performance in shorthand examinations was rejected. The explanation for this could be that the college managements do not encourage staff to go for further studies. This findings agreed with the assertion of Aina (2000) who opined that no teacher can enlighten his students if he himself is ignorant.

The study also revealed that there was significant relationship between the teaching techniques used by shorthand teaching staff and students' performance in shorthand examinations as the calculated correlation of .166 in table 4.2.2 was higher than the table tabulated correlation of 0.05. This implied the rejection of hypothesis two which stated that there is no significant relationship between the teaching techniques used by the lecturers in teaching shorthand and students' performance in shorthand examinations. This may be due to unqualified shorthand teachers who adopted theoretical approach in teaching shorthand rather than practical approach. This finding agreed with Temidayo (2009) who pointed out that the use of ineffective teaching techniques in most cases is responsible for ineffective teaching and learning. He further stated that the teaching profession has no boundary, as such, many unqualified teachers get in to the profession without knowing the effective techniques for imparting skill and knowledge. Unfortunately according to him, students are at disadvantage of their ignorance.

The research finding also revealed that there was significant relationship between the available laboratory facilities and students' performance in shorthand examinations as the calculated correlation of .077 in table 4.2.3. was higher than the table tabulated correlation of 0.05. It was unraveled that laboratory facilities were inadequate in terms of quantity and quality. The reason for this could be that the colleges lack finance to purchase the required facilities. Insufficient resources to equip educational laboratories has always been great problem in schools. This finding is in line with Sholes (2008) who opined that facilities and equipment are required in the teaching of vocational and technical courses. Many facilities and equipment required for the teaching of Office Education courses are capital intensive, as such, many Vocational and Technical Institutions hardly afford the purchase of these facilities and equipment.

The research finding further revealed that there was no significant difference between College of Education Akwanga and College of Education Pankshin on the influence of available laboratory facilities and teaching techniques. However, College of Education Akwanga Lecturer's mean score of 2.33 and standard deviation of 2.42 were slightly higher than College of Education Pankshin lecturer's mean score of 2.22 and standard deviation of 2.14. Again, Akwanga performance mean score of 37.00 and standard deviation of 12.08 were also slightly higher than Pankshin performance mean score of 36.03 and standard deviation of 10.46. This therefore implied that COE Akwanga's influence of laboratory facilities and teaching technique was slightly higher than that of COE Pankshin. The two colleges' slight differences in mean scores and standard deviation stood at 0.11 and 0.28 for lecturers, and 0.97 and1.62 for students' performance which are statistically insignificant

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Business education as a component of vocational education is said to be a set of instructions to prepare students for jobs in the business world. Business education, like many other courses is aimed at providing an individual with knowledge, skills, aptitudes and methods required in business training. Thus, Business Education is the preparation of individuals for enterprises or employment. The philosophy behind business education is to prepare its graduates for work and for the development of the society. Aliyu (2004) opined that business education programme is an umbrella under which all business courses take cover. These include Business Administration, Marketing, Accounting, purchase and Supply, Business Studies, Secretarial Studies etc, while at the teacher education level three major components are identified, thus: Accounting Education, Distributive/Marketing Education, Office/ Secretarial Education.

Adeshina and Aliyu (2011) opined that Office Education is part of Business Education programme that equips students with all secretarial domain in order to be efficient and effective. Office Education as a programme of study in Business Education programme is expected to be equipped with practical laboratory facilities such as manual and electric typewriters, computers, photocopier machines, scanning machines, projectors, standby electric plant/generator, air-conditioners, radios/tape-recorders, video machines, television, executive tables and chairs, telefacsmile machines, executive cushiness, stop watch, console head phones etc, with qualified teachers that could use varied teaching methods and techniques for teaching and learning. A pilot survey and interaction with some Business Educators and students (Office Option) around the area of study revealed that some of the lecturers are ill-prepared as they are not aware of some facilities and equipment especially the emerging technologies in ICT not to talk of even knowing how to operate them.

1.2 Statement of the Problem

The increasing level of poor performance of students in shorthand in tertiary institutions calls for assessing the laboratory facilities and teaching techniques that would improve the performance levels of the students in shorthand. The poor performance of these youths in shorthand is evidence of falling standard of education in primary and post primary schools in the country. Students' poor performance in shorthand could be observed in appendices F and G which showed clearly five years shorthand results (2010 – 2014) of students in College of Education Akwanga and Pankshin. The results showed five years average performance of 34.33% for Akwanga and 27.07% for Pankshin. Students' poor performance in shorthand can be said to be a reflection of the evidence of absence of functional laboratory equipment and effective teaching techniques. Eeravi (2007) observed that the government neglect of skilled subjects in want of rapid scientific and technological development had paid little attention and emphasis to the teaching and learning of skilled technical subjects in our schools. Also, little concern and efforts are made on the qualities of vocational and technical teachers education and in the area of teaching facilities and equipment. Shorthand a course taught under the Office Education Option, the major trust of this project has suffered tremendously in view of lack of adequate laboratory facilities and employment of the correct teaching method, techniques and styles. This has consequently lead to students mass failure, resulting into their mass defection from Office Option to Accounting Option. To a large extent it has not contributed to the achievement of the objective for which the programme was designed. It is against this background that the researcher became interested in carrying out an investigation to unravel the state of laboratory facilities such as equipment, teaching aids and also teaching techniques that are used by the teaching staff and their impact on students performance in shorthand examinations in Colleges of Education Pankshin and Akwanga.

1.3 Objective of the Study

The general objective of the study is to investigate the impact of availability of laboratory facilities and teaching techniques on students' performance in shorthand examinations in Colleges of Education Akwanga and Pankshin. The specific objectives of this study are to:

1. Investigate the relationship between qualification of the shorthand teaching staff in colleges of education and their impact on students' performance in shorthand examinations.
2. Discover the types of teaching techniques used by lecturers and their impact on students' performance in shorthand examinations

1.4 Research Questions

Considering the specific objectives of the study, the following research questions were generated with particular focus on College of Education Akwanga and Federal College of Education Pankshin.

1. To what extent does the qualification of the available shorthand lecturers in the Colleges of Education affect students' academic performance in shorthand?
2. To what extent do the types of lecturers' choice of teaching techniques affect students' academic performance in shorthand?

1.5 Research Hypotheses

Based on the objectives of the study, the following null hypotheses are formulated to aid the study..

Ho_1

There is no significant relationship between the qualification of the available shorthand teaching staff in Colleges of Education and their impact on students' academic performance in shorthand examinations.

Ho_2

There is no significant relationship between the types of teaching techniques used by lecturers and their impact on students' academic performance in shorthand examinations.

1.6 Significance of the Study

It is hoped that the results of this research will be useful to both government, college managements, lecturers, students and future researchers in the following ways;

The study is expected to be of immense benefit to College management in that they will be able to decide better the type of lecturers to employ to teach shorthand in Colleges of Education.

It is expected to assist shorthand lecturers to adopt effective instructional technique to teach shorthand.

1.7 Basic Assumptions

This study assumed that:

v. Most lecturers in the two Colleges of Education are not adequately qualified to teach shorthand at NCE level.

vi. Office Education lecturers use wrong teaching techniques in teaching students shorthand in the two Colleges of Education.

vii. Inadequate functional laboratory facilities and equipments (both in quantitative and qualitative term) in teaching and learning shorthand in the two Colleges of Education is responsible for students' poor academic performance in shorthand.

viii. There is no significant difference between the impact of laboratory facilities and teaching techniques on students' performance in shorthand in Colleges of Education Akwanga and Pankshin

1.8 Delimitation of the Study

This research covered the impact of the state of laboratory facilities, and teaching techniques on students' academic performance in shorthand in Colleges of Education Pankshin, Plateau State and Akwanga, Nassarawa State, with particular reference to shorthand, a course offered within the Office Education Option in Business Education Department. It concerns itself with all the lecturers teaching shorthand, Heads of Departments and 300 level students' five years (2010 – 2014) results Business Education Departments in Akwanga and Pankshin Colleges of Education.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

This study is aimed at assessing the factors affecting student's academic performance in shorthand and typewriting examinations in Federal College of Education Pankshin and College of Education Akwanga. The chapter is discussed under the following sub-headings:

2.1 Theoretical Framework

2.2 Conceptual Framework

2.3 Teaching Techniques

2.4 Teaching Techniques and Students' Performance

2.5 Laboratory Facilities

2.6 Laboratory Facilities and Students' Performance

2.7 Empirical Studies

2.8 Summary of Literature Review

2.1 Theoretical Framework

This research is hinged on Learner-Centered Approaches to Teaching and Learning theory. It is an Adoptive Instructional Design propounded by Schwartz, Lin, Brophy and Bransford, (2002). The primary goal of this theory is to teach a deep understanding of disciplines and simultaneously fostering and developing skills. The theory is adopted because it highlights important requirements for effective teaching and learning, which are relevant to this research. These requirements are:

The theory provides an understanding of the goals, context and challenges of what is to be taught and learned, It emphasizes the need to bridge gaps between theory and skills, it advocates for variety of motivations, helps students develop shared mental models of what is to be learned, encourages team work and exchange of ideas, students are provided with perspectives of experts, complete skill-building lessons are required, multiple effective evaluation techniques that provide realistic standards of performance are required so that the teacher can effectively evaluate students and the students can equally know their progress. The theory helps set standard for achievement and motivates students to do well.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter explained the methodology that was used in the collection of data for the study under the following sub heads:

3.1 Research Design

3.2 Population of the Study

3.3 Sample Size and Sample Technique

3.4 Research Instrument

3.5 Procedure for Data Collection

3.6 Procedure for data Analysis

3.1 Research Design

For the purpose of this study, the researcher employed the survey research method. This entailed gathering of data about a target population from a sample and generalizing the findings obtained from an analysis of the sample to the entire population. Survey according to Obioma (1988) is "a type of research method involving among others specifying the properties of a given phenomena". In this case, aspects of the problem being investigated are done through the use of sample. Some "properties/variables of the study must inevitably enter into survey work if it is to be of value" (Nisbet andEntwish,1970). The researcher is motivated to choose this character of survey research because the study primarily investigated the relationship between the variables of the study and their impact on students' poor academic performance in shorthand.

3.2 Population of the Study

The target population for this study comprised 10 shorthand lecturers, 2 Heads of Departments, 39 Office Option students in Business Education Departments of College of Education Akwanga and Federal College of Education Pankshin. The population breakdown is shown in table 3.1.

Table 3.1: Population of the Study

Name of College	No. of Lecturers	No. of Students
F.C.E. Pankshin	5	17
C.O.E. Akwanga	7	22
Total	**12**	**39**

Source: Field Survey February 2015

3.3 Sample Size and Sample Technique

The sample selection for this study is all the population of the study. The researcher decided to use all the population of the study because they are not large enough to warrant selection.

3.4 Research Instrument

The instrument used in this survey study for data collection were two sets of questionnaire. One set of questionnaire was meant for shorthand lecturers, while the second set was meant for Heads of Departments of Business Education in the two Colleges of Education. The questionnaire was used to obtain the respondents' own opinions on the research topic and to gather broad range of views on the problem under examination. The two sets of questionnaire were divided into two major sections: 'A' and 'B'. Section 'A' contained personal information about the respondents, while section 'B' demanded for information on the major variables.

In the two sections described, the responses to the test items followed a 4 point Scale as:

Strongly Agreed (SA)/Very Adequate (VA) Very Often (VO) 4 points

Agreed (A)/Adequate (A) Often (O) 3 points

Disagreed (D) Inadequate (NA) Not Often (NO) 2 points

Strongly Disagreed (SD) Very Inadequate (VIA) Not Very Often (NVO) 1 point

The respondents were required to tick or in some cases write briefly in the appropriate spaces provided.

There are two sets of questionnaire. The data collected on items 2, 3 and 7 in the first set of questionnaire and item 4 in second set of questionnaire were used to answer research question one. The data collected on items 8 of the lecturers' questionnaire and items 5 and 6 of the Heads of Business Education Departments' questionnaire were used to answer research question two. Similarly, the data collected on items 9 and 10 of the lecturers' questionnaire and items 7, 8 and 9 in the Heads of Business Education Departments' questionnaire were used to answer research question three. The data collected on all the questions in the lecturers' and heads of Business Education Departments' questionnaire were used to answer research question four.

3.4.1 Validity of the Instrument

The idea of content validity is a check of test item efficiency and suitability to measure what is expected, so as to minimize errors and misinterpretation. For this study, the test item content was based on the researcher's insight from the literature review on the major topic in chapter 2. Miri Citing Horst (2010) maintained that psychological measure may be said to have content validity if it measures something of which some authority or groups of authorities asserts that it does measure. Students' shorthand examination results for five years (2010 – 2014) were collected from the examination officers of Business Education

Departments of the two Colleges of Education Akwanga and Pankshin. These examination results were approved and released by the Academic Boards of the respective institutions. It is therefore assumed that the validity and reliability of the results are established.

3.4.2 Pilot Study

After designing and validating the instrument, to ensure that the questionnaire is reliable, the researcher distributed twenty (20) copies of the questionnaire to shorthand Lecturers and Head of Department and correlated data obtained with the students' results of Business Education Department, College of Education Gidan Waya Kaduna State. The pilot study was meant to ascertain the clarity, authenticity or otherwise of the instrument. Based on the outcome of the pilot study, the instrument was more simplified. It was reduced to a four point scale instead of five. It was therefore modified this way taking into consideration the necessary adjustments required.

3.4.3 Reliability of the Instrument

The reliability of an instrument is the consistency with which an instrument measures what it intends to measure. The split half method was used to compute the reliability co-efficient of the instrument. The instrument was divided into two half of odd and even numbers. The Spearman Rank Order Correlation Coefficient formula was used to calculate the reliability estimate of zero point eightysix (0.86). This reliability coefficient was positive and very high, hence the instrument was adjudged reliable and stable based on Nworgu (2007) recommendation, who stated that reliability estimate of 0.80 and above is very high and the instrument for which it is tested is reliable and stable.

Spearman Rank Order Correlation Coefficient Formula:

Wh

$$R = \frac{2r}{1+r} \text{ or } R = \frac{2\text{ (correlation between half test)}}{1+\text{ (correlation between half test)}}$$

In addition, the reliability of the five years shorthand results collected from the colleges was established as stated in 3.4.1.

3.5 Procedure for Data Collection

Seven weeks were used to collect data for this study.The researcher used the first week to introduce herself to the Principal Officers of the two Colleges of Education and the Heads of Business Education Departments purposively selected for the study with the former letter collected from the department for identification (See Appendix). The researcher engaged the services of research assistants in the Colleges who assisted in the distribution of the questionnaire to the respondents. The researcher supervised the questionnaire filling sessions and offered explanations on the questionnaire where necessary. The researcher then collected the completed questionnaire and students' shorthand results for five years (2010 -2014) from the Departmental Examination Officers of the Business Education Departments College of Education Akwanga and Pankshin.

3.6 Procedure for Data Analysis

The data so collected were presented using simple percentage of analytical tables to determine the frequency of occurrence of particular responses to questions asked. Percentages helped to organize and present data collected. Pearson Product Moment Correlation Coefficient (PPMCC) which the researcher believed is best for testing relationship was used to test hypotheses 1, 2, 3. The decision rule was that if the calculated correlation was higher than the table correlation value the hypothesis will be rejected. On the other hand, if the calculated correlation value was less than the table correlation value the hypothesis was retained at a 0.05 significant level.

Independent t-test statistical analysis was used to test null hypothesis four because the independent t-test is one of the most effective methods of comparing two groups mean (Nworgu 1991). Hypothesis four deals with comparing elements. The researcher believed that using these statistical tools of analysis can reduce or avoid major errors in the course of testing the hypotheses. If the calculated value of null hypothesis was greater than the critical table value, the null hypothesis was rejected. On the other hand, if the calculated value was less than the critical table value, the null hypothesis was accepted.

The point of decision for accepting test items in the questionnaire was fixed at 2.5, since the questionnaire is a four point scale. Therefore, items that attracted a mean score of 2.5 and above were regarded as satisfied, while items that attracted a mean score of less than 2.5 were regarded as dissatisfied. The mean score expected for a good performance of students in shorthand examination was 40.00, and anything less than this is a poor performance in shorthand examinations.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

5.2 Conclusions

The findings revealed that lack of adequately qualified shorthand teaching staff was responsible for poor students' performance in shorthand examinations. It was also unraveled that ineffective teaching techniques and lack of adequate functional shorthand facilities and equipments were responsible for students' poor performance in shorthand examinations. The study further revealed that there was no significant difference between College of Education Akwanga and College of Education Pankshin on the impact of the qualification of shorthand lecturers, lecturers' choice of teaching techniques and laboratory facilities on students' academic performance.

5.3 Recommendations

In the light of the discovery and conclusion of the study, the following recommendations are made;

1. The two college managements need to employ qualified shorthand teaching staff and train the present staff in the college so that they will be able to perform better in teaching shorthand.
2. Lecturers teaching shorthand should employ effective technique in teaching shorthand so that students will not only learn fast but also perform well in shorthand examinations.
3. The Federal and State governments who are the proprietors of the colleges and the managements of the two colleges need to provide necessary laboratory facilities such as typewriters, computers, model office, Electric plant, television, ICT facilities projector, scanner machine among others. This will go a long way in improving teaching and learning which will also improve students' performance in shorthand examinations.

4. The National Commission for Colleges of Education (NCCE) that is the regulating body of all NCE programmes in Colleges of Education should ensure that all Colleges of Education comply with the required minimum standard standard before they are accredited and allowed to run NCE programmes