

EFFECT OF SCAFFOLDING AND DRILLING TEACHING METHODS ON
STUDENTS' ACADEMIC PERFORMANCE IN SHORTHAND IN SENIOR
SECONDARY SCHOOLS IN KADUNA STATE

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DECLARATION

I declare that this dissertation entitled Effect of Scaffolding and Drilling Teaching Methods on Students' Academic Performance in Shorthand in Government Senior Secondary Schools in Kaduna State has been carried out by me in the Department of Vocational and Technical Education. The information derived from the literature has been duly acknowledged in the text and the list of references provided. No part of this dissertation was previously presented for another degree or diploma.

LINDA SWANYIN MANDE

CERTIFICATION

This Dissertation entitled EFFECT OF SCAFFOLDING AND DRILLING TEACHING METHODS ON STUDENTS' ACADEMIC PERFORMANCE IN SHORTHAND IN GOVERNMENT SENIOR SECONDARY SCHOOLS IN KADUNA STATE by Linda Swanyin MANDE meets the regulations governing the award of the Degree of Master in Business Education of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This work is dedicated to my mother Juliana Paul Kahu, my beloved husband Peter Mande and my children Phanael Tanyar Mande, Hadassah Chat Mande and Bernice Zizo Mande.

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LIST OF ABBREVIATIONS

ANCOVA	Analysis of Covariance
ANOVA	Analysis of Variance
BAT	Biology Achievement Test
CAT	Chemistry Achievement Test
GBG	Good Behavior Game
ICT	Information Communications Technology
IPFA	Instructional Package for Financial Accounting
NCCE	National Commission for Colleges of Education
NPE	National Policy on Education
PAT	Pre- Achievement Test
PSATC	Problem Solving Achievement Test in Chemistry
SAT	Shorthand Achievement Test
SSS	Senior Secondary School
TECK	Test of Environment Conservation Knowledge
WAEC	West Africa Examination Council
ZPD	Zone of Proximal Development

OPERATIONAL DEFINITION OF TERMS

Academic Performance: Refers to students achievement in the topic being taught based on the stated objectives.

Drilling Teaching Method: Is the process where students repeatedly perform the desired act until they reach an acceptable degree of competency.

Scaffolding Teaching Method: This is the process of teaching in which students are given tasks they cannot solve alone without the intervention of the teacher.

Shorthand: Is the art of representing spoken sounds by written signs.

Teaching Methods: Are planned series of action for transmitting knowledge to the learners.

Zone of Proximal Development: This is the difference between learning and unlearning of a student.

ABSTRACT

This study investigated the effect of scaffolding and drilling teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. With the emergence of Information and Communication Technology (ICT), there is a tendency to deviate from the use of conventional teaching method for Shorthand in secondary schools. It was on the basis of this, that this study was conceived. Five research questions were raised to guide the study. Five null hypotheses were formulated to guide the study and tested at 0.05 level of significance. Quasi experimental research design was used for the study. The population of the study was ninety-six (96) SS2 Shorthand students and was used as intact class. Thirty-three (33) students in each of the experimental group and thirty (30) students in the control group were taught Shorthand separately. The experiment lasted for six (6) weeks. The instrument used for data collection was the Shorthand Achievement Test developed by the researcher. Data collected were analyzed using mean, standard deviation. The t-test was used to test all the null hypotheses at 0.05 level of significance. The results of the study revealed that both scaffolding and drilling teaching methods had positive effects on students' academic performance in teaching Shorthand. However, the performance scores of students in control and those in experimental groups significantly differ. The study concluded that the academic performance of students in Shorthand in government senior secondary schools in Zaria, Kaduna State would be improved if appropriate methodologies are employed by the teachers in teaching Shorthand. It was therefore recommended among others that Shorthand teachers in SSS classes in secondary schools should endeavor to employ the use of scaffolding and drilling

methods toadequately guide their students to discover by themselves the skills in
Shorthand.

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

Education is a process by which individuals obtain knowledge, skills, values and attitudes for successful living. The most common way to acquire a sound education is to attend school. The report and recommendation of the curriculum conference of 1969 formed the basis for the National Policy on Education (NPE) for Nigeria, which is the country's educational policy document. In this document, the federal government of Nigeria places emphasis on vocational and technical education in order that the graduates may be equipped with skills, knowledge and attitudes for gaining employment or for becoming self employed (National Policy on Education, 2004).

Before 1960, Shorthand was a subject taught in Nigerian institutions and few vocational centers. The need for trained manpower in the clerical and secretarial field necessitated its initial recognition and hence its provenience in government training institution. Later, in the 1970's and 80's, the revised National Policy on Education gave further the room for the introduction of commercial subjects apart from Shorthand such as Typewriting, Book-keeping, Commerce and Business method in post primary institutions in Nigeria which gave them a place in the curriculum of both commercial secondary schools and higher institutions.

Shorthand has been facing so many challenges since the emergence of Information and Communication Technology (ICT) where the learning of shorthand has been deemphasized both at the lower and higher levels of education where students lost interest in learning shorthand because instructional materials were not available and the supply of

qualified and professional teachers/lecturers was inadequate to teach the course with the overall effect of students losing interest in shorthand.

Hornby (2005) sees shorthand as a quick way of writing using special signs or abbreviations, used especially to record what somebody is saying. Based on NPE (1998) and NCCE (2002), Shorthand is a skill subject which involves the use of the head, the heart and the hand in quick response to spoken sounds. The sub skills involved in learning shorthand are listening, reading, writing, ability to recall what has been heard and language skills. This enables rapid method of writing shown by the use of characters, symbols and abbreviations to represent letters, words and phrases.

Despite the easier method of teaching shorthand, one of the major problems faced by teachers today is not necessarily what to teach but how to teach the subject in a meaningful way. It is of note that the interest learners show and the mastery they demonstrate in their field of study at the completion of any programme depends largely on how they were taught using instructional methods (Ojogan and Oganwu, 2006).

Teaching methods are planned series of actions for transmitting knowledge to the learners. 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. Lewis and Pendrill (2000) observe that teaching methods are process of identifying and measuring tools used for teaching and assessments of students' learning process.

An instructional method identified by authors for teaching is scaffolding where the teacher transforms learners by assigning tasks to them which they cannot tackle or solve alone without his intervention. Olson and Prath (2000) observed that instructional scaffolding is a teaching method that emphasizes the teaching of new skills by engaging

students collaboratively in tasks that would be too difficult for them to complete on their own. This method involves individual student to brainstorm on how to provide solution to problem with the help of the teacher.

The drilling method on the other hand can be used to teach shorthand to make students carry out meaningful repetitive drills. It is important that the students be told the aim of the repetitive drill, that is, to be able to write the sentence at a particular speed later. Their achievement at each level provides them with sense of satisfaction which in turn spurs them on to practice further the desired learning activities.

Traditionally, the conventional method of teaching is widely used in the classroom. Cantrell (2004) reported the characteristics of conventional method to include being leader-centered, leader-active, learner passive and content emphasis. One of the reasons that might have affected the effective teaching and learning Shorthand in government senior secondary schools include the use of a definite instructional teaching method.

It is on the basis of the variables discussed so far that the background of this study is built. The study therefore sets out to establish the effects of Scaffolding and Drilling teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State.

1.2 Statement of the Problem

There is no gain saying that the educational system in Nigeria has contributed in no small measure to support the nation's economy through the provision of qualitative manpower and acquisition of knowledge, skills and values. Achieving this in the 21st century has been a nightmare due to the poor use of instructional strategies in teaching and learning process. One of the objectives of the National Policy on Education (NPE) is

to ensure self-reliance after graduation from both junior and senior secondary education levels.

The increasing level of poor performance of students in Shorthand in Zaria, Kaduna State calls for assessing the teaching methods that would improve the performance levels of the students in the subject. The poor performance of students in Shorthand can be said to reflect the evidence of poor methods of teaching the subject in government senior secondary schools in Zaria, Kaduna State. For example, in Kaduna State, WAEC result of five (5) years from 2006-2010 shows that only 23.8% passed Shorthand, while WAEC result from 2011-2015 shows that only 12.8% passed Shorthand. This indicated that students' performance in Shorthand has dropped from 23.8% to 12.8% (WAEC office, Kaduna 2016). These might be attributed to the traditional methods of teaching Shorthand. Azich and Nwosu (2011) indicated that new teaching methods could be very important factors for improving students' performance in the subject.

The researcher interacted with Shorthand students and teachers on what they felt were the reasons for the poor performance of students in Shorthand. Based on the observation and interaction, the researcher noted that some of the teachers appear not to use appropriate teaching methods that would improve the teaching and learning of Shorthand by the students. It is against the background of this problem that the researcher wants to establish what could negatively affect students' performance in Shorthand.

1.3 Objectives of the Study

The general objective of the study is to investigate the effect of scaffolding and drilling teaching methods on student's academic performance in Shorthand in senior secondary schools in Zaria, Kaduna State. The specific objectives of this study are to:

- i. determine the effect of scaffolding teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State.
- ii. assess the effect of drilling teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State.
- iii. compare the effects on the academic performance of SS2 students in Shorthand taught using scaffolding teaching method and those taught using drilling teaching method in government senior secondary schools in Zaria, Kaduna State.
- iv. determine the effect on the academic performance of SS2 male and female students in Shorthand taught using scaffolding teaching method in government senior secondary schools in Zaria, Kaduna State.
- v. determine the effect on the academic performance of SS2 male and female students in Shorthand taught using drilling teaching method in government senior secondary schools in Zaria, Kaduna State.

1.4 Research Questions

Based on the specific objectives of the study, the following research questions have been formulated to aid the study:

- i. What is the effect of scaffolding teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State?

- ii. What is the effect of drilling teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State?
- iii. Is there difference in the academic performance of SS2 students taught Shorthand using scaffolding and drilling teaching methods in government senior secondary schools in Zaria, Kaduna State?
- iv. Is there difference in the academic performance of SS2 male and female students taught Shorthand using scaffolding teaching method in government senior secondary schools in Zaria, Kaduna State?
- v. Is there difference in the academic performance of SS2 male and female students taught Shorthand using drilling teaching method in government senior secondary schools in Zaria, Kaduna State?

1.5 Research Hypotheses

Based on the specific objectives of the study, the following null hypotheses have been formulated to aid the study:

- i. There is no significant difference in the academic performance of SS2 students taught Shorthand using scaffolding teaching method and those taught using conventional teaching method in government senior secondary schools in Zaria, Kaduna State.
- ii. There is no significant difference in the academic performance of SS2 students taught Shorthand using drilling method teaching and those taught using conventional teaching method in government senior secondary schools in Zaria, Kaduna State.

- iii. There is no significant difference in the academic performance of SS2 students taught Shorthand using scaffolding teaching method and those taught using drilling teaching method in government senior secondary schools in Zaria, Kaduna State.
- iv. There is no significant difference in the academic performance of SS2 male and female students taught Shorthand using scaffolding teaching method in government senior secondary schools in Zaria, Kaduna State.
- v. There is no significant difference in the academic performance of SS2 male and female students taught Shorthand using drilling teaching method in government senior secondary schools in Zaria, Kaduna State.

1.6 Significance of the Study

It is expected that the findings of this study should be of immense benefit to Teachers, Students, Ministry of Education, and Curriculum planners as follows:-

The findings of this study will be of benefit to shorthand teachers in selecting and using the most effective methods of teaching shorthand in government senior secondary schools in Kaduna State, thereby exposing the students to meaningful learning. Consequently, it will help enhance student's innovative and creative thinking as well as help them become plausibly spontaneous and enthusiastic. Oremeji (2002), supportively asserts that any teacher who takes advantage of innovative teaching methods and learn to use them correctly will find that they make almost an incalculable contribution to students' academic achievement.

The use of scaffolding and drilling teaching methods in teaching and learning of Shorthand in government senior secondary school level will give the students opportunity to be the manager of their learning process. Therefore, knowledge passed into the

students at various levels of educational instructions should be well planned and properly allied with relevant instructional materials for clarity and comprehensibility.

The findings of this study will be beneficial to students in the sense that proper use of scaffolding and drilling teaching methods in teaching and learning of shorthand will enable them to effectively learn and retain what they have been taught and thereby advancing their academic performance. This according to Nwadinigwe (2000), learning is a process through which knowledge, skills, habits, facts, ideas and principles are acquired, retain and utilized; and the only means of achieving this is through the effective use of teaching methods.

The study will benefit the ministry of education in Kaduna State in the sense that from the findings and recommendations emanating from the research will shed light on scaffolding and drilling teaching methods and their effects on the academic performance of the students. Also, the findings of this study will be of assistance to ministry of education in Kaduna State in the area of Vocational and Technical Education to include appropriate in-service training programme and encourage shorthand teachers to attend seminars, workshops and conferences on the use of teaching methods for commercial subjects and shorthand in particular.

The study will be of significance to curriculum planners as it will enable them consider the most effective methods of teaching shorthand revealed by this study when designing a curriculum for shorthand. Also, to advise textbooks authors to put into consideration the methods revealed by this study when writing shorthand textbooks. The findings of the study will serve as a reference point to other researchers who might wish to carry out a research of similar nature.

1.7 Assumptions of the Study

The study assumed that:

1. the high rate failure of secondary schools students in Shorthand in Zaria, Kaduna State is as a result of the inappropriate teaching methods used in the teaching of Shorthand.
2. the performance of students in Shorthand will improve by the use of scaffolding teaching method.
3. students' performance in Shorthand will improve by the use of drilling teaching method.
4. male and female students' performance in Shorthand will improve by the use of scaffolding and drilling teaching methods.

1.8 Delimitation of the Study

The study was delimited to the use of instructional scaffolding and drilling methods in teaching Shorthand. These methods were chosen because they are rarely used by teachers in teaching Shorthand in government senior secondary schools in Zaria, Kaduna State. The study was also delimited to SS 2 students offering Shorthand. The study is delimited to these students because they have finally made up their minds to offer Shorthand as their career course, and they will be able to provide relevant information for the study.

The study is delimited to Zaria, Kaduna State, because it has more number of students offering Shorthand. The study was also delimited to Government Commercial College, Zaria being the oldest commercial school in Zaria established in 1959. Ninety-six (96) students were used as an intact class for the study.

The study was delimited to the topics “Double Consonants Curves and Compound Consonants” because these topics are among the crucial topics in Shorthand syllabus meant for S.S 2. These topics were chosen because they encompass all the skills, speed and knowledge that will be acquired by the S.S 2 students.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review the literature related to effects of scaffolding and drilling teaching methods on students' academic performance under the following subheadings:

- 2.1 Theoretical Framework
- 2.2 Instructional Methods of Teaching Shorthand
- 2.3 Facilities for Teaching Shorthand
- 2.4 Teaching of Shorthand
- 2.5 Review of Empirical Studies
- 2.6 Summary of the Reviewed Literature

2.1 Theoretical Framework

This study was premised on social learning theory of Vygotsky, (1978) who developed the social-cultural theory under the concept of Zone of Proximal Development (ZPD). This theory is linked to this study because scaffolding and drilling instructional teaching methods are learning processes that an assessor assigns tasks to learners which they might not be able to provide solution alone without teachers' assistance. Vygotsky was a Soviet psychologist whose works were suppressed after his death in the 1930s and were not discovered by the West until the late 1950s. Vygotsky's socio-cultural theory proposes that social interaction plays a fundamental role in the development of cognition in which Vygotsky theorized that learning occurs through participation in social or culturally embedded experiences (Raymond, 2000). In Vygotsky's view, the learner does not learn in isolation, instead learning is strongly influenced by social interactions, which take place in meaningful contexts. According to the author,

children's social interaction with more knowledgeable or capable people and their environment significantly impacts their ways of thinking and interpreting situations. A child develops his or her intellect through internalizing concepts based on his or her own interpretation of an activity that occurs in a social setting.

The theory further emphasized that a learner can do independently (mastery level) and what can be accomplished with the assistance of a competent adult or peer (instructional level), can learn better or more effectively using instructional scaffolding and drilling methods for example by applying the scaffolds. The instructional methods depend heavily on the idea that children come to any educational setting with a great deal of pre-existing knowledge, some of which may be incorrect.

Another interesting theoretical framework which this investigation is based is Piaget's theory of cognitive development (1920). This theory is a comprehensive theory about the nature and development of human intelligence. It is primarily known as development stage theory which deals with the nature of knowledge itself and how humans come gradually to acquire, construct and use.

To Piaget, cognitive development is a progressive reorganization of mental processes as a result of biological maturation and environmental experience. He emphasized that children naturally construct an understanding of the world around them, and when they experience discrepancies between what they already know (schema) and what they discover in their environment.

This theory is linked to this study because the target subject (S.S 2 students) at this stage level of cognitive development results in cause and effect relationship. Giving students tasks to provide solution to a problem would enable them to develop new ideas

of how to tackle such assignment. These assertions of the two social learning theories among others formed the basis of this study.

2.2 Instructional Methods for Teaching Shorthand

Teaching is an inculcation of knowledge for positive change in the learners. Teachings are planned series of action for achieving something (Longman, 2003). Therefore, teaching methods 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. There are various methods and techniques a teacher can adopt in presenting the lessons to the students depending on the subject matter being taught. The methods and techniques for teaching Shorthand are discussed in the sub-headings, thus:

2.2.1 Scaffolding Method

This is a method whereby a teacher transforms learners by assigning tasks to them which they cannot handle alone without his intervention. According to Raymond (2000), instructional scaffolding is a process of problem solving assigned to learners with the help of teacher. This means that learners put all their energy in providing solution to a problem or to a task he cannot without a given assistance. Olson and Prath (2000) opined that instructional scaffolding is a teaching method that emphasizes on the introduction of new skills by engaging students, collaboratively in tasks that will be too hard for them to complete on their own. This method involves individual student to brainstorm on how to provide solution to problem with the help of the teacher.

2.2.2 Drilling Method

The drilling method to shorthand teaching enables students to carry out meaningful repetitive drills. It is important that the students be told the aim of the repetitive drill, that is, to be able to write the sentence at a particular speed. Their achievement at each level provides them with sense of satisfaction which in turn spurs them on to practice further the desired learning activities. In this study, selected drills were given and assigned to students based on scope of the study. Their responses documented and used as their performances.

2.2.3 Inductive or Discovery Approach

One of the methods of teaching shorthand is the Inductive/Discovery approach. In this method, students are induced to reason out shorthand principles which the teacher has planned to teach the students for that period. The teacher writes some outlines on the chalkboard using a particular principle. For example;

Onlyneatly.....until.....unless.....
Kneel.....unload.....endless.....strongly.....

The teacher then asks the students to identify what common features they all have. Thereafter, he would ask them what conclusions could be drawn from the way the outlines have been written. Students would be expected to conclude that L is always written downwards after n, n halved and stroke NG. This method is about three to four times as long as the deductive or telling method. Although any principle learnt through this method has more lasting effect on the students, it however, delays activity for too long. It may be used occasionally to bring variety to the lessons.

2.2.4 Deductive or Telling Method

The deductive or telling method is another method of teaching shorthand. In this method, the teacher teaches the students certain principles. He would then ask the students to apply them in similar circumstances or to explain how similar outlines could be written. For example, past tenses are usually indicated by a disjoined t or d, depending on whichever one is sounded.

Paid.....faced.....dated.....developed.....

Students would then be asked to write out three or four similar outline using the same principles.

2.2.5 Reading Method

Another method to be considered is the reading method. This is a method whereby students are made to read shorthand outlines either from printed material or from their own notes. They could read as individuals, in pairs or in groups. This method is very important in that constant shorthand reading has been found to have a considerable relevance to shorthand writing ability. According to Harms, Stehr and Harris (1972), there are cases which show that shorthand was learned almost entirely by reading alone.

2.2.6 Writing Method

Under the writing method students are made to copy Shorthand notes from a text material, or to write from dictation. They could be made to drill short forms, phrases and single outlines. Constant practice is major to the attainment of high shorthand speed writing.

2.2.7 Demonstration Method

Students learn a lot by watching how certain things are done. The demonstration method is used to show the students, good sitting position, how to hold the pencil, how to

turn over the notebook page, good outline formation, how to build mental storage etc. The teacher could join the students during their practice periods in order to demonstrate to the how to write at speed. The teacher demonstrates using the demonstration stand and by writing outlines on the chalkboard. Chalkboard presentation inspires confidence.

2.2.8 Question and Answer Method

The question and answer method is used to consolidate the deductive method of teaching. Students could be taught by being asked to explain why certain outlines are written in a particular way. By so doing, they are being required to think and to sharpen and clarify their understanding of the practical application of the principle.

Management methods that lead to effective teaching and learning of Shorthand according to Mamman (2011) include among others:

- 1. Preventive Method:** Preventive approaches to classroom management involve creating a positive classroom community with mutual respect between teacher and students. Teachers using the preventive approach offer warmth, acceptance and support unconditionally – not based on a student's behavior. Fair rules and consequences are established and students are given frequent and consistent feedback regarding their behavior.

Preventive method also involve the strategic use of praise and rewards to inform students about their behavior rather than as a means of controlling students' behavior. In order to use rewards to inform students about their behavior, teachers must emphasize the value of the behavior that is rewarded and also explain to students the specific skills they demonstrated to earn the reward. Teachers should also encourage student collaboration in selecting rewards and defining appropriate behaviors that will earn

rewards.

2. **The Good Behavior Method:** The Good Behavior Game (GBG) is a “classroom-level approach to behavior management” that was originally used in 1969. The Game entails the class having access to a reward or loss of reward, given that all members of the class engage in some type of behavior (or did not exceed a certain amount of undesired behavior). The GBG can be used to increase desired behaviors (e.g., question asking) or to decrease undesired behaviors (e.g., out of seat behavior). The GBG has been used with preschoolers as well as adolescents, however most applications have been used with typically developing students (e.g. those without developmental disabilities). In addition, the Game is usually popular with and acceptable to students and teachers.
3. **Discipline with Dignity Method:** According to its founders, Discipline with Dignity is one of the most widely practiced behavior management philosophies in the world. Founded by Dr. Richard Curwin and Dr. Allen Mendler, the programme is utilized in more than 12 different countries. Discipline with Dignity, provides an in-depth flexible approach for effective school and classroom management. With a strong focus on developing responsibility, it is a comprehensive, practical programme that leads to improved student behavior through responsible thinking, cooperation, mutual respect, and shared decision-making.
4. **Positive Classroom Method:** Positive Classroom developed by Dr. Robert Digiulio sees positive classroom management as the result of four factors: how teachers regard their students (spiritual dimension), how they set up the

classroom environment (physical dimension), how skillfully they teach content (instructional dimension), and how well they address student behavior (managerial dimension).

5. **Leave it at the Door Method:** Teachers should understand that they must leave the outside world outside. The teacher's only job is to focus on making a difference in the lives of those students when they enter the school. So, the teacher should implement the leaving it at the door technique. All the teacher's worries and problems should be left outside the school particularly outside the class.
6. **Corporal punishment Method:** Corporal punishment is the use of cane on Students for misbehaving either in the classroom or outside, which is widely used as a means of controlling disruptive behavior as advocated in some contexts by people such as James Dobson.
7. **Rote Discipline Method:** Also known as 'lines', Rote Discipline is a negative sanction used for behavior management. It involves assigning a disorderly student sentences or the classroom rules to write repeatedly. Among the many types of classroom management approaches, it is very commonly used.

2.3 Teaching of Shorthand

For any subject or course to be taught to the understanding of the learners, the tutor must follow the rules guiding such subject or course. Recent findings have shown that many Shorthand teachers especially the non professional ones with low qualification do not have enough Shorthand knowledge and teaching strategies. The consequence of this challenge is the production of half-baked products which could not be useful to the society.

Shorthand is an explicitly engineered writing system designed for optional speed,

efficiency, and ease of use. According to Pitman (1837), every Shorthand student wants the satisfaction of watching their hand zoom along the line, producing all the correct outlines instantly, and then reading it back without hesitation. There are three main ways to practice Shorthand, which are as follows;

1. Facility Drills: They are used to practice new outlines or phrases in isolation. Facility means easiness and drill means doing the same thing over and over again- repetition in order to make easiness. It is helpful to write the sample outlines in a different colour e.g. red ink, so that if you do have to glance back at them, you can instantly locate them. Once you have begun filling in the page, it becomes impossible to do this rapidly if all the ink is the same colour. This is a good excuse to treat yourself to a second Shorthand pen, or cheaper options are to use a soft red drawing pencil, suitably sharpened and kept for this purpose only, or run a highlighter pen over the sample line so that it stands out. Facility drills are used for the following;

- i. Familiarize yourself with a new outline or phrase.
- ii. Learn new outlines.
- iii. Correct an outline that you are consistently getting wrong.
- iv. Improve the flow of your writing.

2. Dictation: This is a student's second line of attack, as it puts together everything he/she has learned in the class. There are certain types of drills depending on what the student is looking forward to;

a. Prepared dictation: This method enables you to absorb new outlines and get used to writing from dictation, without the hassle of being presented with a stream of

completely unknown outlines. A student need to have the passage before him/her in correct Shorthand i.e. one of the exercises in his/her instruction book. The students needs to read it through several times until he/she can read confidently with no hesitation. Write out the sentences one at a time and practice them. Any hard or new outlines should get extra attention. Write out whole passage as neatly as possible and then read from your own Shorthand. When he/she can read the Shorthand passage from the book without hesitation, read it out aloud but at the same time recording it on his/her computer or device. He/she can now take this dictation as it will be a reasonably easy speed, although writing it is always somewhat harder than just reading. The student should drill any outlines that he/she hesitated over. Read and record the passage slightly faster, from the longhand key if necessary.

b. Unprepared dictation: This is what all his/her Shorthand learning is aiming for; taking down speech with no knowledge of what is coming next. During any dictation, he/she is doing at least three things-listening to the word, recalling the outline and writing it-all simultaneously, as you are dealing with the next few words whilst still writing the previous ones. These too should be done at varying speeds so that he/she do not get either lazy from too many slow ones, or unduly discouraged from too many fast ones. An unprepared dictation will not teach him/her any Shorthand, but it will train his/her mind to retrieve outlines rapidly and show up whether his/her concentration on the task needs some strengthening. Obviously, he/she can write parts of it or some of the consonants. As he/she read back his/her notes, mark up the gaps and errors, and work on them, then retake the passage. Recording a batch in advance should give him/her a chance to forget the content.

c. Slow or easy dictations: It enable him/her to concentrate on neat writing (something that often gets left behind in the headlong rush for high speed). If prepared, he/she can concentrate on neat flowing writing. If unprepared, he/she can gauge his/her skill in recalling outlines without too much pressure. This will also help with gaining the skill of remembering what has been said, whilst writing the current outline.

d. Fast dictation: Put students learning together into a situation that approaches the final use that he/she will be making of Shorthand. What they show up is how his/her mind is reacting to the situation, whether you panic and freeze up, or whether he/she can maintain control and press on. It is a battlefield where he/she sees what they are capable of, but it is not going to teach him/her any actual Shorthand. They keep the writer alert and in a swift frame of mind, but they should be greatly outnumbered by the prepared ones, which are filling his/her mind with the correct Shorthand that you will need when the fast dictations are undertaken.

e. Silent dictations: This can be done by writing the Shorthand outline over the top of the text in a newspaper, magazine or leaflet. This will help him/her practice recall of outlines, but to get most benefit he/she should say the words to himself/herself, either out loud, whispered, or at least heard mentally. Such an exercise is ideal for when he/she is in public or do not have his/her Shorthand materials with him/her in the park, during lunch hour at the office or college, in a library or waiting room. Draw a ring round any words that need later attention.

3. Visualizing: Means listening and imagining the outlines being written on imaginary paper. This allows him/she to practice just one part of the whole process – recall of outlines – without being hampered by all the other parts, such as writing, moving from line to line, turning the page, doubts about being able to read it back, or the duration of

the dictation. With a strong will, he/she can do very well on matter that would be too fast if being written for real, and I think the reason for this is that it avoids the insidious and unhelpful habit of glancing at what he/she have just written and worrying about the state of the outlines. However, he/she cannot congratulate himself/herself if he/she is just missing out chunks, especially as there will be no real notes in existence to check up on those unnoticed omissions! This exercise can be done anywhere where you can safely give attention to the words being spoken in his/her hearing – on a bus, in a queue, television, radio, etc. With eyes closed works best, so home is obviously the safest place for this activity.

2.4 Facilities for Teaching Shorthand

One other problem confronting better performance in Shorthand among secondary school students in Kaduna State is lack of teaching aids. It has been suggested by Nolen (1967) that students remember about 70% of what they hear and see.

Adequate teaching facilities of scaffolding and drilling are essential for the development of shorthand skill. Shorthand teaching facilities of scaffolding and drilling methods include; suitable furniture which are properly arranged such that the teacher can move around easily at all times to supervise students' activities. Other items include good notebook (reporter's note book) good quality and well sharpened pencil, ruled chalk board with preferably black surface, stop watch, display board, demonstration stand, Pitman shorthand textbook, Pitman shorthand dictionary, store or cupboard for note books, papers, sets of memos, reference books as well as tape recorder and cassettes. Nevertheless, Shorthand teachers should take advantage of these facilities to improve the teaching and learning of shorthand using appropriate instructional methods.

2.5 Review of Empirical Studies

The following reviews of related studies are presented as guide on this study;

Ugwanyi, (1998) conducted a research titled “The effect of guided discovery and expository teaching methods on students’ achievement in Physics in selected secondary schools in Nsukka”. The study employed the quasi experimental design and the entire SS II physics students in public senior secondary schools constituted the population of the study. The researcher administered pre-test to the students in order to ascertain the entry level of the subjects. After the treatment, a post-test was administered to the students in order to ascertain the effects of the treatment. The purpose of the study was to find out the extent to which expository and discovery methods actually affect performance of students in physics with a view to recommending a better opinion. Three hypotheses were formulated and tested at 0.05 level of significance. Analysis of variance (ANOVA) test was used to verify the initial abilities of the students in physics before they were treated with either expository or guided discovery methods. The 2 x 2 analysis of variance was used to test the hypotheses instead of co-variance since the initial ability levels of the students were equated.

It was revealed that sex has a significant effect on performance of students, as female students performed significantly better than their male counterparts. The findings of the study were that guided discovery method of instruction in physics was more effective than the commonly used expository method. In other words, guided discovery increases the degree of students’ interest, and consequently students develop principles based on their observation and in addition encourage enquiry and group work. Physics teachers should therefore harness the method for effective teaching and learning.

The research lacked bases for generalization because the number of selected secondary schools in Nsukka was not mentioned. A study of this magnitude supposed to have mentioned the number of schools selected for the study in order to determine whether the sample size was a fair representation of the population. However, the study served as a guide in the selection of a research design for this current study.

Busari, (2001) conducted an experimental study on comparative effects of four instructional strategies on students' achievement and retention in Chemistry in some selected secondary schools in Lagos State. The purpose of the study was to compare the effect of instructional strategies on:

- i. Students achievement in chemistry.
- ii. Their retention of the learned task. The design of the study was a randomized experimental and control group, pre-test, post-test instructional design.

Two null hypotheses were formulated and tested at 0.05 level of significance. The sample for the study consisted of 218 SS II chemistry students randomly drawn from seven (7) schools in Lagos State. There were 130 students in the experimental group and 88 students in the control group. The researcher made use of the following instruments.

- i. Pre-Achievement Test (PAT).
- ii. The Chemistry Achievement Test (CAT).
- iii. The Chemistry Achievement Test (CAT).

The result indicated that: there was no gain, post-instruction in all the groups, except the lecture method group. Each of the instructional strategies except the lecture method contributed positively to the learning of chemical concepts. The research helped in directing the current researcher on the choice and formulation of the instrument for

data collection. However, the researcher did not state the statistical tool that was used in analyzing the data. However, this study will make use of the appropriate tool.

Olaniyi, (2002) conducted an experimental research on *The Relative Effect of Values Clarification and Problem-Solving Instructional Strategies on Students Learning Outcomes in Integrated Science*. The design for the study was the pre-test, post-test control group quasi experimental design, all the junior secondary schools in the state constituted the population for the study, three (3) schools were used as sample for the study. Two (2) research hypotheses were assigned at random to the experimental group and one (1) control group. The instrument used was a Test of Environment Conservation Knowledge (TECK). The result indicated that there was a significant main effect of treatment on student achievement in selected environmental concept. Also, there was no significant effect of treatment on students' gender.

The findings of the above study revealed that problem-solving as an instructional strategy has greater effects on students learning outcomes in integrated science and it is useful for effective teaching and learning when employed in the classroom.

However, the study contributed immensely in the choice of a suitable research design for this current study. However, the researcher did not state the exact figure of the population for the study which makes it difficult to determine whether the sample size is an adequate representation of the population.

Uwameiye and Ogunbameru, (2005) investigated *The Effect of the Conventional Method of Teaching vis-à-vis the Effect of an Alternative Method of Teaching (Guided Discovery Method of Teaching) on Students' Performance in Financial Accounting*. The research was carried out using quasi- experimental design of pre-test, post-test control group. Two groups , the experimental and the control were subjected to pre-test and post-

test using same instruments. Two types of instruments that were employed for data collection in the study included: Instructional Package for Financial Accounting (IPFA) and Financial Accounting Achievement Test. The population which comprised all twenty-two Senior Secondary School two (SS2) financial accounting students with the population of 820 students in Okitipupa Local Government Education Area of Ondo State in Nigeria. Purposive sampling technique was adopted and used to select schools for the study. A survey of co-educational public secondary day schools was carried out to identify schools that have at least one graduate financial accounting teacher with relevant professional teaching qualification teaching the group used for the study was chosen. Chosen schools were randomly assigned to experimental and control group, while students in the sample schools remained in their intact classes. Findings of the study indicated a difference in pre-test and post-test mean performance scores of students in control and experimental groups; and mean performance score of students taught with guided discovery method and those taught with conventional method in financial accounting achievement post-test scores. In other words, the effectiveness of the instructional method employed in the classroom can be evaluated based on the obtained mean achievement score of the group. Also, the treatment given to the experimental and control groups effected positive changes on the students mean achievement scores in the post-test financial achievement test. The study also revealed no difference in the mean performance scores of male and female students taught with guided discovery and conventional method of teaching respectively.

The present study is related to this particular empirical study as both discussed related variables in students' academic achievement in senior secondary schools. A research of this magnitude however, did not state the number for the sample size which

makes it difficult to generalize the findings. However, the study served as a guide to this present study in the selection of purposive sampling technique as an appropriate sampling technique for the study.

Oghenevwede, (2009) conducted an experimental research on Effects of Discovery and Inquiry Approaches in Teaching and Learning of Biology on Secondary Schools Performance in Delta State, Nigeria. The study design is quasi-experimental which employed the pre-test, post-test control group. It was quasi-experimental because intact class was used. The population comprises all senior secondary school two (SSII) students in the 284 secondary schools in Central Senatorial District of Delta State, Nigeria. The sample consist of one hundred and fifty (150) senior secondary two (SSII) students from three intact classes (50 in each class respectively) which were randomly selected from amongst the 284 secondary schools in Delta Central Senatorial District of Delta State, three biology graduate teachers of over five years of experience. Samples of schools were drawn in a randomly unbiased manner (probability sampling). The simple random sampling method was used through balloting (withdrawal-replacement procedure). Schools were randomly assigned into experimental and control groups.

A 50-item achievement test instrument BAT (Biology Achievement Test) was developed by the researcher for the study. The test was constructed by using content on the topic Nutrition. Validity was established by a panel of qualified experts in science education, test and measurement and biology teachers in secondary schools. The Biology Achievement Test (BAT) instrument was pilot-tested to establish its reliability using test re-tests. On correlation a reliable co-efficient of 0.75 was obtained using the Pearson Product Moment Correlation. Three biology graduate teachers with over five years teaching experience were used for the study. The essence was to ensure uniformity and

mastery of the teaching approaches upon which the research was based to enable them apply the techniques accordingly in teaching the stipulated contents. At the end of the training, the instructor for discovery approach was given a copy of a validated lesson plan; instructional materials and pre-activity questions, while the instructor for inquiry was given a copy validated lesson plan, probing questions and instructional materials. The test instruments were administered as a pre-test before treatment commenced. The main treatment for the study was teaching using the inquiry and discovery approaches and it lasted for six (6) weeks. Immediately after the treatment the test instrument was administered again to students as a post test. The data collected were analyzed using the analysis of covariance (ANCOVA) at the significance level of 0.05.

Based on the findings, it was concluded that the discovery method was superior and more effective than the inquiry method. Therefore science teachers should consistently make use of the discovery approach in teaching biology. The present study is related to this particular research study as both discussed related variables in students' academic performance in senior secondary schools.

Bamidele and Oloyede, (2013) investigated the Relative Effectiveness of Three Types of Concept Maps (Hierarchy, Flowchart and Spider) on the Performance of Students in Chemistry. This is with a view to find out which of the concept mapping types is more superior in enhancing students' performance in the numerical aspect of Chemistry. The pre-test, post-test experimental design was used for the study. The population for the study comprised of all the Chemistry students in senior secondary schools in Osun State of Nigeria. Students in senior secondary class two (SS II) in their intact classes from three schools in Ife-Central local government area of the state formed the sample for the study. A total of one hundred and fifty-six (156) students formed the

sample for the study. The age range of the students was between 13 and 17 years. The three schools were randomly assigned to the hierarchical, flowchart and spider concept mapping strategies. Selected sample were randomly assigned to the treatment groups. A pre-test was used to determine the entry level of the subjects. The instrument used for data collection was the Problem Solving Achievement Test in Chemistry (PSATC). Students in the three groups were taught using the three kinds of concept maps separately. The experiment lasted for five weeks after which a post-test was administered to effects of the treatment.

In testing the hypotheses 1, the post-test score of the students in the three groups were subjected to the Analysis of Variance (ANOVA) to determine possible differences in the problem solving ability of the students after exposure to the treatment. From the results of the analysis, it was observed that there was no significant difference in the performance of the three groups exposed to the different concept mapping strategies. Thus, the hypothesis was accepted. However, to find out which of the three groups has a better performance though not significantly different, the mean of the three groups in the pre-test were compared. The mean of the group that used spider concept mapping strategies was higher than the other two groups (\bar{x} =55.8, 53.8, 51.6 for spider, hierarchical and flowchart concept map respectively).

The findings of the study showed that the three concept mapping strategies were effective in enhancing students' performance in Chemistry. The mean scores of the three groups in the pre-test was much lower than the mean scores of the groups in the post-test. This was due to the distinctive characteristics of the concept maps generally. The result of the study also indicated that there was no significant difference in the performances of the students in the three groups with respect to the kind of concept map used. ($F= 1.088$; $p>$

0.05). This implies that the concept mapping strategies were not all that different in their superiority. The methods all produced a similar effect on the students with respect to their performance in Chemistry. However, it was found out that the methods enhanced the performance of students in their problem solving skills in Chemistry as already reported by research studies.

2.6 Summary of the Reviewed Literature

This study reviewed literature on effects of scaffolding and drilling teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. A lot of strategies for teaching were discussed; these include Instructional Scaffolding Method, Drilling Method, Inductive or Discovery Approach, Deductive or Telling Method, Reading Method, Writing Method, Demonstration Method, Question and Answer Method. Facilities for Teaching Shorthand, Teaching of Shorthand were looked into. Also, Empirical Studies related to this work were reviewed which include the works of Ugwanyi (1998), Busari (2001), Olaniyi (2002), Uwameiye and Ogunbameru (2005), Oghenevwede (2009), Bamidele and Oloyede (2013).

On the whole, the gaps noticed from the reviewed literature were that, their work had to do with the academic performance of students' in other disciplines such as; Physics, Chemistry, Integrated Science, Financial Accounting and Biology. And their teaching methods includes; guided discovery and expository methods, values clarification and guided discovery methods, discovery and inquiry approaches and concept maps strategies (hierarchy, flowchart and spider), but not in scaffolding and drilling teaching methods in Shorthand which formed the basis of the gap this research work has filled.

CHAPTER THREE

RESEARCH METHODOLOGY

The chapter explains the methodology procedure that will be used in the collection of data for the study under the following sub-headings:

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

Quasi experimental research design involving pre-test, post-test and control group was used in this study. According to Sambo (2005) and Ofor (2000), quasi experimental research design permits the use of intact classes. This design was adopted because it was not possible for the researcher to randomly sample the subject and assign them to groups without disrupting the academic programme and the time table of the secondary school involved in the study. Hence, the design was considered quite suitable for conducting the study.

3.2 Population of the Study

The population of this study comprised of ninety-six (96) S.S.2 students from government commercial college Sabon-Gari, Zaria. This population comprised of the total number of SS2 commercial classes used as an intact class for the study.

3.3 Sample Size and Sampling Procedure

Purposive sampling was used to select Government Commercial College Sabon-Gari Zaria, Kaduna State, with population of ninety-six (96) shorthand students. This was because the school is one of the oldest schools established in 1959. The intact class was used. The ninety-six (96) shorthand students from the school were grouped into three (3) groups comprised of group A, B, and C. Group A and B was used as the experimental group and group C was used as the control group. The two experimental groups were used as they were met by the researcher as intact classes. Group A and B being the experimental groups comprised of thirty-six (36) shorthand students each and thirty (30) students for group C who are the control group.

3.4 Instrument for Data Collection

The instrument used for data collection in this study, was a structured Shorthand Achievement Test (SAT) I, Shorthand Achievement Test (SAT) II and lesson plan. After a critical examination of the curriculum, the researcher selected two topics (Double Consonant Strokes and Compound Consonants) from Shorthand syllabus meant for S.S 2 for the term during the study.

Shorthand Achievement Test (SAT) I

The Shorthand Achievement Test I was meant to be administered to students before the treatment was given, (It represented the pre-test of the study). The purpose of this test was to ascertain the entry behavior of the students in Shorthand. This instrument

was made up of twenty (20) multiple choice objective questions with four (4) options A-D, where the students were expected to choose the correct option which were based on the selected topics for the study.

Shorthand Achievement Test (SAT) II

The second instrument that was administered in order to collect data after the treatment was given to the students was named Shorthand Achievement Test (SAT) II. This instrument represented the post-test to determine the effects of the treatment. This instrument was prepared based on the table of specification that was developed using the Double Consonant Strokes and Compound Consonants.

Double Consonant Strokes consists of;

- i. Double Consonant Strokes FR and VR.
- ii. Double Consonant Strokes FL and VL.

Compound Consonants consists of;

Compound Consonants KW, GW, MP/MB, LR, RR and WH.

This procedure was followed because it formed the basis for Shorthand at SS2 level. The instrument was made up of twenty (20) multiple choice objective questions with four (4) options A-D, where the students were expected to choose the correct option and three (3) essay questions.

3.4.1 Validation of the Instrument

The instrument designed for the study was subjected to both face and content validity for it to be consistent and fit for use in gathering data from the respondents. The drafted pre-test and post-test questions having been reconstructed and restructured based on the inputs by the researcher's supervisors, were also subjected to thorough scrutiny and proof reading by experts in Business Education not below the rank of senior lecturer

for further necessary corrections and approval. This supports the view of Berg (1995) who stated that any research instrument to ascertain its validity should be given to a panel of experts to determine if its items (contents) can elicit the desired data they are intended to elicit and this in essence is to ensure its content validity and also to ensure that necessary adjustments were made thereafter.

3.4.2 Pilot Study

In a bid to ascertain the reliability and consistency of the instrument designed for the study, the researcher conducted a pilot study with 20 SS II students at government commercial college, Samaru Kataf, Kaduna State. The reason for using this school was that, the school is not within the scope of the study nor for being part of the sample size, but has the similar characteristics as the sample population. The conduct of the study was to enable the researcher ascertain the possibility of any difficulty that may arise in the process of answering the questions and afford the researcher the opportunity of students providing necessary information that may be useful for the study. Possible problems of respondents not understanding certain statement in the instrument and provision of valid answers during the process of carrying out the main study could have been solved. The result is shown in reliability of the instrument.

3.4.3 Reliability of the Instrument

Reliability of an instrument refers to the consistency with which instrument measures what it intends to measure. The reliability of the instrument was determined by statistical analysis of the data collected from the pilot study. The reliability co-efficient of the questions was computed using split- half method. The instrument was divided into two, half of odd and even numbers. Spearman Rank Order Correlation Coefficient was used to calculate the reliability estimate of 0.86. This reliability coefficient is reliable for

use based on Nworgu (2007) recommendations who stated a reliability estimate of 0.80 and above for an instrument to be reliable and stable.

3.5 Procedure for Data Collection

Letter of introduction was collected from the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria taken to the school authority for the conduct of the experiment. The researcher introduced herself to the principal of the purposively selected school with the formal letter collected from the Department for identification, (appendix I). Then the researcher was permitted to introduced herself to the shorthand S.S II students and after which the SAT I (pre-test) was administered to them (appendix iv).

The group A, group B and group C were used according to the letters the researcher met the classes. Group A and B were made the experimental groups, while group C was made the control group. Group A was exposed to the selected topics using scaffolding method. Group B was exposed to the topics using drilling method. While, group C was taught using the conventional method and the students were not given the experimental treatment.

The study was conducted for the duration of six (6) weeks, and four (4) weeks using lesson plans for each method and topics (appendices IIA-H). At the end of the treatment, in week five (5), a post-test (appendices V and VI) was administered to both experimental and control groups. The answer scripts were scored 100 marks as stated by the marking scheme (appendices VII and VIII). The test result of each test for the experimental and control groups were collected separately and marked.

3.6 Procedure for Data Analysis

The data collected from the field were subjected to statistical analysis for appropriate interpretations to achieve the stated objectives of the study. Both descriptive and inferential techniques were used in the analysis of data. The bio data of the respondents were analyzed using descriptive statistics which involves the use of frequency and percentage, while mean and standard deviation were used to answer the research questions. The inferential statistics in the form of t-test was used to test the postulated null hypotheses. The justification for the use of descriptive statistics to answer the research questions was based on the fact that the statistics is easily obtainable and can be easily interpreted by the readers without any complication (Abbas, 2006). T-test that was used being an appropriate statistical tool for making comparison between group means of two samples even if they have different numbers (Clarke and Cook, 2007). The decision rule is that if the calculated value of null hypotheses was greater than the critical table value, the null hypotheses was rejected. On the other hand if the calculated value was less than the critical table value, the null hypotheses was accepted at 0.05 level of significance.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

The presentation, analysis and interpretation of data in this chapter are presented under the following sub-headings:

4.1 Answers to Research Questions.

4.2 Testing of Null Hypotheses.

4.3 Summary of Major Findings.

4.4 Discussions of Findings.

4.1 Answers to Research Questions.

1. Research Question One: What is the effect of Scaffolding teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State?

The answer to this research question is shown in table 1.

Table 1: Mean and standard deviation summary of post-test achievement test scores of students taught Shorthand using Scaffolding and Conventional teaching methods

Methods	N	Mean	S.D	Mean Diff.
Scaffolding method	33	58.72	12.56	16.42
Conventional method	30	42.30	9.87	

Source: Field study data 2016

Table 1 shows the effect of using Scaffolding and Conventional teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. The group exposed to Scaffolding teaching method had a mean performance of 58.72 and standard deviation of 12.56, while the group exposed to Conventional teaching method had a mean performance of 42.30 and standard deviation of 9.87. This implied that students exposed to Scaffolding teaching method had higher

academic performance than that of their counterparts taught shorthand using Conventional teaching method.

ii. Research Question Two: What is the effect of drilling teaching method on the academic performance of SS2 students in Shorthand in government senior secondary schools in Zaria, Kaduna State?

The answer to this research question is shown in table 2.

Table 2: Mean and standard deviation summary of post-test achievement test scores of students taught Shorthand using Drilling and Conventional teaching methods

Methods	N	Mean	S.D	Mean Diff.
Drilling method	33	57.65	10.24	15.35
Conventional method	30	42.30	9.87	

Source: Field study data 2016

Table 2 shows the effect of using Drilling and Conventional teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. The group exposed to Drilling teaching method had a mean performance of 57.65 and standard deviation of 10.24, while the group exposed to Conventional teaching method had a mean performance of 42.30 and standard deviation of 9.87. This implied that students exposed to Drilling teaching method had higher academic performance than that of their counterparts under the Conventional teaching method for teaching Shorthand in secondary schools.

iii. Research Question Three: Is there difference in the academic performance of SS2 students taught Shorthand using Scaffolding and Drilling teaching methods in government senior secondary schools in Zaria, Kaduna State?

The answer to this research question is shown in table 3.

Table 3: Mean and standard deviation summary of post-test achievement test scores of students taught Shorthand using Scaffolding and Drilling teaching methods

Method	N	Mean	S.D	Mean Diff.
Scaffolding method	33	58.72	12.56	1.07
Drilling method	33	57.65	10.24	

Source: Field study data 2016.

Table 3 shows the effect of using Scaffolding and Drilling teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. The group exposed to Scaffolding teaching method had a mean performance of 58.72 and standard deviation of 12.56, while the group exposed to Drilling teaching method had a mean performance of 57.65 and standard deviation of 10.24. This implied that students exposed to Scaffolding teaching method had higher academic performance than that of their counterparts taught Shorthand using Drilling teaching method.

iv. Research Question Four: Is there difference in the academic performance of SS2 male and female students taught Shorthand using Scaffolding teaching method in government senior secondary schools in Zaria, Kaduna State?

The answer to this research question is shown in table 4.

Table 4: Mean and standard deviation summary of post-test achievement test scores of male and female students taught Shorthand using Scaffolding teaching method

Method	Sex	N	Mean	S.D	Mean Diff.
Scaffolding method	Male	17	58.80	8.51	1.6
	Female	16	57.20	14.54	

Source: Field study data 2016.

Table 4 shows the effect of using Scaffolding teaching method on male and female students in Shorthand in government senior secondary schools in Zaria, Kaduna State. Male students had a mean performance of 58.80 and standard deviation of 8.51, while

female students had a mean performance of 57.20 and standard deviation of 14.54. This implied that male students slightly had higher academic performance than their female students' counterparts.

v. Research Question Five: Is there difference in the academic performance of SS2 male and female students taught Shorthand using Drilling teaching method in government senior secondary schools in Zaria, Kaduna State?

The answer to this research question is shown in table 5.

Table 5: Mean and standard deviation summary of post-test achievement scores of male and female students taught Shorthand using Drilling teaching method

Method	Sex	N	Mean	SD	Mean Diff.
Drilling method	Male	19	57.10	10.05	0.5
	Female	14	56.60	9.94	

Source: Field study data 2016.

Table 5 shows the effect of Drilling teaching method on male and female students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. Male students had a mean performance of 57.10 and standard deviation, while female students had a mean performance of 56.60 and standard deviation of 9.94. This implied that male students had higher academic performance than the female students.

4.3 Testing of Null Hypotheses

Five null hypotheses were raised to achieve the objectives of the study. The post-test for Shorthand were statistically analyzed at 0.05 level of significance. All the null hypotheses 1-5 were tested using t-test to establish the differences in the academic performance of the students.

i. Null hypothesis one

There is no significant difference in the academic performance of SS2 students taught Shorthand using Scaffolding teaching method and those taught using Conventional teaching method in government senior secondary schools in Zaria, Kaduna State.

The data in table 6 tests the null hypothesis one

Table 6: The t-test analysis showing difference in the performance of students taught Shorthand using Scaffolding and Conventional teaching methods.

Methods	N	Mean	S.D	t.-cal	t-crit	Df	Sig.
Scaffolding method	33	58.72	12.56				
Conventional method	30	42.30	9.87	2.046	1.96	61	0.018

Source: Field study data 2016.

Table 6 shows the result of t-test analysis used for testing the effect of performance of students taught Shorthand using Scaffolding and Conventional methods of teaching in government senior secondary schools in Zaria, Kaduna State. The result revealed that the group taught Shorthand using Scaffolding teaching method had a mean performance of 58.72 with standard deviation of 12.56, while those taught Shorthand using Conventional teaching method had a mean performance of 42.30 with standard deviation of 9.87. The t-cal stood at 2.046 and t-crit stood at 1.96. This result shows that there is significant difference in the academic performance of students taught Shorthand using Scaffolding teaching method and those taught using Conventional teaching method. In view of this, the null hypothesis was rejected since the 0.018 value of significance was lower than 0.05 a priori expectation.

ii. Null hypothesis two

There is no significant difference on the academic performance of SS2 students taught Shorthand using Drilling teaching method and those taught using Conventional teaching method in government senior secondary schools in Zaria, Kaduna State.

The data in table 7 tests the null hypothesis two

Table 7: The t-test analysis showing difference in the performance of students taught Shorthand using Drilling and Conventional teaching methods.

Methods	N	mean	S.D	t-cal	t-crit	Df	Sig
Drilling method	33	57.56	10.24				
				2.68	1.96	61	0.027
Conventional method	30	42.30	9.87				

Source: Field study data 2016.

Table 7 shows the result of t-test analysis used for testing the effect of performance of students taught Shorthand using Drilling and Conventional methods of teaching in government senior secondary schools in Zaria, Kaduna State. The test shows that the group of students taught Shorthand using Drilling teaching method had a mean performance of 57.56 with standard deviation of 10.24, while those taught using Conventional teaching method had a mean performance of 42.30 with standard deviation of 9.87. The t-cal stood at 2.68 and t-crit stood at 1.96. This shows that there is significant difference in the academic performance of students taught Shorthand using Drilling teaching method and those taught using Conventional teaching method. In view of this, the null hypothesis was rejected based on the fact that the significance value of 0.027 obtained was lower than a priori expectation P at ≥ 0.05 level of significance.

iii. Null hypothesis three

There is no significant difference in the academic performance of SS2 students taught Shorthand using Scaffolding teaching method and those taught using Drilling teaching method in government senior secondary schools in Zaria, Kaduna State.

The data in table 8 tests the null hypothesis three

Table 8: The t-test analysis showing difference in the performance of students taught Shorthand using Scaffolding and Drilling teaching methods

Methods	N	Mean	S.D	t-cal	t-crit	Df	Sig
Scaffolding method	33	58.72	12.56	1.56	1.96	64	0.069
Drilling method	33	57.56	10.24				

Source: Field study data 2016.

Table 8 shows the result of t-test analysis used for testing the effect of the performance of students taught Shorthand using Scaffolding and Drilling methods of teaching in government senior secondary schools in Zaria, Kaduna State. The result shows that the students taught Shorthand using Scaffolding teaching method had a mean performance of 58.72 with standard deviation of 12.56, while those taught using Drilling teaching method had a mean of 57.56 with standard deviation of 10.24. The t-cal stood at 1.56 and t-crit stood at 1.96. This result shows that there is no significant difference in the academic performance of students taught Shorthand using Scaffolding teaching method and those taught using Drilling teaching method. In view of this, the null hypothesis was retained being that the significance value of 0.069 was greater than 0.05 level of significance.

iv. Null Hypothesis Four

There is no significant difference in the academic performance of male and Female students taught Shorthand using Scaffolding teaching method in government senior secondary schools in Zaria, Kaduna State.

The data in table 9 tests the null hypothesis four.

Table 9: The t-test analysis showing performance of male and female students taught Shorthand using Scaffolding teaching method

Method	Sex	N	Mean	S.D	t-cal	t-crit	Df	Sig
Scaffolding method	Male	17	58.80	8.51	1.86	1.96	31	0.099
	Female	16	57.20	14.54				

Source: Field study data 2016.

Table 9 shows the result of t-test analysis used for testing the effect of performance of students taught Shorthand using Scaffolding method of teaching in government senior secondary schools in Zaria, Kaduna State. The result shows that the male students taught Shorthand using Scaffolding teaching method had a mean performance of 58.80 with standard deviation of 8.51, while the female students taught Shorthand using Scaffolding method had a mean of 57.20 with standard deviation of 14.54. The t-cal stood at 1.86 and t-crit stood at 1.96. This result shows that there is no significant difference in the academic performance of male and female students taught Shorthand using Scaffolding teaching method. In view of this, the null hypothesis was retained coupled with the fact that the significance value of 1.86 was lower than the t-crit value of 1.96 and 0.099 greater than 0.05 level of significance.

v. Null Hypothesis Five

There is no significant difference in the academic performance of SS2 male and Female students taught Shorthand using Drilling teaching method in government senior secondary schools in Zaria, Kaduna State.

The data in table 10 tests the null hypothesis five

Table 10: The t-test analysis showing performance of male and female students taught Shorthand using Drilling teaching method

Method	Sex	N	Mean	S.D	t-cal	t-crit	Df	Sig
Drilling method	Male	19	57.10	10.05	1.78	1.96	31	0.840
	Female	14	56.60	9.94				

Source: Field study data 2016.

Table 10 shows the result of t-test analysis used for testing the effect of performance of students taught Shorthand using Drilling method of teaching in government senior secondary schools in Zaria, Kaduna State. The result shows that the male students taught Shorthand using Scaffolding teaching method had a mean performance of 57.10 with standard deviation of 10.05, while the female students taught using Scaffolding method had a mean of 56.60 with standard deviation of 9.94. The t-cal stood at 1.78 and t-crit stood at 1.96. This result shows that there is no significant difference in the academic performance of male and female students taught Shorthand using Drilling teaching method. In view of this, the null hypothesis was retained.

4.3 Summary of Major Findings

The major findings are summarized as follows:

1. The study showed that there was significant difference in the performances of students taught Shorthand using Scaffolding teaching method and those taught using Conventional teaching method.
2. The study indicated that there was significant difference in the performances of students taught Shorthand using Drilling teaching method and those taught using Conventional teaching method.

3. The study revealed that the two teaching methods (Scaffolding and Drilling) significantly affected students' performance in Shorthand
4. The study showed that there was no significant difference in the academic performance of male and female students taught Shorthand using Scaffolding teaching method.
5. The study indicated that there was no significant difference in the academic performance of male and female students taught Shorthand using Drilling teaching method.

4.4 Discussion of Findings

Based on the data so far analyzed, it was discovered that:

The finding of this study revealed that Scaffolding teaching method had significant effect on students' academic performance in Shorthand than the Conventional teaching method. This is because the mean performance for Scaffolding teaching method is higher than the mean performance for Conventional teaching method. Also, the t -cal is greater than the t -crit in the test of the null hypothesis. The finding of this study agrees with the findings of similar studies Olson and Prath (2000) whose studies revealed that Scaffolding teaching method is most appropriate for introduction and teaching of new skills which make students to be self directed and regulated learners more than Conventional method of teaching.

The findings of this study shows that Drilling teaching method had significant effect on students' academic performance in Shorthand than the Conventional teaching method. This is because the mean performance for Drilling teaching method is higher than the mean performance for Conventional teaching method. Also, the t -cal is greater than the t -crit in the test of the null hypothesis. The finding of this study is in line with the

study of Hornby (2005) who study revealed that Drilling teaching method enables students to carryout meaningful repetitive drills more than the Conventional teaching method.

Furthermore, the findings of this study shows that both Scaffolding and Drilling teaching methods has significantly affected the academic performance of students taught Shorthand. The study revealed that the mean academic performance of students taught Shorthand using Scaffolding was higher than those in Drilling method, but was slight which was confirmed by the t -crit being higher than t -cal. The finding of this study agrees with the study of Sawyer (2006) who asserted that Scaffolding and Drilling teaching methods play significant role in promoting deeper level of learning.

The study further indicated that there is no significant difference in the academic performance of male and female students taught Shorthand using Scaffolding teaching method. This is because the t -crit was greater than t -cal, even though, the mean academic performance of male was higher than that of female students but was insignificant statistically. This agrees with the finding of Olson and Prath (2000) who asserts that instructional scaffolding introduced new skills to learners and is not gender bias.

The study revealed that there is no significant difference in the academic performance of male and female students taught Shorthand using Drilling teaching method. The t -crit was higher than t -cal, even though, the mean academic performance of male students was higher than that of female students but was insignificantly statistically. This corroborates the finding of Oghenevewede (2009).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is presented under the following sub-headings;

- 5.1 Summary
- 5.2 Contribution to knowledge
- 5.3 Conclusion
- 5.4 Recommendations
- 5.5 Limitation of the study
- 5.6 Suggestion for further studies

5.1 Summary

The main purpose of this study was to investigate the effect of Scaffolding and Drilling teaching methods on students' academic performance in Shorthand in government senior secondary schools in Zaria, Kaduna State. The major factor considered was the most effective method(s) for teaching students Shorthand. This enabled the researcher to group the subject into the instructional groups. This was to find out whether students' academic performances were affected positively by the Scaffolding and Drilling teaching methods. Five specific objectives, five research questions were raised and five null hypotheses were tested at 0.05 level of significant.

The review of related literature gave broad spectrum of various methods of teaching Shorthand in senior secondary schools. It reviewed Vygotsky and Piaget learning theories as the study itself is related to learning. A number of relevant and related literatures by different authors were reviewed on the research problem. The design adopted for the study was quasi experimental research design for pre-test and post-test. Intact class was used for the study. The population of the study comprised of the whole ninety-six (96)

S.S 2 students offering Shorthand in government commercial college Zaria, Kaduna State. The instruments for data collection were Shorthand Achievement Test I (SAT I) as pre-test and Shorthand Achievement Test II (SAT II) as post-test which was administered to the students by the researcher after the treatment. The data collected were used to answer the four research questions using mean and standard deviation. Similarly, the four null hypotheses were statistically tested at a significant level of 0.05, using the two tailed t-test.

This study established that:

1. scaffolding teaching method was more effective than conventional method in teaching Shorthand in government senior secondary schools in Zaria, Kaduna State.
2. drilling teaching method was more effective than conventional method in teaching Shorthand in government senior secondary schools in Zaria, Kaduna State.
3. both scaffolding and drilling teaching methods were effective instructional methods in teaching Shorthand in government senior secondary schools in Zaria, Kaduna State.

5.2 Contribution to knowledge

The study will contribute to knowledge in the field of education especially in Shorthand. It has been proved empirically from the study that:

- i. the students' performance in Shorthand can be improved when teachers use instructional Scaffolding and Drilling teaching methods ($P = 0.018$ and 0.027).
- ii. the academic performance of students taught Shorthand using Scaffolding and Drilling teaching methods did not significantly discriminate gender ($P = 0.099$ and 0.840).

5.3 Conclusion

Drawing from the findings of this study, it can be concluded that for students to do well, it can be based on the use of Scaffolding and Drilling methods in teaching Shorthand which will motivate and promote the interest of the students in terms of achieving good results and it will encourage parents and teachers to be proud of using the methods as an effective means of teaching Shorthand.

5.4 Recommendations

In line with the findings of this study, the researcher recommended the following:

1. It is recommended that management of secondary schools should emphasize the use of both Scaffolding and Drilling methods of teaching compared to Conventional method of Shorthand especially in government senior secondary schools in Zaria, Kaduna State.
2. Education planners from the ministry of education should ensure that the review curriculum of Shorthand to accommodate the two teaching methods in order to improve the students learning experiences and academic performance.

5.5 Limitation of the Study

This research study, like any other experimental study had its limitations. Some of these limitations included the students' readiness especially in the area of punctuality to classes because the students were aware that this exercise has nothing to do with their promotion to the next class. The researcher had to call the students to order by enlightening the students on the importance of coming to school early and also the importance of this study to all secondary school Shorthand students in Kaduna State. There was also the problem of unavailability of teaching and learning materials which the researcher had to provide and also improvise some teaching materials. Lastly, there was

not even one private secondary school that was involved in the study, so it could also limit the generalizability of the findings of this study.

5.5 Suggestion for Further Study

Based on the findings of this study, the researcher made the following suggestion for further studies:

1. A similar study should be conducted in other areas of specialization and locations to serve as a basis for comparison of the findings of the study.

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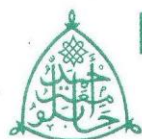
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APPENDIX I



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

VICE CHANCELLOR: **Prof. Ibrahim Garba** (B.Sc., M.Sc. (A.B.U.); Ph.D. (London) D.I.C.)

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HEAD OF DEPARTMENT: **Professor A. A. Udoh** (B.Ed. (Hons) Nsukka; M. Ed. & Ph.D. Bus Edu. [A.B.U.]

24th July, 2015

Your Ref: _____
M.Ed/Educ/10537 /2011-2012

Date: _____

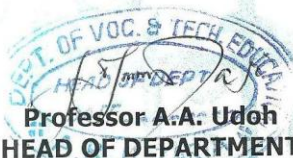
Our Ref: _____

Letter of Introduction

LINDA SWANYIN MANDE – M.ED/EDUC/10537/2011-2012

This is to certify that the above mentioned name is a Postgraduate student (M.Ed Business Education) in the Department of Vocational and Technical Education, Ahmadu Bello University, Zaria carrying out a research topic: ***Effect of Scaffolding and Drill Teaching Methods on Students Academic Performance in Shorthand in Government Senior Secondary Schools in Kaduna State.***

Please, kindly give her every assistance she may require.


Professor A.A. Udoh
HEAD OF DEPARTMENT

APPENDIX IIA

WEEK ONE

LESSON PLAN ON SCAFFOLDING TEACHING METHOD

DATE: 1st June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Double Consonant Curves

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, well displayed solved Shorthand tasks, well displayed picture of the right sitting position of a Shorthand writer, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Scaffolding Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form a series of Double Consonant strokes FR and VR.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Double Consonant strokes FR and VR.
- ii. Explain Double Consonant strokes FR and VR.
- iii. Know the words that form a series of Double Consonant strokes FR and VR.
- iv. Differentiate between the words that form a series of Double Consonant strokes FR and VR.

PREVIOUS KNOWLEDGE: The students have been taught about Consonant strokes and how to distinguish between light strokes and heavy strokes.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

- i. Explain the three positions where vowel sound can be placed?

ii. Consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Double Consonant strokes FR and VR, and also explains their uses.

STEP II: Teacher tells the students the words that form a series of Double Consonant strokes FR and VR.

STEP III: Teacher tells the students the difference between the words that form a series of Double Consonant strokes FR and VR.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Double Consonant strokes FR and VR and explain their uses?
2. Differentiate between Double Consonant strokes FR and VR?
3. Who can write the words that form Double Consonant strokes FR and VR?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Double Consonants PL and PR series.

SOLUTION TO ASSIGNMENT: The five (5) words that form Double Consonants PL and PR series are;

PL series- play, place, plate, replaced and blue.

PR series- pray, press, presume, break and try.

APPENDIX IIB

WEEK ONE

LESSON PLAN ON DRILLING TEACHING METHOD

DATE: 1st June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Double Consonant Curves

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, well displayed solved Shorthand tasks, well displayed picture of the right sitting position of a Shorthand writer, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Drilling Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form a series of Double Consonant strokes FR and VR.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Double Consonant strokes FR and VR.
- ii. Explain Double Consonant strokes FR and VR.
- iii. Drill the words that form a series of Double Consonant strokes FR and VR into shorthand.
- iv. Differentiate between the words that form a series of Double Consonant strokes FR and VR.

PREVIOUS KNOWLEDGE: The students have been taught about Consonant strokes and how to distinguish between light strokes and heavy strokes.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

- i. Explain the three positions where vowel sound can be placed?
- ii. Consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Double Consonant strokes FR and VR, and also explains their uses.

STEP II: Teacher shows the students how to drill the words that form a series of Double Consonant strokes FR and VR into shorthand.

STEP III: Teacher tells the students the difference between the words that form a series of Double Consonant strokes FR and VR.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Double Consonant strokes FR and VR and explain their uses?
2. Differentiate between Double Consonant strokes FR and VR?
3. Who can write and drill the words that form Double Consonant strokes FR and VR?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Double Consonants PL and PR series.

SOLUTION TO ASSIGNMENT: The five (5) words that form Double Consonants PL and PR series are;

PL series- play, place, plate, replaced and blue.

PR series- pray, press, presume, break and try.

APPENDIX IIC

WEEK TWO

LESSON PLAN ON SCAFFOLDING TEACHING METHOD

DATE: 8th June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Double Consonant Curves

DURATION: 80minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Scaffolding Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form a series of Double Consonant strokes FL and VL.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Double Consonant strokes FL and VL.
- ii. Explain Double Consonant strokes FL and VL.
- iii. Know the words that form a series of Double Consonant strokes FL and VL.
- iv. Differentiate between the words that form a series of Double Consonant strokes FL and VL.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant strokes FR and VR.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

- i. How many letters are the combination of consonants and vowels?
- ii. Light dot or dash is used for what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Double Consonant strokes FL and VL, and also explains their uses.

STEP II: Teacher tells the students the words that form a series of Double Consonant strokes FL and VL.

STEP III: Teacher tells the students the difference between the words that form a series of Double Consonant strokes FL and VL.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Double Consonant strokes FL and VL and explain their uses?
2. Differentiate between Double Consonant strokes FL and VL?
3. Who can write the words that form Double Consonant strokes FL and VL?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out four (4) words that form Double Consonants SHL and SHR series.

SOLUTION TO ASSIGNMENT: The four (4) words that form Double Consonants SHL and SHR series are;

SHL series- official, shelf, partial and specialize.

SHR series- artificial, pressure, fisher and essential.

APPENDIX IID

WEEK TWO

LESSON PLAN ON DRILLING TEACHING METHOD

DATE: 8th June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Double Consonant Curves

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Drilling Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form a series of Double Consonant strokes FL and VL.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Double Consonant strokes FL and VL.
- ii. Explain Double Consonant strokes FL and VL.
- iii. Drill the words that form a series of Double Consonant strokes FL and VL into shorthand.
- iv. Differentiate between the words that form a series of Double Consonant strokes FL and VL.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant strokes FR and VR.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

- i. How many letters are the combination of consonants and vowels?
- ii. Light dot or dash is used for what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Double Consonant strokes FL and VL, and also explains their uses.

STEP II: Teacher shows the students how to drill the words that form a series of Double Consonant strokes FL and VL into shorthand.

STEP III: Teacher tells the students the difference between the words that form a series of Double Consonant strokes FL and VL.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Double Consonant strokes FL and VL and explain their uses?
2. Differentiate between Double Consonant strokes FL and VL?
3. Who can write and drill the words that form Double Consonant strokes FL and VL?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out four (4) words that form Double Consonants SHL and SHR series.

SOLUTION TO ASSIGNMENT: The four (4) words that form Double Consonants SHL and SHR series are;

SHL series- official, shelf, partial and specialize.

SHR series- artificial, pressure, fisher and essential.

APPENDIX IIE

WEEK THREE

LESSON PLAN ON SCAFFOLDING TEACHING METHOD

DATE: 15th June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Compound Consonants

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Scaffolding Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form Compound Consonants KW, GW and MP/MB

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Compound Consonants KW, GW and MP/MB.
- ii. Explain Compound Consonants KW, GW and MP/MB.
- iii. Know the words that form Compound Consonants KW, GW and MP/MB.
- iv. Differentiate between the words that form Compound Consonants KW, GW and MP/MB.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant curves.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

i. The joining of shorthand outlines without lifting the pen in order to enhance writing speed is called what?

ii. The first six consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Compound Consonants KW, GW and MP/MB and explains their uses.

STEP II: Teacher tells the students the words that form Compound Consonants KW, GW and MP/MB.

STEP III: Teacher tells the students the difference between the words that form a series of Compound Consonants KW, GW and MP/MB.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Compound Consonants KW, GW and MP/MB and explain them?
2. Differentiate between Compound Consonants KW, GW and MP/MB?
3. Who can write the words that form Compound Consonants KW, GW and MP/MB?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Compound Consonants KW, GW and MP/MB.

SOLUTION TO ASSIGNMENT: The five (5) words that form Compound Consonants

KW, GW and MP/MB are;

KW- quick, request, equipment, acquainted and banquet.

GW- linguist, Quebec, adequate, exquisite and square.

MP/MB- camp, embody, stamp, dump and sympathy.

APPENDIX IIF

WEEK THREE

LESSON PLAN ON DRILLING TEACHING METHOD

DATE: 15th June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Compound Consonants

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Drilling Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form Compound Consonants KW, GW and MP/MB.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Compound Consonants KW, GW and MP/MB.
- ii. Explain Compound Consonants KW, GW and MP/MB.
- iii. Drill the words that form Compound Consonants KW, GW and MP/MB.
- iv. Differentiate between the words that form Compound Consonants KW, GW and MP/MB.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant curves.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

i. The joining of shorthand outlines without lifting the pen in order to enhance writing speed is called what?

ii. The first six consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Compound Consonants KW, GW, MP/MB and explains their uses.

STEP II: Teacher shows the students how to drill the words that form Compound Consonants KW, GW and MP/MB into shorthand.

STEP III: Teacher tells the students the difference between the words that form Compound Consonants KW, GW and MP/MB.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Compound Consonants KW, GW and MP/MB and explain them?
2. Differentiate between Compound Consonants KW, GW and MP/MB?
3. Who can write and drill the words that form Compound Consonants KW, GW and MP/MB?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Compound Consonants KW, GW and MP/MB.

SOLUTION TO ASSIGNMENT: The five (5) words that form Compound Consonants

KW, GW and MP/MB are;

KW- quick, request, equipment, acquainted and banquet.

GW- linguist, Quebec, adequate, exquisite and square.

MP/MB- camp, embody, stamp, dump and sympathy.

APPENDIX IIG

WEEK THREE

LESSON PLAN ON SCAFFOLDING TEACHING METHOD

DATE: 22nd June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Compound Consonants

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Scaffolding Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form Compound Consonants LR, RR and WH.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Compound Consonants LR, RR and WH.
- ii. Explain Compound Consonants LR, RR and WH.
- iii. Know the words that form Compound Consonants LR, RR, and WH.
- iv. Differentiate between the words that form Compound Consonants LR, RR and WH.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant curves.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

i. The joining of shorthand outlines without lifting the pen in order to enhance writing speed is called what?

ii. The first six consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Compound Consonants LR, RR and WH, and explains their uses.

STEP II: Teacher tells the students the words that form Compound Consonants LR, RR and WH.

STEP III: Teacher tells the students the difference between the words that form a series of Compound Consonants LR, RR and WH.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Compound Consonants LR, RR and WH, and explain them?

2. Differentiate between Compound Consonants LR, RR and WH?

3. Who can write the words that form Compound Consonants LR, RR and WH?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Compound Consonants LR, RR and WH.

SOLUTION TO ASSIGNMENT: The five (5) words that form Compound Consonants

LR, RR and WH are;

LR- filler, scholar, roller, counselor and ruler.

RR- poorer, sharer, bearer, fairer and wearer.

WH- where, white, nowhere, whip and elsewhere.

APPENDIX III

WEEK THREE

LESSON PLAN ON DRILLING TEACHING METHOD

DATE: 22nd June, 2016.

CLASS: S.S II

SUBJECT: Shorthand

TOPIC: Compound Consonants

DURATION: 80 minutes (double period)

INSTRUCTIONAL MATERIALS: Charts, Shorthand memos, Shorthand notebook, Pitman New Era Shorthand Textbook (Isaac Pitman).

INSTRUCTIONAL METHOD: Drilling Teaching Method.

GENERAL OBJECTIVE: At the end of the lesson, the students should be able to know the words that form Compound Consonants LR, RR and WH.

SPECIFIC OBJECTIVES: At the end of the lesson, the students should be able to:

- i. Define Compound Consonants LR, RR and WH.
- ii. Explain Compound Consonants LR, RR and WH.

- iii. Drill the words that form Compound Consonants LR, RR, and WH.
- iv. Differentiate between the words that form Compound Consonants LR, RR and WH.

PREVIOUS KNOWLEDGE: The students have been taught about Double Consonant curves.

INTRODUCTION: Teacher arouses students' interest by asking the following questions:

- i. The joining of shorthand outlines without lifting the pen in order to enhance writing speed is called what?
- ii. The first six consonants are represented by what?

PRESENTATION OF THE LESSON

STEP I: Teacher define Compound Consonants LR, RR and WH, and explains their uses.

STEP II: Teacher shows the students how to drill the words that form Compound Consonants LR, RR and WH into shorthand.

STEP III: Teacher tells the students the difference between the words that form Compound Consonants LR, RR and WH.

EVALUATION: Teacher evaluates the students by asking the following questions:

1. Who can define Compound Consonants LR, RR and WH, and explain them?
2. Differentiate between Compound Consonants LR, RR and WH?
3. Who can write and drill the words that form Compound Consonants LR, RR and WH?

SUMMARY: The teacher goes over the lesson and highlights the main points worth remembering. The students participated through their contributions to the summary of the lesson and ask questions where necessary.

ASSIGNMENT: Teacher asks students to find out five (5) words that form Compound Consonants LR, RR and WH.

SOLUTION TO ASSIGNMENT: The five (5) words that form Compound Consonants LR, RR and WH are;

LR- filler, scholar, roller, counselor and ruler.

RR- poorer, sharer, bearer, fairer and wearer.

WH- where, white, nowhere, whip and elsewhere.

APPENDIX III

SHORTHAND OBJECTIVE QUESTIONS (PRE-TEST)

Answer all the questions

Tick Appropriately

Sex: Male ()

Female ()

Instruction: Circle the correct answer

1. In what year Pitman Shorthand was first introduced? A. 1837 B. 1977 C. 1980 D. 1999
2. The Pitman Shorthand that was reviewed is called A. Pitman 1950 B. Pitman 2002 C. Pitman 2000 D. Pitman 2010.
3. Diphthongs are represented by _____ A. alphabet B. angular marks C. letters D. consonants.
4. Long vowels A and O are both second place vowels A. True B. False
5. Vowels are represented by _____ and _____ A. sounds and words B. phrases and

outlines C. speeds and notes D. dots and dashes.

6. The first six consonants are represented by straight strokes written downward A. True B. False

Use the following information to answer question 27 - 32

The first six consonants

Letters	Outlines or Signs	Name
P		pee
B		bee
T		tee
D		dee
CH		chay
J		jay

7. Letter P is represented by A. a slight thin stroke B. a slight thick stroke C. a heavy dot D. a heavy dash.
8. Letter B is represented by A. a heavy dash B. a slight thick stroke C. a thin stroke D. a bracket.
9. Letter T is represented by A. a thick stroke B. a heavy dash C. a light stroke D. a dot
10. Letter D is represented by A. a thick stroke B. a straight line C. a circle D. a

hyphen

- 11. Letter CH is represented by a slight thin stroke A. True B. False
- 12. Letter J is represented by a slight thick stroke A. True B. False

Use the following information to answer question 33 - 40

The second group of consonants

Letter	Outlines or Signs	Name
F		ef
V		vee
TH		ith
TH		thee
S		ess
Z		zee
SH		ish
ZH		zhee

- 13. Letter F is represented by A. a slight thin curve B. a thick stroke C. all of the above D. none of the above.
- 14. Letter V is represented by A. a light dot B. a slight thick curve C. a circle D. all of the above.

15. First letter TH is represented by A. a dash B. a light curve C. an angular mark
D. none of the above.
16. Second letter TH is represented by A. a thick curve B. a short form C. a coma
D. all of the above.
17. Letter S is represented by a light curve A. True B. False
18. Letter Z is not represented by a thick curve A. True B. False
19. Letter SH is not represented by a slight light curve A. True B. False
20. Letter ZH is represented by a slight thick curve A. True B. False

APPENDIX IV

SHORTHAND OBJECTIVE QUESTIONS (POST-TEST)

Answer all the questions

Tick Appropriately

Sex: Male ()

Female ()

Instruction: Circle the correct answer

1. A small initial hook, written on the inside of curves is known as A. triphone B.
double consonant strokes fr, vr C. short forms D. vowel.
2. Compound consonants are made up of A. 6 B. 8 C. 10 D. 12
3. In Pitman Shorthand, all the consonants are regarded as sounds A. true B. false
4. The first six consonants are represented by straight strokes written A. upward B. on
the line C. downward D. straight.
5. Consonants are represented by ----- and ----- A. strokes and curves B. curves

and dots C. dots and sounds D. sounds and dashes.

6. The 26 letters are the combination of consonants and vowels A. true B. false
7. A large initial hook, written on the inside of curves, forms the A. double consonants fl, vl B. single consonants C. compound consonants D. consonants curves.
8. Ler is used only where the downward l would be used A. true B. false
9. Rer is used only where the downward r would be used A. true B. false
10. There are three places on a consonant where vowels maybe placed. A. true B. false
11. In Pitman Shorthand, there are----- consonants. A. 10 B. 24 C. 15 D. 12
12. The double consonant stroke shl is always written A. sideways B. downward C. right D. upward.
13. The double consonant shr is always written A. above B. on the line C. downward D. inside.
14. A dot vowel maybe indicated by writing a small circle instead of the dot, either after or before the double consonant stroke A. true B. false.

Use the following information to answer question 15 - 20

Compound consonants

Letters	Outlines or Signs	Name
KW		kwa
GW		gwa
MP, MB		emp,emb
LR		ler
RR		rer
WH		hwa

15. Letters KW are represented by A. a light small curve B. a light small curve and a light straight long line C. a long curve D. a downward curve.
16. Letters GW are represented by A. a heavy dash B. a slight thick stroke C. a light small curve and a thick straight long line D. consonant strokes
17. Letters MP, MB are represented by A. a thick stroke B. a heavy dash C. a light stroke D. an upward thick curve.
18. Letters LR are represented by A. a thick slight left curve B. a straight line C. a double stroke D. a downward curve.
19. Letters RR are represented by A. an angular mark B. a thick slight right curve C. all of the above D. none of the above.
20. Letters WH are represented by A. a thick stroke B. a short form C. a slight light small upward long curve D. a consonant stroke.

APPENDIX V

SHORTHAND ESSAY QUESTIONS (POST-TEST)

Answer all questions

1a. Drill the following double consonant strokes fr, vr words into shorthand.

- i. honor_____
- ii. effort_____
- iii. author_____
- iv. summer_____
- v. other_____

b. Drill the following double consonant strokes fl, vl words into shorthand.

- i. fly_____
- ii. evil_____
- iii. final_____
- iv. civil_____

v. arrival_____

2. Drill the following compound consonants words into shorthand.

a. quit_____

b. quoted_____

c. stamp_____

d. ruler_____

e. sharer_____

f. wearer_____

g. white_____

h. anywhere_____

i. poorer_____

j. dump_____

3. Take down the dictation of 80 words per minute (80 WPM).

The attached sheet shows-the result of the-year's business. You-will-note-that, except for the first two-months, business for-the-year was good. We adopted a new sales policy in March, and since that-time we-have enjoyed the benefit of-our new methods. We-have-had about twice as-many sales as-in the same-months last-year. We-think that-this-is-the best evidence we could-have of-the value of -our new policy.

APPENDIX VI

PRE-TEST OBJECTIVE QUESTIONS

MARKING SCHEME

EACH QUESTION CARRIES FIVE MARKS

- | | |
|------|-------|
| 1. A | 11. A |
| 2. C | 12. A |
| 3. B | 13. A |
| 4. A | 14. B |
| 5. D | 15. B |
| 6. A | 16. A |
| 7. A | 17. A |
| 8. B | 18. B |
| 9. C | 19. B |
| 10.A | 20. A |

APPENDIX VII

POST-TEST OBJECTIVE QUESTIONS

MARKING SCHEME

EACH QUESTION CARRIES ONE MARK

- | | |
|-------|-------|
| 1. B | 11. B |
| 2. A | 12. D |
| 3. C | 13. C |
| 4. A | 14. A |
| 5. A | 15. B |
| 6. A | 16. C |
| 7. A | 17. D |
| 8. A | 18. A |
| 9. A | 19. B |
| 10. A | 20. C |

APPENDIX VIII

POST-TEST ESSAY QUESTIONS

MARKING SCHEME

QUESTION ONE AND TWO CARRIES FOURTY MARKS, AND QUESTION THREE CARRIES FOURTY MARKS

1a. i. honor_____

ii. effort_____

iii. author_____

iv. summer_____

v. other_____

b. i. fly_____

ii. evil_____

iii. final_____

iv. civil_____

v. arrival_____

2a. quit_____

b. quoted_____

c. stamp_____

d. ruler_____

e. sharer_____

f. wearer_____

g. white_____

h. anywhere_____

i. poorer_____

j. dump_____

3. _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____