THE EFFECT OF DEFERRED TRANSCRIPTION UPON STUDENT ACHIEVEMENT IN SHORTHAND DICTATION

M. Ed. (OFFICE EDUCATION)

THESIS

BY

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DEPARTMENT Of VOCATIONAL AND TECHNICAL EDUCATION

AHMADU BELLO UNIVERSITY

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CERTIFICATION

This Thesis entitled, 'THE EFFECT OF DEFERRED TRANSCRIPTION UPON STUDENT ACHIEVEMENT IN SHORTHAND DICTATION' by ERIC YAHAYA ABUBAKAR, meets the regulations governing the award of the degree of M. Ed. Business Education (Office Education) of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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D E D I C A T I O N

This Thesis is dedicated to

my lovely daughter

MISS LISA YAKUN ABUBAKAR

who has always missed my warm presence and has

continued to pray for my success and

safety throughout this

taxing period.

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A B S T R A C T

The study was to determine the effect of deferred transcription upon students' achievement in shorthand dictation as compared to transcription of the same shorthand notes immediately they were written. Specifically the study was aimed at finding out if variables such as correctness of shorthand outlines i.e. dictionary correct written outlines had any effect on the ability of the student to transcribe accurate notes on the day written and a week after. Also factors such as, transcription skills, correct English grammer, spellings, proofreading and typing skills were looked into. Two polytechnics were sampled for the study. All students in the National Diploma II (ND II) class of each of the polytechnics were respondents. The two classes were made up of fifty-six (56) students. Two pre-recorded passages of shorthand dictation were used. The first passage was a warm-up passage which was dictated at 90 words a minute for two minutes. The students were not expected to transcribe this passage; It was used to familiarise the students with the dictator's voice. The second pre-recorded dictation passage was the actual test material which was marked and analysed. It was dictated 80 words a minute for a period of three minutes with a standard syllabic intensity of 1.4. Accuracy of the transcription was expected at 95% with a 5% error margin allowance.

Forty-five minutes was allowed for the transcription of both the non-deeferred and deferred transcription. Shorthand notes of the students at the first transcription (non-deferred) and the transcript were collected. The same notes were returned to the students a week later under their coded numbers for deferred transcription. In older to test the proposed null hypothesis, the Chi Square (X^2) test was conducted. The null hypothesis were either accepted or rejected at the 0.05 level of significant. Results of the study showed that:

(a) there was no significant difference in student achievement when students trancscribe shorthand dictation prior to a week later.

(b) the students' English knowledge and typing errors actually affected their achievement in the transcription of shorthand notes.

(c) students who tended to formulate their own shortrhand outlines instead of the commonly acceptable phrases and dictionary correct outlines got them more wrongly transcribed in non-deferred. This inability was also linked with memory and retention.

(d) local Nigerian names were either wrongly written or transcribed or both.

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Definition of Terms

Cold Notes (deferred transcription)	Refer to shorthand notes which were written a week prior to the transcription.
Hot Notes (non-deferred transcription).	Refer to shorthand outlines that are transcribed immediatelly after they have been dictated.
Non-shorthand Transcription	errors. Are spelling, punctuation, and grammar errors.
Theory Errors	Refer to an outline that is not dictionary correct.
Transcription Errors	An incorrect transcription, omissions, major variations from the thoughts of the dictator.
3- or 5- Minutes Takes	Refers to shorthand dictation given at time length periods of three or five minutes.
Mailable Document	One that the "boss" will sign.
ND	Abreviated form for National diploma.
Dictionary Correct	An outline that is a replica of the Pitman shorthand inventor.

Chapter 1

INTRODUCTION

The effect of deferred transcription upon students' achievement in shorthand dictation was looked into by the researcher to determine the effect it would have upon students ability to transcribe shorthand notes. The ultimate concern of the author was to compare the students' results on immediate transcription with the students' achievement on the same shorthand notes when transcription is deferred for one week. It was the researcher's interest to find out if there are factors that militate against the achievement of such deferred transcription when compared with on-the-hour transcription.

1.1 Background Information

Pitman Shorthand, regarded as one of the most widely used international system today, was invented by Sir Isaac Pitman. The first edition of his shorthand system was published in 1837 after he had spent half a century improving it.

The subject of shorthand has been described by the inventor, Pitman (1978) as the art of representing spoken sounds by written signs.

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Pitman (1978) also identified the purpose of shorthand as to represent letters briefly and as distinctively as possible. These represented signs or symbols are capable of being transcribed into conventional longhand mostly with the aid of the typewriter into mailable form.

Explaining further (Pitman, 1978) noted that:

> Writing by sound means writing words as they are pronounced and not according to longhand spelling. In Pitman shorthand, English alphabet consist of consonants and vowels, combinations of which are used to form words. Special signs are used to represent only those consonants and vowels which are actually sounded when pronouncing words.
>
> The Pitman shorthand alphabet consists of strokes which represent the consonant sounds, and dots and dashes which represent the vowel sounds. Any consonant symbol or combination of consonant symbols, with or without vowel signs is known as an outline. Having written an outline correctly, a Pitman shorthand writer should be able to recognize and transcribe it without any hesitation. The writer should be able to transcribe his shorthand outlines quickly and accurately into typewritten or handwritten form, but mostly, it should be in typewritten form at least for legibility and ease. To buttress this fact Gartside (1970) said:

> The handwritten transcription is unrealistic since it bears no relation to business practice, which requires transcripts to be typed. In class, written transcripts waste valuable time and should therefore be restricted to occasional test in circumstances where typewriting facilities are not available.

Canning (1979) equally noted that typed transcript from shorthand, audio or manuscript is the ultimate stage in the communication chain for the great majority of applications of these skills.

The transcription of cold notes should not be totally neglected by shorthand teachers as part of the training instructional methods used to impart the knowledge of the subject to their students.

Hampton (1976) in support of the above statement said:

> If shorthand outlines which can be read within the hour of the dictation can be read any time, there would be no need improving deferred transcription, activities. If, however, students do have difficulty in reading deferred transcription, or 'cold notes', consideration should be given for the development of this skill.

1.2 The Pitman System

Isaac Pitman's shorthand system is distinct from other systems before it. He differentiates it, (Pitman, 1978) by saying that;

> Speed and facility of writing and safety of reading are achieved by following a coherent and comprehensive scheme: each individual sound has its sound and signs, sounds of the same family have signs with an appropriate family likeness, so that with a little practice, the signs seem to produce themselves like snapshots from the sounds, and the sounds themselves seem to speak from the written page.

Pitman (1978) attested to the extent of his shorthand system usage as one which, it is believed, has been tested for so long by many writers of such a wide diversity of natural aptitude.

Pitman (1978) noted that:

> Millions have used this system as a means of earning a livelihood, and today, throughout the world, whenever accurate and immediately legible recording of spoken English is required in parliaments and congresses, in the courts of justice, and in offices of every size and sort, there is Pitman Shorthand doing what a machine can so effectively reproduce, the whole speech and nothing but the speech in a form that it can be read like a book as soon as it is written or ten years afterwards.

The ability of the shorthand student (writer) to be able to read his notes a week later as well as he did the hour he wrote them is what the researcher intends to test. To effectively carry out this thesis, the researcher chose to study secretarial students of two Polytechnics:

(1) The Federal Polytechnic, Kaura Namoda, Sokoto State.

(2) Katsina Polytechnic, Katsina, Katsina State.

The researcher decided to study these two institutions because of their similarity in couse or study programmes and basic entry requirements for candidates as well as the length of time required for graduation.

1.3 The Federal Polytechnic, Kaura Namoda

The Federal Polytechnic, Kaura Namoda, Sokoto State, (1985/86 Prospectus) was established in 1983 to train technologists for the growing needs of the nation.

The Polytechnic is operating on a temporary campus within Kaura Namoda town which is 56 kilometres North of Gusau on the way to Jibiya. As to the primary objectives of the institution, it is included in the 1985/86 prospectus, that;

(a) it was set up to produce higher and lower technical manpower for the national economy;

(b) by its establishment, the govenment desires that the nation's drive towards technological development would be attained at a somewhat faster pace;

(c) its graduates would prove themselves worthy men and women who are able to use their brains adeptly as they can apply hands.

These ideals must be reflected in the type of training and knowledge to which they are exposed. To embrace this ideal in totality, it would not be a misgiving if properly trained secretaries are able to transcribe their cold notes into perfect mailable copies. The Department of Secretarial Studies, which is in the school of Business Management and Liberal Studies,

now (1987) offers three programmes.

1. One year preliminary course leading to entry into the-two year National Diploma (ND).
2. The National Diploma course is also for students who have obtained a minimum requirement of four credits in relevant subjects at the WASC or GCE O'level obtained at a maximum of two sittings which must include English Language.
3. Candidates with the Teachers' Grade II Certificate with credits in four subjects including English Language obtained at one sitting or R.S. A. (Intermediate or Advanced) in four subjects including English Language obtained at a maximum of two sittings, could be admitted.

The Department of Secretarial Studies has a target of 50 and 60 words per minute for its ND I students, for the first semester, with a minimum of 95% transcription accuracy. Students are however, expected to transcribe,using the typewriter, mailables of speeds ranging from 70 - 90 words per minute in the second semester.

In ND II, students are expected to attain and transcribe typewritten mailables of a speed range of 80 - 100 words a minute. The department in its final marking assessment accepts only 95% accuracy of typewritten transcription with a 5% error margin allowance

in shorthand. This standard is approved by the regulating body of course structures and standards in all Polytechnics and Colleges of Technology in Nigeria, and the National Board for Technical Education (NBTE).

In the 1987/88 academic year, the department had a total population of 90 students out of which 28 were in ND. II.

1.4 Katsina Polytechnic

Katsina Polytechnic, formerly owned by the Kaduna State Government, is now in Katsina State, which was carved out of Kaduna State on September 9, 1987.

The Polytechnic was established by the then North Central State Edict No.1 of 1975, while the law establishing the Katsina Polytechnic came into operation on 1st January 1983.

The Katsina Polytechnic (1985/86 Prospectus) is situated on a very large and good site of about 1,600 hectares extending between km 44 and km 11.2 along the western side of trunk B road connecting Katsina town with Dutsin-Ma.

Courses are offered in several fields leading to the attainment of Certificates and National Diplomas. Secretarial Studies is offered in the School of Administration and Business Studies. The department of secretarial studies had 28 students in National Diploma II (ND.II).

The National Diploma course in secretarial Studies requires candidates to have entry qualification of four credits and above in the GCE Ordinary level/School Certificate or its recognised equivalent, two of which must be in relevant subjects or Teachers' Grade II Certificate with merits in at least four relevant subjects including English Language.

1.5 Statement of the Problem

The research was conducted to determine the effect of deferred transcription upon students' achievement in shorthand dictation as compared to on-the-hour transcription of shorthand notes. Specifically, the study was concerned with looking into influences such as:

(1) significant difference in accurate transcription of on-the-hour dictation transcription of shorthand notes as compared to deferred transcription, i.e. cold notes of at least one week interval;

(2) the extent to which correctly written outlines are wrongly transcribed at the hour of the dictation and a week later;

(3) the inaccuracy of transcribing correctly written shorthand outlines a week after they have been written;

(4) the types of errors commonly associated with wrong transcription of shorthand notes at the hour of taking dictation and a week later, i.e. when deferred;

(5) if the key subjects/skills like English and typewriting really affect the accuracy in producing mailable transcription of shorthand notes.

1.6 Research Questions

The study addressed the following research questions.

(1) Does the secretarial studies student undergo any special course in transcription in the Department of Secretarial Studies at the Federal Polytechnic, Kaura Namoda and Katsina Polytechnic?

(2) Do shorthand teachers in these institutions train their students in transcription of shorthand outlines written by them from their notes anytime other than from the hour of dictation?

(3) Does the students' English grammar (spelling, punctuation and sentence construction) affect their achievement in shorthand transcription of deferred notes?

(4) Does the inability of the shorthand students in following set principles of writing affect their ability to transcribe cold notes?

(5) Is it possible for wrongly written outlines to be transcribed accurately even a week later (e.g. after the hour of dictation)?

(6) Do the students really transcribe accurately their shorthand outlines written at that hour as compared to a week later?

(7) Does the students' inability to type well affect their achievement in transcribing deferred shorthand dictation?

1.7 Hypothesis

Towards effective study of the effect of deferred transcription upon student achievement in shorthand dictation, the following null hypotheses were tested:-

(1) There is no significant difference in student achievement when a student transcribes shorthand dictation on-the-hour prior to a week later.

(2) There is no significant difference between the inability of the student to transcribe incorrect written shorthand outlines on deferred transcription as compared with on-the-hour transcription.

(3) Accuracy of the shorthand transcript and accuracy of the shorthand notes are independent of each other.

(4) Students' English knowledge, and typing errors do not affect their achievement in on-the-hour transcription as compared to deferred.

1.8 Significance of the Study

The purpose of this study was to determine whether shorthand students could transcribe as accurately from shorthand notes written one week prior to their transcription as from notes written on the day of their transcription.

Secretaries in busy offices may not be chanced to transcribe their shorthand notes on the day they take them. This, however, does not mean they would not have need to produce such important documents for their executives thereafter. Stressing on the transcription of cold notes, Wanous (1942) observed that in actual office situation, transcription must be done from cold notes.

Gartside (1980) supporting the significance of this type of study, noted that immediate transcription is not always possible in the office, thus making a strong case for more practice in deferred transcription during training.

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Experimental data, Thurse (1938) do not seem to be available to indicate the relationship between accurate shorthand outline and incorrect ranscript, and conversely between inaccurate outline and correct transcript in shortahand achievement. It is noteworthy that this particular sudy will be significant and of use particualaly to these groups of people; students, shorthand teachers, institutions and employers/office executives who are the consumers of this category of workers.

1.8.1 Student

Shorthand is an important tool to the secretarial student, and his ability to transcribe dictated shorthand passages accurately is a skill appreciated by his teacher and employer. The student of shorthand will benefit by the results of this study as some useful suggestions on the causes and likely remedies of students' inability to transcribe deferred or non-deferred dictation notes accurately will be given.

1.8.2 Teacher

This study will be of significance to the teacher of shorthand. Findings of the study will be a pointer to the teachers of this subject who may not have given careful recognition to assignment in deferred transcription as part of their class instructions to begin doing so.

Shorthand teachers will be able to benefit from suggestions of this study and those factors that commonly associate with the hindrance of their students to achieve in deferred transcription. They will also, through the findings of this study be aware of the consumers of their products - the employers' interest to employ graduates who can produce mailable correspondence from accurate notes even when transcription is deferred.

1.8.3 Institutions

Definitely no institution of learning is interested in existing so as to train students on any skill that they cannot defend the certificates it awards.

This study will be of significant importance to all institutions that train secretaries on the need for providing practice in transcribing cold notes, if they do not do so already. Suggestions made at the end of the study will be a guide to any institution that will want to improve its students' ability and skills on deferred transcription in Pitman shorthand.

It will be a thing of pride and publicity if any institution receives praises and commendations from employers of labour for the good performance of its products at the discharge of their professional duties.

1.8.4 Employers/Executives

Secretarial student education is for office consumption, hence their training towards meeting office and working life situation is equally important. Consumers (Employers) of this labour abound all the different forms of our business enterprises. Definitely no employer will be interested in employing a secretary who cannot effectively transcribe cold notes into mailable copies. Today, growth in business transactions has been increasing with great volume of secretarial work. The present harsh economic constraints have made it difficult for employers of labour to employ more hands. With these constraints, secretaries in busy offices are unable to transcribe shorthand notes immediately, rather forcing them to delay their transcription until a week(s) later.

Organizations, large or small require the services of the secretary. Employers of such category of workers take pride in the competent and efficient performance of their secretaries, which helps to create a good name for the company.

The findings and suggestions of this study will be of great help to the employer of the secretary. This research should not be the final, but a beginning step for other studies in the exploration of how shorthand writers can improve their skill in transcriptiontion. It, therefore, should serve as a fore-running recipe for institutions, and a fast growing world of business.

Chapter 2

REVIEW OF RELATED LITERATURE

2.1 Introduction

In this chapter,certain related literature are reviewed to highlight findings on the effect of deferred transcription upon students' achievement in shorthand dictation.

Shorthand as a subject in our educational curriculum has been gaining much ground and high enrollment both in the junior secondary schools, senior secondary schools and the (tertiary institutions).

Trabue (1938) has specially noted and confirmed that generally enrollment in commercial departments has grown very rapidly. Far from the misconcepted belief that only the not-well-to-do in academics or mediocres enroll for commercial education, Trabue (1938) stated that a large percentage of students with high scholastic standing is reported by most commercial teachers. Their department can no longer be considered a dumping ground for low academic achievers.

Contributing their own observation in the same positive direction, Nolan et al. (1967) found that enrollment in business subjects has been on a tremendous increase for the past decades all over the world.

The business subjects . . . which have the largest enrollment, are the secretarial subjects - shorthand, typewriting, English and office practice". It is important that secretarial subjects should hold an important place in business education as (Nolan et al., 1967) business today requires large numbers of clerical and stenographic employees and will probably continue to do so in the foreseeable future.

Despite the high requirement and high enrollment of stenographic staff in the business world today, there has been an acute shortage and an increasing need of shorthand writers. A look at the daily newspapers (Mallim 1982) in this country, especially, will reveal that out of ten advertised vacant opportunities for employment four of them will be for secretaries and stenographers with certificates in shorthand.

Mallim (1982) noted that there is a growing need for shorthand writers in this country due to greater reliance on secretaries in offices, and that instruction in shorthand should be geared towards attaining competency needed in the office.

This need poses a challenge to our institutions that train and produce secretaries and shorthand writers. The quality of a good secretary begins from the training he receives in our institutions. Trabue (1938) confirmed this point and need when he asserted that . . . surely the continued existence of the college depends upon the contribution of its graduates in the business world.

References related to the topic were cited under the following sub-headings that reflect the major variables.

1. Transcription.
2. English Language.
3. Typing.
4. Accuracy of shorthand outlines
5. Memory/time duration.
6. The shorthand typist and challenges of modern technology.

2.2 Transcription

The ability of the secretary to write good shorthand outlines at high speeds is not all that is necessary for his competency in transcribing a mailable copy. Competency in grammar, spelling and punctuation errors contributes a lot in transcribing mailable copy. The ability to type accurately at an acceptable speed is also a tool a good secretary will need to acquire.

One may pose the question of what is meant by transcription skill. The word transcription has been defined by so many people in many contexts. Barlsley (1977) defines transcription as it applies to the office and school as the integration of a myria of skills and knowledge in producing mailable transcripts.

. . . in the classroom, the term may refer to performing one or more sub-skills of the complete process, or it may refer to the entire process as it is performed in the office situation.

Tonne et al. (1965) described English Language (usage, spelling, punctuation), shorthand and typewriting as the basic skills in transcription. They went further to state that "drills, drills and more drills" are necessary for mastering, and stressed that students should be made to transcribe shorthand notes of dictation loaded with punctuation, spelling, and homonyms.

Gartside (1970) also noted that

> Many other factors besides ability to write good shorthand and to type well are involved in transcription. Specifically word spelling sense, especially skill in dealing with such common mispelt words as "accommodate", "necessary" "receive", and "fulfill" and with less common words such as . . . "accelerate", "acquiesce", "facsimile" and "superannuate", weakness in spelling necessitating frequent references to the dictionary, lower transcription rate considerably, and while it is commendable to consult a dictionary in uncertainty, it is much more so to master the spelling of all words in common use.

Stoddard (1981) also agreed to certain non-shorthand knowledge and skills to be heart and soul of an effective transcription program and hence constitute the essence of a language arts dimension of shorthand/transcription program. He said:

> . . . sense, providing spontaneous recognition of differences between similar words, such as "practice", "practise", "council", "counsel", "affect", "effect", "stationery", "stationary." The language arts knowledge and skills that must be mastered if students are to produce mailable work are inherently related to punctuation rules, grammar word division rules, capitalization rules, and proofreading ability. . . . the shorthand/transcription teacher should not plan to teach every punctuation rule, grammar rule, etc., but should emphasize the most frequently used and abused language arts items.

In the same defence Whitehead (1979) defined transcription as "the conversion of dictated material into finished correspondence ready for signatures". And contended that transcription requires a complex series of decisions for a real working life situation (out of class need) which start with the choice of the correct size style of letterhead paper and the right number of carbons for copies.

Transcription skill does not suddenly appear . . . it is the result of careful planning and conscientious practice. Heard (1960) likens this to a fine building that is shaped from the original plans of the architect and the skillful and detailed work of the carpenters, bricklayers, and other workmen. Each is vital to the final project. In throwing more light to the above Heard (1960) said that transcription skill is not merely the adding together of the separate skills of shorthand reading and writing, of typewriting and of English usage; it is a terminal skill resulting from the fusion of the separate component skills.

The art of transcription must be taught, hence, one needs to develop the skills discussed ealier to produce a perfect shorthand transcription, be it of hot or cold notes. Shorthand transcription proficiency enables the student to adjust to complex situations. Such complex situations that could aid proficiency in shorthand transcription when learned were identified (Wanous 1942) as reading one's shorthandnotes to get the thought of the dictation, typing, spelling, punctuation, capitalizing, editing, consulting references, proofreading, arranging material, and handling stationery. Wanous (1942) concluded by stating that the task of coordinating these activities into real transcription ability and of using this ability wisely in a variety of job situations calls for expert training.

Russon (1968) in accepting that transcription is the ultimate goal of achievement in shorthand, stated that the recording of shorthand dictation at ever increasing rates is of little value unless an accurate typewritten transcript is made of the notes. He defined transcription as a number of skills rather than a single skill. . . . the student must be able to typewrite, . . . must be able to read his shorthand fluently, . . . must have minimum abilities in English. Therefore it is believed that the best results are reached if a shorthand student has already attained some proficiency in typewriting and English previous

to his enrollment in shorthand.

From a business stand point and the stand point of those who utilise the services of secretaries, the ultimate aim of all transcription of shorthand is the production of typed correspondence and reports in mailable form. Teachers of shorthand should, therefore look at the transcription process as more than a combination of skills already mastered separately considering the range of problems entering into transcription.

Gartside (1970) rounds up this point more clearly when he pointed that there is much to be said for regarding it. . . . teachers should not see it as a mere fusion of separate skills but a skill that needs to be taught with much the same care as any other skill. He also differentiates between straight copying from copy and typing from shorthand notes by saying:

> . . . copy-typing is a direct process involving no change in the form of the symbols used. But typed transcription introduces on immediate step, since the operator works from symbols that must first be converted into a mental image of the words to be typed before the requisite figment movements can be activated.

In order to overcome the problem of not being able to transcribe shorthand symbols into valuable script, some writers have recommended an early transcription course. With the early approach to transcription, the

subordinate skills involved in typing from shorthand are integrated smoothly and naturally with the student's growing shorthand typewriting potentials. Gartside (1970) in his contribution to this stated that:

> Transcription consists at first in the typing of single words which may be written in shorthand on the chalkboard or taken from the printed shorthand in the text book. However, if the teaching of typewriting has preceded the teaching of shorthand, the link with shorthand may take place as soon as instruction in shorthand begins.

He also believes that through this method from the typing of single words the student graduates to the typing of short sentences and paragraphs and, later, to the typing of longer passages always from shorthand material that has been previously studied with which he is familiar.

It is not an overstatement to say that this study is highly significant as most students do not have any transcription skills and moreso, when it is in connection with cold notes. Wanous (1942) in stressing this need, pointed out in his write-up that it is no misstatement of fact to say that stenographic students are poor if the students cannnot transcribe mailable notes. woefully deficient in their ability to transcribe cold notes. He further stated that studies show that as a rule, students who finish the prescribed course in stenography turn out work which fails to attain a 50 per cent mailability rating.

Most shorthand teachers have only bothered their minds (Russon, 1968) in giving dictation tests to their students with a view to achieving a high speed of taking dictation.

Few of them bothered about the accuracy and mailability of the shorthand transcription.

Stoddard (1981) discouraged this attitude of shorthand teachers when he wrote that:

> Whenever shorthand/transcription teachers talk about the accomplishments of their shorthand/transcription student, the teachers inevitable relate exclusively to the speeds which their students can pass three minutes speed test with at least 95 percent accuracy. This phenomenon is predictable and reflects the 'normality' of business teacher behaviour; a pattern which might be labelled the speed syndrome in shorthand/transcription.

He therefore noted that this behaviour pattern is probably one of the greatest deterrents to appropriate success patterns in the teaching of shorthand/transcription because teachers judge their success almost totally in terms of the speeds at which their students write shorthand. And concluding that typically, no consideration is given to the real reason for the shorthand/transcription programme - the ultimate goal of shorthand/transcription.

It is the researcher's strong opinion that the shorthand transcription programme for secretarial students should be aimed at training students in producing mailable copies from their dictation notes.

Stoddard (1981) expressing the need for this training commented that:

> The ultimate goal of shorthand/transcription should be reflected in the student's ability to prepare typewritten copy that is free of errors and that 'the boss' will accept without further revisions. . . . mailable copy does not occur automatically simply because the student is a fast and accurate typist. Nor is mailable work achieved because the student is a fast and accurate shorthand writer. . . . the final job-competence measure of the shorthand/transcription student is his/her ability to write shorthand and then to produce documents in mailable form at a reasonable rate of speed.

As it has been noted that a typical business person would not want to accept a poorly typed document that will invariably be sent back to the secretary - certainly with "mixed-grill" - for corrections. It will be to the best interest of institutions and the responsibility of teachers that train such secretaries cherish in their training lectures, such errors that can cause a document to be unmailable.

Contributing to this thought Stoddard (1981) wrote that the teacher must ensure that students thoroughly master the knowledge and skills that will ensure the avoidance of an unmailable document. He also believes that most of these skills are "non-shorthand" in nature

and hence the student's ability to deal with them is closely connected with shorthand speed ability.

In support of training shorthand students in developing skills necessary to produce mailable copies, Rome (1960) wrote that, every classroom activity - beginning and advanced theory, dictation and transcription - should be oriented towards mailability. He did not reserve his feelings too in confirming that mailability is the ultimate end of any shorthand transcription - thus he said: This is especially true of testing which can be highly motivational in promoting students interest in being the ultimate end of all shorthand instruction - the mailable transcript. He therefore concluded by saying that, shorthand containing the transcription element serves as the best all-round evaluation of the student's learning program.

Mailability has been actually acclaimed the ultimate goal of shorthand/transcription. Steps necessary, however, for achieving mailability have been overlooked by some shorthand teachers. Reading and proofreading are some of the mailability skills one could acquire.

Shorthand notes, whether cold or hot should be read with ease. Danneman (1960) wrote that . . . reading shorthand is the foundation for future ability

in transcription. He suggested that it should be taught and practiced from the beginning of the first semester of shorthand.

This is a basic principle of teaching transcription devise that is too often overlooked by some teachers of shorthand. Too much attention is given to the modality of selecting students in the class to read. Students' registers should be kept and made in such a way that every student in the class is allowed a chance to read and his record of performance graded. Stressing on its importance, Donneman (1960) said that:

> Classroom reading is very important and should not be overlooked. . . . by having students read you can tell how well they have prepared their assignment. By giving every student a chance to read in the class, it gives the teacher a good chance to help students and prod the lazy ones.

Stressing the need for developing secretarial students' reading skills either for cold or hot notes, Whitehead (1979) maintains that there should be complete mastery of the typewriter . . . it includes both speed and accuracy and also skill in the correction of errors. Considering that . . . constant practice in reading back cold notes will pinpoint poor outlines and help to overcome future difficulties with transcription.

Experiments have shown that the speed at which a shorthand writer reads his notes is the same speed at which he writes. Heard (1968) warned students:

> . . . do not be contented to read the shorthand of either your textbook just once, read the same paragraph or passage until you can do so without hesitation at speed equal to your writing speed. Noting that . . . as your reading skill and speed advance, so do your writing skill and speed.

He therefore advocated the development of minimum reading writing skills before starting transcription course.

In support for the need for reading skills as a necessity for achievement in shorthand transcription, Crank (1979) wrote that if reading skills in shorthand are developed effectively, students will be able to perceive thought units rapidly, without having to read each line separately.

The teaching of deferred shorthand transcription can only be improved if shorthand teachers will encourage their students to proofread their dictated materials in the class and even days after they have been taken. This will surely help in obtaining mailability of transcript.

*Driska (1972) pressing on the importance of proof*reading advised shorthand teachers to:

> . . . put a great deal of stress on proof-reading. Try this procedure occasionally with your 3- or -5 minute taking. Have each student proof his take at least three times and look for different types of errors each time he goes over the transcript. On the first proofing the student compares his typewritten transcript with his shorthand notes to be sure that there are no omissions and that he has actually transcribed what he has in his notes. On the second proofing the student looks just for spelling errors; on the third proofing, for punctuation and to see if the sentences make sense - that is, agreement of subject and verb, and such things as "you letter" instead of "your letter". If you will have each student proofread for specific errors, he will find and correct more of his errors before handing in the 3- or -5 minute takes.

Driska (1972) also suggested that the ability for a student to transcribe perfect and mailable transcripts have been traced to interesting and worthwhile experiences in the shorthand class. He said:

> In beginning shorthand, read with your class in order to set the reading pace. Stop occasionally to see if your students are continuing at the rate set for them, if they are not, start reading with them, again to encourage faster reading or notes. Spend a great deal of time in beginning shorthand on improving the students' reading rates, by devoting one or two minutes during the class to individual, timed, silent reading.

Driska (1972) also encouraged the need for deferred transcription in the class stating that . . . dictate 70, 80 and 90 w.p.m.; let your students transcribe outside of class whichever they get best, bring it in the next morning, and check the takes in class.

Achievement in most transcriptions, be they on 'cold' or 'hot' notes have been traced to be more goal-directed, when they are proofread, be it in the examination or real office life situation. In this light, Camp (1979) wrote that, once students learn how to proofread efficiently, they will be better prepared to meet the challenges in the modern office. He went further to note that what management people consistently look for when hiring office workers today are increasingly involved with some kind of error detection or verification. Certainly, this enables the efficient secretary in the office to cover much ground in other works awaiting him on his table, than having to repeat the same task many times before achieving mailability.

In recognition of this need in respect of transcription, Russon (1968) stated that one of the skills a stenographer, secretary or typist must have is the ability to locate and correct his own errors. He is of the believe that proofreading skill has plagued shorthand teachers, and therefore, suggested that the aspect of asking students to proofread their job after transcribing is essential for any mailable material.

2.3.1 English Language

Many writers and researchers have shown that the grasp of English Language has a very positive effect in achievement of shorthand transcription.

Mallim (1982) stated that as Pitman shorthand is based on the use of English Language, it is pertinent that the users of the system must be fluent in the language. This means that one should have a good knowledge of syntax, vocabulary, spelling and punctuation.

Mallim (1982) also in his findings noted that some students attain higher speeds in shorthand but fail in transcribing their notes due to spelling and grammatical errors.

In support of this observation, in the WAEC report (1980), it was remarked that many candidates failed shorthand because they interchanged words which seemed to sound alike without bothering to consider the meanings of the statements. The report concluded that:

> Many students who obviously had attained the required speed skill failed because of poor knowledge of the English Language, particularly in spellings.
>
> The following words were spelt wrongly:
>
> "Cricket", "relevant", "tennis", "hockey", "jerseys", ...

> The following errors were fairly common
> ". . . as soon as you possible can . . .",
> ". . . sports equipments . . ."
> ". . . long tennis . . . and sucker . . ."
> (for possibly, lawn tennis and soccer).
>
> "The reason why people save are many . . "
> "not even the wisest man whoever leaved
> came anyway (for lived and anywhere)
> near using the full extend of . . . the
> human brain".

Complete mastering of English in all its ramifications is a very important tool for the secretary, especially during transcription. To support this important note, Whitehead (1979) stated that whichever way dictation is perceived, through hearing the tape recording, the secretary has to make instant decisions about capitalisation, punctuation, spelling and presentation. As an example to buttress the above need, he wrote that the phrase 'the minister's ten objections' might be rendered:

> The minister's ten objections
>
> the minister's 10 objections
>
> the Minister's ten objections.

He concluded by advising that it is important, therefore, to take training in the use of English seriously when undergoing secretarial training.

In their contribution on the importance of English Language in shorthand and the reasons for low progress in the subject, Popham et al, (1965) stated that some students enter with defficiencies in English grammar, reading, listening, and hearing phonetic sounds accurately.

They went further to warn that, unless such problems are identified at the beginning of shorthand instruction and corrective measures are taken, both students and teachers become frustrated.

Expert shorthand writers have not found it easy to write shorthand and reproduce such symbols into readable longhand without actually acquiring certain skills. Heard (1960) confirmed this by writing that to produce the spoken work you need skill to take down in shorthand from dictation, and then you need to read your shorthand notes. He noted too that in addition to taking down accurate shorthand notes, the secretary needs to spell and to use words correctly, punctuate and to paragraph correctly, and, on occasions, even to correct errors of grammar or arrangement of sentence.

Most schools that train secretaries, from this researcher's preliminary survey, do not seem to teach transcription skills as a separate subject with much emphasis. Poor production work in the achievement of shorthand dictation is sometimes traced to poor transcription as a result of the lack of incorporating it in teaching instructional packages.

Rundnisky (1978) in her writing about 'A successful formula for teaching and learning shorthand transcription' noted that Business Education recognises the fact that many of their students are deficient in

English grammar and punctuation ability. It is this deficient skill, she concluded that need to be given due attention in shorthand transcription instruction as these skills are vital to producing a mailable transcript from shorthand notes.

2.4 Typing

Apart from the much discussed grammatical skills as a means for achieving perfect transcription in shorthand, it has been noted that poor typing skills too can affect the achievement of the goals of transcription. Wanous (1942) wrote that many students undertake transcription before they have become masters of the typewriter and often too little stress has been placed in their typewriting instruction on those techniques that are important in transcription.

Poor typing skill is one of the problems that can prevent students from achieving set goals in transcription. Actually, the aim of writing any shorthand notes is to produce such notes in longhand accurately for others to read, mostly with the aid of the typewriter. It is not unlikely for a student to mess up his well-written shorthand dictation because of poor typing skills.

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Students should be allowed to master typewriting speed up to at least 25 words per minute before undertaking transcription. Some learned authors and researchers have advised with precepts to this fact.

Russon (1966) observed that mailable transcript is the ultimate goal of shorthand. The recording of shorthand
at ever increasing rate is of little value unless an accurate typewritten transcript is made of the notes; . . . the student must be able to typewrite. He went further to advise that the beginning student in shorthand should have had at least one (preferably two) semesters of previous typewriting.

Heard (1960) has suggested, too, that before students begin any transcription course or programme, it is advisable that they should have acquired shorthand reading and writing speeds of 60 - 80 w.p.m. with simple display.
This, it is believed, would be a level at which the student will be able to combine the motor skill of direct typing from shorthand notes with maintenance of a comfortable rhythmic speed.

The inability of the student to master the typewriter very well has adverse effect in his transcription achievement. If the student's speed is low, and if he has not actually mastered the typewriter, he will be tempted to look at the typewriter while he, at

the same time attempts to look through the shorthand notes. With this, mistakes are inadvertent as it is easier for him to omit words and even skip lines. Therefore, the lack of proper mastery of the typewriter and not keeping away from the bad habits in typing each to the following situation noted by Wanous (1942):

> The transcriber often looks at the copy to see whether he has made any errors in typing; he sometimes gazes off into space while he is trying to recall which word was dictated at the time he made ann indistinguishable outline, he may look at the keyboard to check his home position after a pause; or may look up to see whether he is near the end of a line and make no use of the bell on his machine.

Mallim (1982) traced students bearing difficulties in shorthand to typing errors such as over-striking, poor erasing and omissions, (where transcription is done on the typewriter).

In further indentifying typing problem as one of the causes for students' inability to achieve in shorthand transcription, Canning (1979) in his own contribution asserted that students often fail in shorthand transcription because they do not check their work with sufficient care, either the transcript against the shorthand note, or the typing against the standards of conventional accuracy and presentation that should have been taught.

2.5 Accuracy of Shorthand Outlines

One other fact that has been traced to achievement in transcription is the writing of accurate shorthand outlines. The writing of accurate shorthand outlines has been considered an offshoot of well tutored instruction on the principles and theories of writing shorthand outlines.

Grinstead (1967) noted that an underlying principle of developing shorthand skill is having a good knowledge of theory. He further advised that the presentation of theory in every lesson plan should be based upon the needs of the class as shown through some evaluative instrument. Weaknesses of students in theory and writing of brief forms can easily be recognised by the teachers during their many hours of teaching when evaluating shorthand papers.

Students are often not asked to keep their evaluated papers that contain corrections, this could contribute to the possibility of students' making the same errors over and over again. Grinstead (1967) has noted that this type of evaluation loses a great deal of important as a teaching technique because only incidental weaknesses are recalled when planning another lesson.

Some teachers do not even give back to their students evaluated scripts, therefore, denying them the opportunity to note mistakes made and possible corrections taken.

Grinstead (1967) advised that after papers have been graded and recorded, hand them back, allow students to make notations of errors for their own information and review, and have all evaluated papers returned for further analysis.

Siegel (1956) quickly noted that some psychologists agreed, that too early attention to errors retards the eventual learning of skill.

Poor shorthand outlines coupled with not going by the shorthand set theories for achievement in transcription, often lead to poor performance by students. From experience, many students, often believe that writing any outline in dictation is no problem as long as it can be transcribed.

In his own view, Cannning (1981) concluded that:

> . . . the standards of writing shorthand, both from the view point of accuracy of outline and from the view point of precision and quality of penmanship are often very low and that this poor shorthand writing is a factor in many failures. . . . bad shorthand writing is a prime cause of error and hence, causes students' failure.

> . . .what is needed is positive teaching in every lesson of the characteristics of good shorthand writing. These are lightness of lines, uniformity of size; compactness and consistency of style; proper execution of circles, hooks,loops, and the large items (such as SW, in Pitman New Era SES, STER, WH, doubling. SHUN hook); speed and fluency of execution, correctness of outlines and of accuracy of positioning, the under use of vowels and dipthongs whenever these lead to immediate legibility.

He further advised that in order to achieve the above perfectly, it was necessary for time to be set aside specifically for such teaching.

Closely related to following set theories to achieve in shorthand transcription is equally accepting the factor that correct shorthand outlines written down during dictation could always bring about transcription achievement be it 'hot' or 'cold' notes.

Shorthand outlines that are written incorrectly are always known to be more difficult to transcribe correctly, while shorthand outlines that are dictionary correct are more easy to transcribe.

It is pertinent to note that some teachers place more emphasis on students' producing just accurate transcription, and do not bother about the shorthand outlines that produce such transcripts. This, they have often supported with the fact that employers would not ask for shorthand outlines from their secretaries but for the mailability of any transcribed dictated passage.

Many researches conducted to this effect have come out with varying results. Schloemer (1965) found that it is not necessary to write dictionary-correct outlines inorder to transcribe them correctly. She further stated from her experimental findings that the method of approach in teaching shorthand is not as significant to shorthand success as are other factors such as the ability and interest of the student, and the enthusiasm of the teacher in the methods he uses.

In his own contribution, Flood (1965) concluded that:

> Accuracy is important. An accurate outline tends to result in accurate transcript. Too much emphasis on "book" outlines can hinder fluent writing. However, certain variations from the official outline tend to result in inaccurate transcript. The errors, which did appear to affect accuracy in transcription were the addition of the word, the omission of major consonants and poor proportion or otherwise distorted outlines.

Re-stressing the need for accurate outlines as a prerequisite for legibility in accurate transcript, Flood (1965) found that . . . the consonants appear to be principal determinants of illegibility; the vowels, either major or minor, did not appear to affect the accuracy of transcript.

In support of the importance of accurate outlines, Turse (1938) quoted Nichols, (1933) as saying:

> A shorthand writer must possess good hearing . . . manual dexterity . . . word sense, a good vocabulary, a good mastery of sentences. It should be obvious to anyone that a short tryout course in shorthand, which must be devoted to the study of principles and their application in writing of simple words will not reveal the above characteristics.

Quoting Hoke (1937), Turse (1938) stated that in relationship to correct shorthand outlines resulting in accurate transcript, there is no doubt that there is some relationship between symbol accuracy and transcript accuracy. the ability to discriminate ambiguous language situations among words which have similar shorthand outlines is also highly important in shorthand transcription.

Russon (1968) also asserted that a number of research studies have shown that shorthand students transcribe more accurately when they write correct shorthand outlines.

In support of Russon's assertion, Crank (1979) stated that theory development is fundamental to effective shorthand instruction. He further supported his argument based on research findings, that there is a direct correlation between accurate outlines and speed development and transcription. . . . students who learn to write accurate outlines tend to build dictation speed with more rapidity and transcribe with

more accuracy than students who consistently write their own brand of outlines.

Writing one's own brand of outlines may only enable the student to transcribe 'hot' notes with a recognisable degree of achievement which may be due to memory, but may not attain same when notes are 'cold'.

It is believed too that notes whether 'cold or 'hot' can easily be transcribed accurately if proper and correct shorthand outlines are written. Supporting this view, Wanous (1942) agrees that notes that can be read accurately and unhesitatingly whether they are hot or cold, must be written accurately.

2.5 Memory/Time Duration

While it is commonly believed that the rate of shorthand transcription is predictable by the qualification/fast and accurate ability to type, Gartside (1970) believes that transcription rate is also determined by factors external to the qualifications of the typist among which are:

> . . . the speed at which the dictation is given and the resulting quality of the shorthand note . . . the nature of the matter dictated - whether it is general or technical, easy or difficult and also the degree of its familiarity to the typist.
> . . . the length of the letters to be dictated . . . the length of interval between dictation and transcription, i.e. (Hot or Cold notes).

Tallying above facts, this researcher's experience in the classroom, has shown that students transcribe more accurately shorter letters or dictated matters than longer letters or materials. Also, the length of time interval given before students transcribe their dictated materials affects the accuracy and memory of their shorthand outlines.

Gartside (1970) accepted this fact by stating that the part played by memory in transcription is not always appreciated. Many students who pass tests on immediate transcription would not do so if transcription were deferred. He supports any examination in shorthand where. . . shorthand notes are collected and not returned to candidates for typed transcription until over an hour later. Because immediate transcription is not always possible in the office, there is a strong case for more practice on deferred transcription during training. To buttress this fact, Wanous (1942) stated that in actual office situation, much shorthand must be transcribed from cold notes.

The training and inculcating the need for teaching the skill and art or transcribing cold notes is highly lacking in our institutions. Noting this fact, Wanous (1942) wrote that, far too many times in our shorthand

classes, students are asked to transcribe only immediately after they have taken the dictation.To this effects, some students hand in fairly accurate transcriptions, not because they read it from their notes but because they had excellent memories.

Shorthand students can improve their art of writing the signs if they sould form the habit of taking down their notes in other subjects in shorthand. Some authors have identified, that students hardly utilize the knowledge of shorthand in their daily academic subjects. Shorthand students hardly take down notes in shorthand even in business related subjects such as economics, commerce, and even English during lectures. They fear they may not be able to transcribe and even find it difficult to read it fluently any time thereafter. Noting this short-coming in students and advocating for this need, Pullis (1978) wrote that:

> Shorthand instructors have recognised that without the development of the students transcription ability, the knowledge of a shorthand system is of minimal value, since the extent to which shorthand writers utilize shorthand for personal note-taking and letter writing can scarcely justify the time and effort required to master the subject for personal use.

2.6 The Shorthand Typist and the Challenges of Modern Technology

The world of business is becoming sophisticated with machine almost replacing all manual efforts. In the secretatial field, this is not an exception. The dictation and transcribing machines, computers and even word processors have been in market trying.

Some people even think it is not necessary these days of 'jet' age to continue to open new and even encourage the existence of the secretarial training in the school. Harpton (1976) has written extensively to support the fact that no modern equipment is capable of totally taking over the secretary's job. He supplied answers to the questions; what are the implications on word processing? Is Manual shorthand on the way out? Will dictating machines take over completely within the next few years? Well these questions sound familiar as office equipment manufacturing manufacturing companies have been aggressively promoting in our national dailies that machine dictation must replace dictation given to a manual shorthand writer. All this is just a way of trying to woo for market for their products. Harpton (1976) has tried to advance his argument in favour of the need for the secretary in any organisation despite the threat of modern sophisticated equipment that can perform almost their duties. He wrote extensively that:

> An elaborate system of dialing into a central recording terminal and having stenographers who do nothing but transcribe can be very efficient, but does it really meet the needs of most executives? Are most businesses large enough to profitable use this type of system? Even large firms that use a centralized word processing system still have secretaries who write shorthand for their top executives. Many Executives do not like the impersonality of a centralized system and find it difficult to make deletions and corrections in their dictation. They prefer instant human response as they dictate.
> . . . the thousand small offices which have only "Girl Friday" cannot afford an elaborate system; these firms find that the infrequent dictation is taken more efficiently by a manual shorthand writer. Also employers find that stenographers who have had manual shorthand training frequently make the best transcribers.

Harpton (1976) went further to note that training in all input system should be included in the curriculum so that stenographers will be capable of working efficiently in any type of system, whether it be all machine dictation, all manual writing, or a combination of the two.

The secretary does much more than what the dictating and transcribing machine can do. Whitehead (1979) rounds it up that the secretary chooses appropriate margins, line spacing, decide correctly and quickly, proofread carefully and correct any errors as swiftly - and invisibly - as possible.

Chapter 3

METHODS AND PROCEDURES OF COLLECTING AND TREATING DATA

3.1 Pilot Study

A pilot study was conducted in the two institutions used in this study. Five teachers that teach shorthand in the ND II classes were involved.

The Pilot study was carried out to find sufficient answers to questions contained in (Appendix I). Oral questioning techniques were used and answers supplied by the individual shorthand teachers were jotted down. These answers were then analysed by the researcher.

3.2 Population

The population of this study was comprised of all National Diploma II students of 1986/87 academic year, from the Federal Polytechnic, Kaura Namoda and the Katsina Polytechnic, Katsina. The two departments from the two institutions have turned out graduates with the National Diploma in Secretarial Studies. Students of the ND II Secretarial
Studies had satisfactorily passed to ND II from the ND I class with shorthand and typewriting speeds of 80/35 words a minute. Their entry background in shorthand and typewriting was not one of the variables for consideration.

3.3 Sample of the Study

The two classes of 56 National Diploma II (ND. II) students from the two institutions who were studying to pass the speeds of 100/50 words a minute in shorthand and typewriting respectively at the end of the (ND. II) second semester participated in the study. Upon entering the ND. II course in Secretarial Studies, all the students were expected to take dictation for a maximum of three minutes duration at a minimum rate of 80 w.p.m. on new unpreviewed materials with no more than 5 percent error allowance.

These two Polytechnics were chosen for this study as they look quite representative for other Polytechnics and Colleges of Technology of the same status. This was to enhance the generalization of the findings of the study. The Federal Polytechnic, Kaura Namoda had its students intake from all the parts of the states of the country. Such similar Federal Polytechnics abound in other parts of the country with the same spread of state quota intake. State Polytechnics and Colleges of Technology too like the Katsina Polytechnic spread out its intake to all parts of the states in the country with major concentration however of candidates coming from its home state.

3.4 The Instrument

Two passages of Pitman Shorthand New Era dictation made up of local material and context were administered. The first passage was a pre-recorded warm-up passage of

90 words a minute for a duration of two minutes. This passage comprised of selected word drills of shorthand vocabulary, shortforms and phrases with a syllabic intensity of 1.4. The students were not required to transcribe this passage as it was only meant to familiarise them with the dictator's voice and pronunciation. Therefore, the warm-up passage outlines were collected from the students for observation and record.

The pre-recorded warm-up passage was dictated at a higher rate than the actual test passage. This was done, so as to enable the students write the lower speed passage of 80 words per minute more comfortably and at a speed within the attainable range of the class.

The material for transcription was also a pre-recorded passage of 80 words per minute for three minutes. This was the major test passage that was actually analysed for the purposes of the research findings.

This passage was a letter, containing a well mixed blend of shorthand business vocabulary, shortforms and phrases with a syllabic intensity of 1.4.

Table 3.1 on the next page presents a description of the warm-up passage dictation used in the study. Thirty-eight point four percent of the words were shortforms, and 100 per-
cent of the words occured within the frequently used words in Pitman (1978) 700 Common Words and Pitman (1978) New Course.

Table 3.1: Composition of the Two-minute Ninety words-A-Minute Dictation Warm-up Passage

Minute	Words	Syllables	Syllabic Intensity	short Forms	% of Short Forms	Common Words	% of Common words
1	90	122	1.35	35	38.9	90	100
2	90	132	1.46	34	37.8	90	100
Total	180	254	1.4*	69	38.4*	180	100*

*Weighted Average.

Table 3.2 on the following page presents a description of the actual test passage used.

The test passage which was made up of 80 words a minute for three minutes had the average syllabic intensity of 1.4. Thirty-six point seven percent of the words were shortforms, and 92.1 percent of the words occurred within the frequently used words as found in the 700 common Words and the New Course Pitman shorthand.

The dictation material should not have posed undue difficulty for the shorthand students as these words are found in their recommended texts for shorthand at their course level (ND. II).

Table 3.2 Composition of the Three-Minute, **Eighty-Words-A** Minute Dictation Test Passage

Mins	Words	Sylla-bles	Syllabic Inten-sity	Short Forms	% of Short Forms	Common Words	% of Common Words
1	80	106	1.3	33	41.3	70	87.5
2	80	126	1.5	26	32.5	76	95.0
3	80	123	1.5	29	36.3	75	93.8
Total	240	355	1.4*	88	36.7*	221	92.1*

*Weighted Average.

3.4.1 Administration of the Instrument - Test

The two passages of dictated material were recorded into a cassette by the researcher. The assistance of the shorthand teachers of this group of students was obtained to help the researcher conduct the class. This was to enable the students to feel comfortable and complaints in respect of bad typewriter were attended to. The test was conducted in the students shorthand/ typewriting laboratories. This was to ensure the required usual comfort of students during testing.

The test passage of 80 words per minute was administered at this speed lower than their expected attainable 100 w.p.m., so that the student could write more accurate shorthand outlines.

A time period of 40 minutes was allocated for the students to transcribe the major test passage. Students were allowed two minutes to go through their shorthand outlines after the three minutes dictation take to make any necessary corrections in shorthand before starting the typewritten transcription.

At the end of the 40 minutes allowance, student's shorthand passages were collected along with the typewritten transcripts.

Though shorthand speed is obviously necessary and important in the secretary's life, Heard (1960) has noted that speed without attention to the accuracy and quality of one's shorthand notes, can be dangerous. He noted too that the better and accurate one's shorthand writing, the swifter and more accurate will be one's shorthand reading.

This speed of 80 words a minute for three minutes was considered more adequate for this study as Canning (1979) supported that, the ability to write a complete readable shorthand note of a period of at least three minutes at 80 word a minute or above, was adequate enough to test transcription skill.

The 40 minutes transcription period was allocated as it is a set standard in the syllabus issued by the National Board for Technical Education (NBTE), which is the controlling body set up to coordinate and regulate the quality of programmes of all government recognised Polytechnics and Colleges of Technology in the country.

A week later, the written shorthand passage of 80 words a minute was returned to the students for transcription. This time the transcription was referred to as transcribing from cold notes. The same time limit of 40 minutes was allowed for the students to transcribe their earlier written shorthand outlines.

This typewritten transcription from the cold notes was collected, and a comparison was then made between the accuracy of the first and second transcripts after scoring them accordingly.

3.5 Test Mechanics/Statistical Instrument for Analysis

This study was aimed at evaluating the effect of deferred transcription upon students' achievement in shorthand dictation.

The Chi Square Test was applied in the course of the statistical operation necessary for analysis of all tabulated data. The chi square test was applied to compare the student achievement in the non-deferred dictation transcription as compared with one week deferred transcription of shorthand outlines, i.e. from cold notes. Simple averages and percentages were also used to analyse any changes occurring in simple totals.

The chi square test was used to determine whether the observed frequencies differ significantly from the expected under the proposed null hypotheses. A chi square test is a test which uses nominal data (frequencies) comparing observed frequencies against or with some theoretical or expected frequencies. Harper (1971) puts it this way, the X^2 distribution is a statistical distribution that can be used to test if an observed series of values differs significantly from what was expected.

The chi square (X^2) test applies only to discrete data, counted rather than measured values. Best (1977) puts it this way "the test is a test of independence, the idea that one variable is not affected by, or related to, another variable. The X^2 is not a measure of the degree of relationship. Best (1977) went on to oexplain that it is merely used to estimate the likelihood that some factor other than chance (sampling error) accounts for the apparent relationship. Since the null hypothesis states that there is no relationship (the variables are independent), the test merely evaluates the probability that the observed relationship results from chance.

Explaining further, Best (1977) stated that the computed X^2 value must equal or exceed the appropriate X^2 table critical value to justify rejection of the null hypothesis or the assumption of independence at the 0.05 or the 0.01 level of significance. Therefore the chi square test is going to compare the observed on expected frequencies and to see whether it is large enough to say it is not just happening by chance. If it is happening by chance it means it is small and it is purely a sampling error. If it is great it becomes a systematic error.

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In this regard, the formula for the computation of the chi square in 2 x 2 contingency tables used is as shown in Appendix C.

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The fromula, according to Sedney Siegel (1956) is appropriate when applying the chi square test to data in a 2 x 2 contingency table, i.e. where both row (r) and column (k) equal to 2. Consequently, with a resulting degree of freedom of 1 (df = 1). This formula according to him, has the additional advantage of incorporating a correction for continuity which markedly improves the approximation of the computed chi square distribution.

Quoting King (1969), Aliyu (1984) also recommended the use of the above formula in a 2 x 2 table. He argued that since the correction incorporated in the formula will always reduce the size of the chi square, its use lessens the risk of X values being counted as significant when they are not significant.

Therefore, if under the stated null hypotheses in this study, the computed values of chi square at the chosen level of significance are greater than the critical values of chi square at the corresponding level of significance, it could be concluded that the observed frequencies differ significantly from the expected frequencies and would therefore, reject the null hypothesis.

However, if the computed values of the chi square are less than the critical values at the chosen level of significance, it could be concluded that the differences between the observed and the expected frequencies are not significant.

Hence the researcher will accept the null hypothesis. However, in order to draw any inference concerning whether or not an obtained chi square value differs significantly the table showing the sampling distribution of chi square has been referred to accordingly (Appendix D Table of a copy of X^2).

3.6 Level of Significance

As a basis for either accepting or rejecting the hypothesis, 0.05 level of significance was chosen so as to minimize errors of decision even before the samples were drawn.

The decision to reject any of the hypotheses under this level of significance means that the researcher could be wrong with a probability of 0.05. Best (1977) supporting this said in psychological and educational circles the 5 per cent (.05) alpha level of significance is often used as a standard for rejection . . . this suggests a 95 per cent probability that the difference was due to the experimental treatment rather than to sampling error.

3.7 Scoring Technique

Students shorthand outlines were taken and the accuracy of the written outlines were marked. The non-deferred shorthand transcription was marked by circling, putting omission signs, underlying incorrect English grammar, spelling and tenses and omission of punctuation signs. This was also done for the deferred transcription.

The total of each group of errors found in the non-deferred shorthand transcription were compared with those found in the deferred transcription for the appropriate statistical test analysis.

A summary of the following totals was recorded separately from both transcriptions.

1. The total outlines written;
2. Outlines written correctly;
3. Correct outlines written correctly;
4. Correct outlines transcribed correctly;
5. Correct outlines transcribed incorrectly;
6. Outlines written incorrectly;
7. Incorrect outlines transcribed correctly;
8. Incorrect outlines transcribed incorrectly;
9. Outlines omitted.

Chapter 4

ANALYSIS AND PRESENTATION OF DATA

4.1 Pilot Study

Data colllected during the pilot study were recorded; these were the answers to the questions in Appedix I.

1. Of the respondents interviewed (100%) said they do not undertake any special course in shorthand transcription for their students.
2. All the shorthand teachers concerned said that they only accept typewritten transcription from their students.
3. One hundred percent response was recorded on the fact that the students transcribe hot and not cold notes.
4. Four of the teachers, representing 80% of the respondents, accepted they have never encouraged deferred transcription. However, one of the respondents, representing 20%, said he tried it before with the previous set of ND II students and was not encouraged by their performance. He said, they exhibited some sign of discomfort in transcribing cold notes. He therefore,did not bother to introduce it with the present set (1986/87). He argued that the students said after all they did not

need it in their examination and that it was not the practice in offices. The teacher said that he was further discouraged to continue drilling the students in the transcription of deferred notes because there was no provision for it in the time table and examination.

5. Common answers were given as reasons for the non-achievement of transcription of hot or cold notes by the students. These reasons were:-

   (a) Lack of typing skills and following set typing instructions and rules.

   (b) Poor English grammar.

   (c) Carelessness and making of mistakes as a result of lack of proof-reading of typed notes for possible corrections.

6. All the respondents (100%) answered that they did not have a shorthand laboratory where transcription exercise is done.

4.2. The Research

After grading the shorthand outlines and transcripts of the 56 students, the following data were obtained concerning the shorthand notes and the non-deferred transcription from those notes. (See appendix E for complete table).

Total outlines written	11,296
Outlines written correctly	9,642
Correct outlines transcribed correctly	9,527
Correct outlines transcribed encorrectly	115
Outlines written incorrectly	1,654
Incorrect outlines transcribed correctly	461
Incorrect outlines transcribed incorrectly	1,193
Omitted outlines	2,144

In drawing parallel conclusions between achievement of ND II students taking dictation at 80 words per minute for three minutes, one can make the following statements concerning the students' non-deferred transcription:

1. A total of 13,440 outlines were written for the period of three minutes representing 100 percent of the test material.
2. A total of 11,296 outlines were written representing 84.05 percent.
3. Of the total outlines written, 9,642 (85.36%) were correctly written and 14.64 percent were incorrectly written, representing a total of 1,654 outlines.
4. The shorthand transcription error rate (which excludes errors in spelling, punctuation, and grammar) was 1.19 percent resulting from 115 correct outlines transcribed incorrectly.

5. Of the outlines written correctly 9,527 were correctly transcribed representing 98.81 percent.
6. Incorrect outlines transcribed correctly were 461, representing 4.08 percent.
7. Incorrect outlines transcribed incorrectly were 1,193, representing 10.56 percent.
8. There were 2,144 outlines not written and were therefore considered omitted and were not transcribed. This represented 15.95 percent of the total outlines dictated in the test passage.
9. Non-shorthand transcription error (an error in spelling, punctuation or grammar) was computed (see appendix G) and 755 errors were found on the non-deferred transcription thereby representing 7.92 percent of the correct outlines transcribed correctly.
10. Shorthand transcription errors, including typographical errors, were 115 representing 1.21 percent of the correctly written outlines transcribed correctly.

Each student transcribed his shorthand notes again one week after the day of the original dictation. The transcription of these "cold notes" was then analysed in terms of errors committed from correctly and incorrectly written shorthand outlines.

The distribution of errors on the deferred transcription was as follows: (Appendix F)

Total outlines written	11,296
Outlines written correctly	9,642
Correct outlines transcribed correctly	6,938
Correct outlines transcribed incorrect	2,704
Outlines written incorrectly	1,654
Incorrect outlines transcribed correctly	189
Incorrect outlines transcribed incorrectly	1,478
Omitted outlines	2,144

Based upon the students achievement on the deferred transcription, the following statements can be made:

1. The percentage of incorrectly written shorthand outlines that were also transcribed incorrectly increased from 72.13 percent of non-deferred transcription to 88.57 percent of deferred transcription.
2. The percentage of correctly written shorthand outlines that were transcribed incorrectly increased from 1.19 percent of non-deferred transcription to 28.15 percent of deferred transcription, resulting from 2,704 correct outlines transcribed incorrectly.
3. Of the 9,642 outlines written correctly, 6,938 outlines were correctly transcribed, representing 71.96 percent. This shows a decrease of 26.85 percent when compared with the non-deferred transcription.

4 Incorrect outlines transcribed correctly were 189, representing 71.43 percent of the incorrect outlines written.

5. Incorrect outlines transcribed correctly were 1,465 representing 88.57 percent of the outlines written incorrectly.

6. Outlines that were not transcribed were 2,110, representing 18.68 percent of the total outlines written.

7. Non-shorthand transcription error was computed (see appendix G) and 788 errors were found on the deferred transcription representing 11.36 percent of the correct outlines transcribed correctly.

8. Shorthand transcription errors, including typpographical errors, were 2,704 representing 28.48 percent of the correctly written transcribed correctly. This shows a 27.28 percent increase

Table 4.1 below presents the analysis of the errors committed on the two transcripts.

Shorthand transcription errors amounted to 2,829 in the two transcriptions, 115 occuring in the non-deferred transcription representing 4.07 percent while 2,704 occurred from the deferred transcription. This represented 95.93 percent of the total shorthand errors committed. The average number of shorthand transcription errors increased from 115 in the first transcription to 2,704 on the second with a difference of 91.86 percent errors omitted.

The non-shorthand errors committed in the non-deferred transcription were 755 representing 48.80 percent of the total of 1,547 errors; while 792 errors were committed on the deferred transcription representing 51.20 percent. This shows a difference of 2.40 percent between non-deferred and deferred transcription. This can simply be explained that students committed non-shorthand transcription errors only 2.40 percent times more on the non-deferred transcription. While the difference of 91.86 percent shorthand errors signified that students committed more typographical errors when notes were deferred for one week.

This looks alarming and uncomfortable and further suggest that notes do become 'cold' and cannot be read and transcribed as accurate as a week after the original dictation.

Table 4.1: Average Number of Shorthand and Non-shorthand errors Committed on Two Transcriptions of Identical Shorthand Notes.

Dictation Interval	Shorthand Transcription Errors		Dictation Interval	Non-Shorthand Transcription Errors	
	First	Second		First	Second
First Minute	38	901	First Minute	265	285
Second Minute	36	890	Second Minute	205	245
Third Minute	41	913	Third Minute	285	262
Total Errors	115	2,704	Total Errors	755	792

Using the formula given for the chi square test (appendix C) the test was conducted as shown below to test the hypotheses that stated that:-

1. There is no significant difference in student achievement when student transcribes shorthand dictation prior to a week later i.e. correctly written shorthand outlines do not affect students achievement in deferred transcription.

Table 4.2: Chi Square calculation to determine if correctly written shorthand outlines do affect students achievement in deferred transcription.

	Non-deferred	Deferred	
Correct outlines transcribed correctly	9,527	6,938	(16,465
Correct outlines transcribed incorrectly	115	2,704	(2,819)
	(9,642)	(9,642)	

$$X^2 = \frac{56[(9527 \times 2704) - (6938 \times 115)]^2}{(9527 + 6938)(115 + 2704)(9527 + 115)(6938 + 2704)}$$

$$= \frac{56\ (6.23158 \times 10^{14})}{4.3151 \times 10^{15}}$$

$$= \underline{8.06}$$

$\therefore$ X^2 (calculated) = 8.06

X^2 (critical) = 3.84

The computed X value must equal or exceed the appropriate X^2 table critical value to justify rejection of the null hypothesis or the assumption of independence at the 0.05 level of significance.

That is to say that the computed X^2 value of 8.06 is greater than the X^2 critical value of 3.84. Therefore, the null hypothesis is rejected to uphold that correctly written shorthand outlines do affect student achievement in deferred transcription of shorthand dictation.

The test indicates that there is a significant relationship between student achievement in the transcription of shorthand dictation on-the-hour prior to a week later.

2. There is no significant difference between the inability of the student to transcribe incorrect written shorthand outlines in deferred transcription as compared with non-deferred transcription of shorthand dictation.

Table 4.3: Chi Square calculation to show if there is significant difference between the inability of the student to transcribe incorrect written shorthand outlines in deferred shorthand dictation.

	Non-deferred	Deferred	
Incorrect outlines transcribed correctly	461	189	(650)
Incorrect outlines transcribed incorrectly	1,193	1.465	(2.658)
	(1,654)	(4.312)	

$$X^2 = \frac{56[(461 \times 1465) - (189 \times 1193)]^2}{(461 + 189)\,(1193 + 1465)\,(461 + 1193)\,(189 + 1465)}$$

$$X^2 = \frac{1.13343 \times 10^{13}}{4.72649 \times 10^{12}}$$

$$X^2 = \underline{2.40}$$

$\therefore$ X^2 (calculated) = 2.40

X^2 (critical) = 3.84

The X^2 calculated value is less than the X^2 critical value This is, therefore, accepting the null hypothesis and upholding that there is no significant difference between the inability of the student to transcribe incorrect written shorthand outlines on deferred transcription as compared with on-the-hour transcription of shorthand dictation.

In other words, incorrectly written shorthand outlines are bound to be transcribed incorrectly from "hot" or "cold" notes.

3. Accuracy of the shorthand transcript and accuracy of the shorthand notes are independent of each other.

Table 4.4: Chi Square calculation to show if the accuracy of shorthand notes are independent of each other.

	Non-deferred	Deferred	
Outlines written correctly	9,642	9,642	(19,284)
Correct outlines transcribed correctly	9,527	6,938	(16,465)
	(19,169)	(16,380)	

$$X^2 = \frac{56[(9642 \times 6938) - (9642 \times 9527)]^2}{(9642 + 9642)\ (9527 + 6938)\ (9642 + 9527)\ (9642 + 6938)}$$

$$X^2 = \frac{3.48968 \times 10^{16}}{1.00912 \times 10^{17}}$$

$$X^2 = \underline{0.35}$$

$\therefore$ X^2 (calculated) = 0.35

X^2 (critital) = 3.84

This shows that the X^2 calculated value (0.35) is less than the X^2 critical value (3.84). Therefore we cannot reject, but accept the null hypothesis that states that accuracy of the shorthand transcript and accuracy of the shorthand notes are independent of each other. This concluded that the accuracy of the shorthand transcript is not associated with accuracy of the shorthand notes in deferred shorthand transcription.

4. English knowledge and typing errors do not affect students' achievement in non-deferred transcription as compared with deferred, in shorthand dictation; i.e. non-shorthand transcription errors and shorthand transcription errors do not affect achievement in deferred shorthand dictation transcription.

Table 4.5 Chi square calculation to show if non-shorthand transcription errors and shorthand transcription errors do affect achievement in deferred transcription.

	Non-deferred	Deferred	
Non-shorthand transcription errors	755	792	(1,547)
Shorthand transcription errors	115	2,704	(2,819)
	(870)	(3,496)	

$$X^2 = \frac{56[(755 \times 2704) - (792 \times 115)]^2}{(755 + 792)\ (115 + 2704)\ (755 + 115)\ (792 + 2704)}$$

$$X^2 = \frac{2.13264 \times 10^{14}}{1.3264 \times 10^{13}}$$

$$X^2 = \underline{16.06}$$

$\therefore$ X^2 (calculated) = 16.06

X^2 (critical) = 3.84

The computed X^2 value above (16.06) is greater than the X^2 critical value (3.84). This means that the null hypothesis is rejected. It therefore stands that non-shorthand transcription errors do affect achievement in deferred transcription of shorthand dictation. It also means that there is a reliable association between students' poor English, spellings, punctuation and typing errors in non-deferred transcription as compared with deferred shorthand dictation in achievement.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This thesis was to analyse the effect of deferred transcription upon students' achievement in shorthand dictation. The researcher was particularly interested in finding out if factors such as correctness of shorthand outlines; correct spellings of words; grammatical correctness of tenses; typographical errors; proper and neat erasing, affect the students' achievement in shorthand transcription of deferred dictated notes.

The study revealed some significant results.

5.1 Principal Findings and Conclusions

The following principal findings and conclusions were revealed from the study.

(a) The null hypothesis stating that there is no significant difference in student achievement when students transcribe shorthand dictation prior to a week later was rejected at the 0.05 level of significance. It therefore, revealed that students inability to achieve in the transcription of deferred shorthand dictation is as a result of their incorrectly written shorthand outlines can be transcribed correctly even a week after writing them.

(b) The null hypothesis which stated that there is no significant difference between the inability of the student to transcribe incorrect written shorthand outlines in deferred transcription as compared with non-deferred transcription of shorthand dictation was accepted at the 0.05 level of significant. It can be concluded that students will not be able to transcribe and achieve in deferred transcription with incorrectly written shorthand outlines as in non-deferred.

(c) The null hypothesis stating that accuracy of the shorthand notes and transcripts are independent of each other was also accepted. This too, was accepted at the significant level of 0.05. This means that the correctness of the shorthand transcript did not depend on the correctness of the shorthand notes in deferred transcription. Though the statistical analyses above is correct and interpreted same, the researcher was surprised of this result, as the researcher assumed that if you write correct shorthand outlines, you are likely to achieve better in transcription, vis-a-vis the accuracy of your transcript should depend significantly on the accuracy of your shorthand notes in deferred transcription. The researcher however

upholding the findings of the study in this respect to be true as other factors such as non-shorthand errors etc., could attribute to the non-achievement.

(d) The null hypotheses which stated that students' English knowledge, and typing errors do not affect achievement in non-deferred transcription as compared with deferred in shorthand dictation i.e. non-shorthand transcription errors, and shorthand transcription errors do not affect achievement in deferred shorthand dictation was rejected. It can be concluded that, the students' English knowledge, and typing errors actually affected achievement in deferred transcription of shorthand dictation. In other words there was evidence to show that shorthand errors made significant differences between students' achievement in non-deferred transcription and deferred transcription of shorthand dictation. In the marked passage it showed that students still had problems of correct sentence composition - e.g. "we need someone who is not only full competence"; "can act for her boss in his absent" "I have know her for four year"; "has been keeping me inform__"; etc.

Overtyping without taking pains to erase neatly as acceptable for mailabilty was ignored. Some students actually erased poorly. This seem to suggest that they have not received good instruction on what constitutes mailability.

(e) The researcher found that students who tended to formulate their own shorthand outlines instead of the commonly acceptable phrases and dictionary-correct outlines had them more wrongly transcribed in deferred transcription than in non-deferred. This too, could be attributed to the effect of memory. Specifically, most students wrote the outline for "reference" wrongly. They transcribed it correctly in the first transcription but transcribed "refers" in the second transcription.

(f) Time duration played an important role in achievement of transcription. This showed that students who were deficient in typing speed could not achieve. Such students were unable to complete their transcription within the set 40 minutes transcription time. The few outlines transcribed, however, were very accurate. This was not statistically computed to state and relate its significance.

(g) As seen from the students' notes and transcripts, the local Nigerian names of Bola and Wayas were either wrongly written or transcribed or both. The common Yoruba name "Bola" was often spelt "Bolla". The popular name of some the ex-political leaders in the second republic, such as Joseph Wayas of Benue State was wrongly written, (though with a correct shorthand outline for ('wire') and transcribed in most cases as "wires".

5.3 Recommendations

Based on the findings of this study, the following recommendations are made available to institutions which train secretaries.

1. Shorthand teachers in all Secretarial Training Institutions have an awesome task of turning out their students to be great achievers in both the transcription of "cold" or "hot" notes. It is suggested that teachers of shorthand should help their students learn the theory of the shorthand system; develop dictation/recording speed; learn and/or review punctuation; spelling and rules for typing style; integrate and apply shorthand, typing and language arts skills. This will aid the development of basic typewritten transcription for the production of usable business communication.

2. For students to achieve more meaningfully in transcription of either "hot" or "cold" notes, during the first six weeks of beginning shorthand, major emphasis should be placed upon the development of reading skills.

Research shows that students who can read shorthand fluently will be better able to take dictation and transcribe. Reading as from beginning shorthand to the advanced stage should be greatly emphasised. To develop rapidly reading, have students read from the shorthand passages in their textbooks and later from their homework notes. If possible, time the number of minutes read, and record steady improvement.

The rationale for this suggestion is based upon the trend toward early typewritten transcription.

If typewriters are available in the shorthand classroom, the teacher can develop more readily students' transcription skills and shorthand notes reading skills.

To this extend it is strongly recommend that every school that offers shorthand curriculum and trains secretaries should have well equipped shorthand laboratories with sufficient functional typewriters to teach transcription as a separate skill alongside speed development.

3. Shorthand instructors in secretarial departments should stress theory in beginning shorthand as this research study has proved that shorthand outlines that are accurately written (dictionary correct) are more likely to be accurately transcribed. This procedure is comparable to the adage that says "bend the stick when it is still fresh to your desired shape."

   It is equally highly recommended that for more accurate and readable shorthand passages, be they deferred or non-deferred, accurate teaching of theory outlines be enforced in all schools learning shorthand regardless to level of advancement. To this effect teachers should work with theory development and the correct writing of outlines in all semesters of shorthand learning.

4. As revealed from the literature review, proofreading should be considered as an essential skill towards the achievement of accurate shorthand transcription both in deferred and non-deferred. To this effect regular assignments in proofreading should be given a place in classroom activities. These exercises will aid the students in detecting their own, or someone else's errors.

5. From the pilot study, it was found that transcription must actually be taught - not just left to happen! moreso, since transcription of a quality document is the final goal of a study of shorthand.
6. The language arts knowledges and skills that must be mastered if students are to produce mailable work are inherently related to punctuation rules, grammar rules, confusing words, spelling, number rules, word division rules, capitalization rules, proofreading ability. It is highly recommended that the shorthand teacher should not plan to teach every rule of punctuation, grammar, number, etc., but should emphasize the most frequently used and abused language arts items by students. Selection of appropriate confusing words to teach intentionally (such as affect-effect) should be based on the frequency of occurrence of these words in relation to their abuse. Likewise, students should be expected to master certain frequently occurring words that are often misspelled and should be taught to use the dictionary for reference purposes, for all other words that potentially might be misspelled.
7. The literature review shows that there is need to recommend that shorthand teachers, should teach the non-shorthand knowledges and skills intentionally and inten- sively.

Shorthand teachers should not only rely upon existing foreign textbook materials. Incoporate Nigerian names and towns in the dictation passages This will furnish an adequate exposure to the non-shorthand knowledges and skills that are so critical for achieving the ultimate goal in shorthand/transcription.

8. From the literature review it is suggested that shorthand teachers should give heavy doses of pressure to produce quality work under timed conditions. If transcription proficiency of either deferred or non-deferred notes is depicted correctly, two ingredients are essential - the ability to produce quality work and the time required to produce the work. The teacher should emphasize production of quality job considering the time factor of transcription.

9. Further research work is still greatly needed in the development of secretarial education in Nigeria. It is hoped that additional studies relating to teaching methodologies be conducted which may help teachers in improving students' performance and achievement in the learning of the secretatial career.

BIBLIOGRAPHY

Aliyu, M. (1984). An Evaluation of the Perception and performance of Instructional Leadership by Principals of Post-Primary Schools in Sokoto State. Unpublished M. Ed (Educational Administration and Planning) Thesis. Ahmadu Bello University, Zaria, Nigeria. pp.74 - 75

Anonymous (1980). Chief Examiner's Report (WAEC) In Shorthand, May/June Yaba, Lagos. p.2

Balsley, W. I. (1977). Production Transcription In: The Balance Sheet; South-Western Publishing Company Cicinnati, Ohio. Volume LVIII, No.5, February, p.205.

Best, W.J. (1977). Research in Education. Prentice Hall, Inc., Englewood Cliffs, New Jersey; 3rd Edition pp. 276 -290

Camp, S.C. (1979). Proof-reading - Teach it Systematically, In: Business Education World Magazine; Gregg/McGraw-Hill, In; U.S.A. Volume 60 No.1 September-October, pp. 26 - 27

Canning, B.W. (1979). Teaching Office Skills; Pitman Publishing Limited, 39 Parker Street, London. p.127.

_____ (1980). The Role of Reading Shorthand Learning; In: Office Skills, for the Business Studies Teacher; Pitman Periodicals, 39 Parker Street, London, September, p. 4.

_____ (1981). Learning from the Shorthand Examiners, In Office Skills for the Business Studies Teacher; Pitman Periodicals Ltd., 39 Parker Street, London, July pp.13 - 15.

Crank, D.H. (1979). Suggested Strategies for Teaching of Shorthand - Developing Shorthand Theory and Reading Skills (part 1); In: Business Education World Magazine Gregg/McGraw-Hill Inc.; U.S.A.: Volume 60/No.1. September - October, pp 3 - 4.

Danneman, J. (1960). On Reading: The road to Shorthand Skill. Business Eduication World Journal; January, Volume 40, No.5. p.26.

Driska, R.S. (1972). On Shorthand and Transcription: Suggestions for maintaining student Interest in Shorthand. Business Education Forum, Official Journal of the National Business Education Association; Educational Press Association of America, Washington, Vol. 20, No.3, December, pp. 19/25.

Flood, F.H. (1965). On How Wrong can Shorthand Outline be and Still Be All Right?: Business Education Forum; National Business Education Association Journal. Educational Press of America, Washington. Vol.20, No.3 December, pp.19/25.

Gartside, L. (1970). Teaching Business Subjects: The Modern Approach. Macdonald and Evans Ltd. London. W.C.I., pp. 146 - 149.

Grinstead, E. (1967). Shorthand and Transcription; Lesson Planning with a purpose. In: Business EducationForum. Published by the National Business Education Association, A Department of the National Education Association (N.E.A.) Centre. N.W. Washington, D.C. pp.17 - 18.

Hampton, F.D. (1976). In: Business Education, Yesterday, Today and Tomorrow. N.B.E.A. Year book No.14 Published by National Business Education Association, Reston, Virginia. pp. 202 -206.

Harper, W.M. (1971). Statistics; The M.& E. Handbook series, second edition, MacDonald & Evans Ltd 8 John Street, London W.C.I. pp. 174.

Heard, W.G. (1960). Gregg Transcription Practice Gregg Division, McGraw-Hill Publishing Company Limited. New York, London Toroto pp iii -vi.

Katsina Polytechnic. 1985/86 Informatioin Handbook, Volume 3.

Mallim, S.S. (1982). An Analysis of Student's Shorthand Notes and their Transcripts to Determine Common Areas of weakness in Pitman Shorthand. p. 4. Unpulished B.B. Ed. Project, A.B.U. Zaria, Nigeria.

Nolan, C.A, Hayda, C.K, and Malsbary D.L; (1967). Principles and Problems of Business Education: South-Western Publishing Company, Cincinati, Chicago. p.229.

Pitmam, I. (1978). New Course; New Era Edition, Pitman Publishing Limited, 39 Parker Street, London. pp. iii - viii.

Popham, L.S.; Schrag, F.A. and Blockhus, W.; (1965); A Teaching Learning System for Business Education; New York: McGraw-Hill Inc. pp.185 - 217.

Pullis, M.J. (1978). The Nebulous World of Shorthand Standards; In: The Balance Sheet; South-Western Publishing Company Cincinnatti, Ohio. vol. LVIX, No. 6, March p.251.

Rowe, J.C. (1960). On the Four Arts of Shorthand Teaching: The Art of Testing; Business Education World; Journal, January vol.40 No. 5. p. 29.

Rudnitsky, A. (1978). On: A successful Formula for Teaching and Learning Shorthand Transcription. The Balance Sheet; South-Western Publishing Company, Volume LVIX, No. 5, p.210.

Russon, A.R. (1968). Methods of Teaching Shorthand; No. 119, South-Western Publishing Company, Cincinnati, Ohio, April, pp. 4, 10 and 34.

Schloemer, C. (1965). Approach to Teaching Beginning Shorthand. In: The Balance Sheet; Volume XLVI, No.7 March; A Magazine on Business and Economic Education - South-Westen Publishing Co., 5101, Madison Road Cincinnati, Ohio. pp.299-332.

Siegel, S. (1956). Non Parametric Statistics for the Behavioural Sciences. Tokyo, Japan, McGraw-Hill; pp.107.

Stoddard, T.D. (1981). On: Transcription:- The Over-looked Dimension of Shorthand. Business Education Forum: Official Journal of the National Business Education Association, Vol.35, No.4 January, Stenograph Corporation Center Road, Skokie, pp. 9 - 12.

The Federal Polytechnic, 1985/86 Propectus, Kaura Namoda. Office of the Registrar.

Tonne, H.A., Pophan, E.C., and Freeman, M.H. (1965). Methods of Teaching Business Subjects. 3rd Ed. (New York: McGraw-Hill Inc. pp.222.

Trabue, E.J. (1938). Is the Commercial Department Selling Its Products? In: Dexter, W.F., An Adequate Business Education. The Business Education World; The Gregg Publishing Company, New York Chicago. p.783.

Turse, P.L. (1938). On Problems of Shorthand Prognosis: The Journal of Business education. Trethaway Publishing Co.,New York: McGraw-Hill Inc. P.17.

Wanous, S.J. (1942). Effective Transcription Procedures; South-Western Publishing Company, New York. p.5.

Whitehead, G. (1979). Secretarial Practice Made Simple: The English Language Book Society and W.H. Allen Longman. London pp. 48-49.

APPENDIX A

WARM-UP PASSAGE

90 WORDS PER MINUTE x 2 MINUTES

When we were born our parents took care of us. They fed, clothed and sheltered us, in fact the basic necessities of / life needed by us were completely made available by them.

When we attained the age of schooling - six or seven years of / age - they made sure we were sent to one and usually the best around. And there, the journey towards what we wished to / become started.

At school we ran into the wonderful hands of our second parents - Teachers. Our teachers taught and gave us useful // pieces of advise that could make us great people in the future.

Later in School we were asked to say what profession we / would want to take up in adult life. The Career Master wanted us to choose our type of profession for the future. /

Here the choice of a career began. Some of us do not actually know the implication. We chose one career or the / other because of our interaction with people already in such professions or because we read about such professions or have heard elders // talked about certain people in relation to their profession.

(S.I. 1.4)

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(S.I. 1.4)

APPENDIX B

MAIN PASSAGE FOR TRANSCRIPTION

80 WORDS A MINUTE x 3 MINUTES

LETTER OF RECOMMENDATION

Dear Mallam Aminu,

Your letter of 10th June in respect of a reference for Miss Bola Wayas was of great / interest to me. Your letter reads in parts: "Our company is a fast growing concern and we need someone who / is not only fully competent in her work, but can act for her boss in his absence".

It is with / pleasure and confidence that I support Miss Bola Wayas's application for appointment as a secretary in your organization. I have // known her for four years as a secretary in my department and can speak highly on both of her character / and of her natural ability. Miss Wayas has been keeping me informed about her move in seeking a new employment / for quite sometime now.

After receiving her training in Secretarial Administration at Katsina Polytechnic she actively served our organization as / Secretary for four years. This in many ways brought her into contact with the practical work of a secretary. She // actually proved her competence with great initiative.

Miss Wayas is conscientious and reliable. She is good natured, even-tempered, very / sensible and level-headed. In my opinion she would fit well into the social life of any organization - yours / particularly - and could be trusted to carry out her duties efficiently, cheerfully and in a true spirit required in the secretarial / field.

I strongly recommend that you consider the application of Miss Wayas for the post of Secretary.

Yours faithfully,

(S.I. 1.4)

APPENDIX C

Formula for the Chi Square used

$$X^2 = \frac{N(AD - BC)^2}{(A + B)\ (C + D)\ (A + C)\ (B + D)}$$

APPENDIX D

PERCENTAGE POINTS OF THE CHI (X^2) SQUARE DISTRIBUTION.

df p	.10	.05	.025	.02	.01	.005	.001
v							
1	2.706	3.841	5.024	5.412	6.635	7.879	10.827
2	4.605	5.991	7.378	7.824	9.210	10.597	13.815
3	6.251	7.815	9.348	9.837	11.345	12.838	16.268
4	7.779	9.488	11.143	11.668	13.277	14.860	18.465
5	9.236	11.070	12.832	13.388	15.086	16.750	20.517
6	10.645	12.592	14.449	15.033	16.812	18.475	22.457
7	12.017	14.067	16.013	16.622	18.475	20.278	24.322
8	13.362	15.507	17.535	18.168	20.090	21.955	26.125
9	14.684	16.919	19.023	19.679	21.666	23.589	27.877
10	15.987	18.307	20.483	21.161	23.209	25.188	29.588
11	17.275	19.675	21.920	22.618	24.725	26.757	31.264
12	18.549	21.026	23.337	24.054	26.217	28.300	32.909
13	19.812	22.362	24.736	25.472	27.688	29.819	34.528
14	21.064	23.685	26.119	26.873	29.141	31.319	36.123
15	22.307	24.996	27.488	28.259	30.578	32.801	37.697
16	23.542	26.296	28.845	29.633	32.000	34.267	39.252
17	24.769	27.587	30.919	30.995	33.409	35.718	40.790
18	25.989	28.869	31.526	32.346	34.805	37.156	42.312
19	27.204	30.144	32.852	33.687	36.191	38.582	43.820
20	28.412	31.410	34.170	35.020	37.566	39.997	45.315
21	29.615	32.671	35.479	36.343	38.932	41.401	46.797
22	30.813	33.924	36.781	37.659	40.289	42.796	48.268
23	32.007	35.172	38.076	38.968	41.638	44.181	49.728
24	33.196	36.415	39.364	40.270	42.980	45.558	51.179
25	34.382	37.652	40.646	41.566	44.314	46.928	52.620
26	35.563	38.885	41.923	42.856	45.642	48.290	54.052
27	36.714	40.113	43.194	44.140	46.963	49.645	55.476
28	37.916	41.337	44.461	45.419	48.278	50.993	56.893
29	39.087	42.557	45.722	46.693	49.588	52.336	58.302
30	40.257	43.773	46.979	47.962	50.892	53.672	59.703

Addapted from Siegel (1956).

APPENDIX E

Breakdown of Students' Achievement on Non-deferred Transcription

S/No.	Students Code No.	Total Outlines Written	Outlines Written Correctly	Correct Outlines Transcribed correctly	Correct Outlines Transcribed Incorrectly	Outlines Written Incorrectly	Incorrect Outline Transcribed correctly	Incorrect Outlines Transcribed Incorrectly	Outlines Omitted
1	AA	239	215	215	-	24	8	16	1
2	AB	238	221	221	-	17	7	10	4
3	AC	237	214	214	-	23	22	01	3
4	AD	238	214	214	-	24	01	02	2
5	AE	234	184	184	-	50	4	46	6
6	AF	233	193	193	-	40	14	26	7
7	AG	210	188	164	24	22	10	12	30

Breakdown of Students' Achievement on Non-deferred Transcription

8	AH	238	223	223	-	15	4	09	2
9	IA	235	211	211	-	24	22	11	5
10	AJ	218	190	186	4	28	22	6	22
11	AK	233	193	191	2	40	38	2	7
12	AL	214	164	163	1	50	48	2	26
13	AM	230	222	218	4	8	4	4	10
14	AN	234	209	209	0	25	25	0	0
15	AO	170	141	141	0	29	1	28	70
16	AP	210	167	165	2	45	41	4	30
17	AQ	226	220	216	4	6	0	6	4
18	AR	239	231	231	0	8	8	0	1
19	AS	195	135	130	5	60	31	29	60
20	AT	166	149	149	0	17	4	13	74
21	AU	192	146	146	0	46	22	24	48
22	AV	234	203	203	0	31	11	20	06
23	AW	227	180	170	10	47	12	35	13
24	AX	210	191	188	3	19	6	11	30
29	BC	235	226	226	0	9	5	4	5

APPENDIX E CONT'D.

Breakdown of Students' Achievement on Non-deferred Transcription

25	AY	194	175	170	5	19	5	14	46
26	AZ	236	225	220	5	11	6	5	4
27	BA	232	205	199	6	27	6	21	8
28	BB	240	230	230	0	10	5	5	10
30	BD	234	222	222	0	12	0	12	6
31	BE	235	215	211	4	20	0	20	5
32	BF	120	99	91	8	21	0	21	120
33	BG	235	214	214	0	21	6	19	5
34	BH	175	136	136	0	39	0	39	65
35	BI	179	156	156	0	23	0	23	61
36	BJ	234	224	224	0	10	0	10	6
37	BK	135	97	97	0	38	6	32	105
38	BL	189	168	168	0	21	0	21	51
39	BM	189	157	157	0	32	8	24	51
40	BN	155	141	141	0	14	6	8	85
41	BO	179	129	121	8	50	0	50	61
47	BU	230	200	200	0	30	4	26	10
48	BV	168	137	137	0	31	0	31	72

APPENDIX E CONT'D.

Breakdown of Students' Achievement on Non-deferred Transcription

42	BP	228	194	194	0	34	0	34	12
43	BQ	88	53	53	0	35	0	35	148
44	BR	90	52	52	0	38	0	38	150
45	BS	206	179	179	0	27	5	22	34
46	BT	130	94	94	0	36	8	28	110
49	BW	145	96	94	2	49	0	49	95
50	BX	155	125	125	0	30	0	30	85
51	BY	190	99	99	0	91	0	91	50
52	BZ	229	196	192	4	33	6	27	11
53	CA	171	139	139	0	32	4	28	69
54	CB	90	45	35	10	45	0	45	150
55	CC	239	211	211	0	28	0	28	1
56	CD	239	199	195	4	40	5	35	1
	Total	11,296	9,642	9,527	115	1,654	461	1,193	2,144

APPENDIX F

Breakdown of Students' Achievement on Deferred Transcription.

S/NO.	Students Code NO.	Total Outlines Written	Outlines Written correctly	Correct Outlines Transcribed correctly	Correct Outlines Transcribed Incorrectly	Outlines Written Incorrectly	Incorrect Outlines Transcribed Correctly	Incorrect Outlines Transcribed Incorrectly	Outlines Omitted
1	AA	239	215	205	10	24	6	18	1
2	AB	239	221	213	8	17	3	15	4
3	AC	237	214	210	4	23	15	8	3
4	AD	238	214	200	14	24	0	24	2
5	AE	234	184	169	15	50	0	50	6
6	AF	233	193	181	12	40	10	30	7
7	AG	210	188	172	16	22	0	22	30
8	AH	238	223	208	15	15	1	14	2
9	AI	235	211	199	12	24	5	19	5

Breakdown of Students' Achievement on Deferred Transcription.

10	AJ	218	190	178	12	22	3	19	22
11	AK	233	193	171	22	40	11	29	7
12	AL	214	164	146	18	50	20	30	26
13	AM	230	222	112	110	8	0	8	10
14	AN	234	209	208	1	25	10	15	6
15	A0	170	141	121	20	29	0	29	70
16	AP	210	167	109	58	43	15	28	43
17	AQ	226	220	130	90	24	0	24	44
18	AR	239	231	229	2	8	4	4	1
19	AS	195	135	105	30	60	3	57	60
20	AT	166	149	103	46	17	0	17	74
21	AU	192	146	140	6	47	12	34	48
22	AV	234	203	188	15	31	4	27	6
23	AW	227	180	160	20	47	5	42	13
24	AX	210	191	90	101	19	3	16	30
25	AY	194	175	60	115	19	4	15	46

APPENDIX F CONT'D.

Breakdown of Students' Achievement on Deferred Transcription.

26	AZ	236	225	223	2	11	4	7	4
27	BA	232	205	125	10	27	4	23	8
28	BB	240	230	217	13	10	4	6	10
29	BC	235	226	218	8	9	4	5	5
30	BD	234	222	212	10	12	0	12	6
31	BE	235	215	200	15	20	0	20	5
32	BF	120	99	64	35	21	1	20	120
33	BG	235	214	195	19	21	3	18	5
34	BH	175	136	65	71	39	0	39	65
35	BI	179	156	50	106	23	0	23	61
36	BJ	234	224	200	24	10	0	10	6
37	BK	135	97	45	52	38	2	36	105
38	BL	189	168	80	88	21	0	21	51
39	BM	189	157	97	60	32	4	28	51
40	BN	155	141	60	81	14	4	10	85
41	BO	179	129	00	129	50	-	50	61

Breakdown of Students' Achievement on Deferred Transcription.

42	BP	228	194	00	194	34	0	34	12
43	BQ	80	53	30	23	35	0	35	148
44	BR	90	52	00	52	38	0	38	150
45	BS	206	179	00	179	27	0	27	34
46	BT	130	94	00	94	36	4	32	110
47	BU	230	200	98	102	30	4	28	10
48	BV	168	137	00	137	31	4	27	73
49	BW	145	96	32	64	49	0	49	95
50	BX	155	125	20	105	30	0	30	85
51	BY	190	99	43	56	91	0	91	50
52	BZ	229	196	153	43	33	0	33	11
53	CA	171	139	87	52	32	4	28	69
54	CB	90	45	38	7	45	4	41	150
55	CC	239	211	203	8	28	3	25	1
56	CD	239	199	106	93	40	2	38	1
	Total	11,296	9,642	6,938	2,704	1,654	189	1,465	2,144

APPENDIX G

Non-Shorthand Transcription Errors (An Error in Spelling, Punctuation Or Grammar).

S/No.	Code No.	Non-Deferred Transcription	Deferred Transcription
1.	AA	8	10
2.	AB	7	11
3.	AC	8	11
4.	AD	8	9
5.	AE	13	13
6.	AF	16	18
7.	AG	12	10
8.	AH	14	16
9.	AI	20	15
10.	AJ	18	15
11.	Ak	21	14
12.	AL	23	16
13.	AM	20	13
14.	AN	22	20
15.	AO	12	14
16.	AP	10	12
17.	AQ	17	20
18.	AR	4	2
19.	AS	15	15
20.	AT	18	14

Appendix G (Contd)

Non-Shorthand Transcription Errors (An Error in Spelling, Punctuation or Grammer).

21.	AU	14	18
22.	AV	9	13
23.	AW	23	34
24.	AX	15	14
25.	AY	10	12
26.	AZ	9	11
27.	BA	11	15
28.	BB	13	9
29.	BC	11	11
30.	BD	11	11
31.	BE	16	18
32.	BF	10	18
33.	BG	13	11
34.	BH	14	14
35.	BI	14	25
36.	BJ	18	16
37.	BK	12	9
38.	BL	14	16
39.	BM	14	15
40.	BN	7	9
41.	BO	17	10
42.	BP	13	8
43.	BQ	12	17
44.	BR	18	20
45.	BS	7	10

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Appendix G (Contd)

Non-Shorthand Transcription Errors (An Error in Spelling, Punctuation or Grammer).

46.	BT	15	22
47.	BU	13	17
48.	BV	8	20
49.	BW	15	19
50.	BX	16	12
51.	BY	18	14
52.	BZ	17	12
53.	CA	9	8
54.	CB	12	8
55.	CC	9	12
56.	CD	12	16
	Total	755	792

APPENDIX H

Shorthand Transcription Errors (Errors Excluding Errors in Spelling, Punctuation and Grammar, i.e. Non-Shorthand Transcription Errors).

S/No.	Code No.	Non-Deferred Transcription	Deferred Transcription
1.	AA	0	10
2.	AB	0	8
3.	AC	0	4
4.	AD	0	14
5.	AE	0	15
6.	AF	0	12
7.	AG	24	16
8.	AH	0	19
9.	AI	0	12
10.	AJ	4	12
11.	AK	2	22
12.	AL	1	18
13.	AM	4	110
14.	AN	0	1
15.	AO	0	20
16.	AP	2	58
17.	AQ	4	96

Appendix H (contd).

Shorthand Transcription Errors (Errors Excluding Errors in Spelling, Punctuation and Grammer, i.e. Non-Shorthand Transcription Errors).

18.	AR	0	2
19.	AS	5	30
20.	AT	0	46
21.	AU	0	6
22.	AV	0	19
23.	AW	10	20
24.	AX	3	101
25.	AY	5	115
26.	AZ	5	2
27.	BA	6	10
28.	BB	0	13
29.	BC	0	8
30.	BD	0	10
31.	BE	4	15
32.	BF	8	35
33.	BG	0	19
34.	BH	0	71
35.	BI	0	106
36.	BJ	0	24
37.	BK	0	52
38.	BL	0	88
39.	BM	0	60
40.	BN	0	81
41.	BO	8	129
42.	BP	0	194
43.	BQ	0	23
44.	BR	0	52

Appendix H (contd).

Shorthand Transcription Errors (Errors Excluding Errors in Spelling, Punctuation and Grammer, i.e. Non-Shorthand Transcription Errors).

45.	BS	0	179
46.	BT	0	94
47.	BU	0	102
48.	BV	0	137
49.	BW	2	64
50.	BX	0	105
51.	BY	0	52
52.	BZ	4	43
53.	CA	0	52
54.	CB	10	7
55.	CC	0	8
56.	CD	4	93
	Total	115	2,704

APPENDIX I

PILOT STUDY QUESTIONS

1. Do you teach any special course in shorthand transcription for your students?
2. Do your students transcribe dictated shorthand notes with the use of the typewriter or handwritten?
3. Do you drill your students in transcribing hot and cold notes?
4. Do you give homework assignments on cold notes?
5. What do you consider are the problems of your students in achieving both in non-deferred and deferred transcription of shorthand notes.
6. Do you have a shorthand laboratory?

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