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A Comparative Study of the Performance of Students in Gregg Shorthand, Diamond Jubilee Series, and Forkner Shorthand in the Seattle Public Schools

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A COMPARATIVE STUDY OF THE PERFORMANCE OF STUDENTS IN GREGG
SHORTHAND, DIAMOND JUBILEE SERIES, AND FORKNER SHORTHAND
IN THE SEATTLE PUBLIC SCHOOLS

A Thesis
Presented to
the Faculty of the School of Education
Central Washington State College

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Education

by
Pearl M. Ribling
July 1967

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TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM, THE SHORTHAND SYSTEMS USED,	
DEFINITIONS OF TERMS USED, AND PROCEDURES	1
The problem	1
Statement of the problem	1
Importance of the study	2
The shorthand systems used in this study	2
Forkner shorthand	2
Gregg shorthand, Diamond Jubilee Series	3
Comparison of Gregg and Forkner systems	4
Definitions of terms used	5
Delimitations of the study	9
Procedures	10
II. REVIEW OF THE LITERATURE	12
Literature relating to vocational competency	12
Literature relating to student achievement	14
Literature relating to error analyses	16
Literature relating to other factors	
affecting performance	17
Literature relating to comparison of	
shorthand systems	18
Literature relating to the method of research	22

CHAPTER	PAGE
III. ORGANIZATION OF MATERIALS AND TEST PROCEDURES . . .	25
Selecting the sample	26
Comparing test results	27
Test materials	30
Preparing and using the tapes	34
Administering the practice tests	34
Administering the tests	36
Scoring the tests	38
IV. INTERPRETATION OF DATA	41
Transcription Rates; Typing, Spelling, Punctuation, and Transcription Errors; Wrong Words and Words Omitted	41
Test at 60 wpm	41
Comparison--typing rate and transcription rate	45
Test at 80 wpm	46
Tests at 100 and 120 wpm	48
Variations in transcription rates	50
Median scores by dictation rates in each GPA range	51
Error competency levels	56
Speed competency levels	56
Cumulative error analysis	59
Test at 60	60
Test at 80	63

CHAPTER
IV.

PAGE

Test at 100	67
Test at 120	70
Misspelled words	74
Tests at 60 and 80	74
Test at 100	77
Test at 120	79
Word substitution analysis	81
Same shorthand form	81
Similar shorthand form	82
Proportion or writing error	82
Similar word or careless proofreading	83
Phrasing	83
Cumulative punctuation and grammar error analysis	85
Comparison of student achievement	85
Error analysis	87
Commas omitted	87
Commas added	87
Other punctuation and grammar errors	88
V. CONCLUSIONS AND RECOMMENDATIONS	89
Summary	89
Comparisons of student achievement	89
Transcription rates	89
Comparison--typing rate and transcription rate	89
Median scores in each GPA range	90

CHAPTER	PAGE
V.	Comparison--Gregg 2 juniors and seniors 90
	Error competency level 91
	Speed competency level 91
	Cumulative error analysis 92
	Misspelled words 93
	Word substitution analysis 93
	Punctuation and grammar analysis 93
	Conclusions 95
	Recommendations 98
BIBLIOGRAPHY	101
APPENDIX A	111
Tables	
APPENDIX B	133
Materials and Instructions for Practice tests	
APPENDIX C	172
Materials and Instructions for 1965 shorthand tests	
APPENDIX D	182
Variables considered when selecting the population of the study	
APPENDIX E	183
Transcripts of four shorthand tests	

LIST OF TABLES

TABLE	PAGE
I. Distribution of Grade Point Averages and Median GPA in Each Range	28
II. Analysis of Shorthand Tests	31
III. Total Errors--Test at 60	42
IV. T-S-P Errors--Test at 60	42
V. Transcription Errors--Test at 60	43
VI. Wrong Words--Test at 60	43
VII. Words Omitted--Test at 60	44
VIII. Transcription Rates--Test at 60	44
IX. Typing Scores	45
X. Total Errors--Test at 80	46
XI. T-S-P Errors--Test at 80	47
XII. Transcription Errors--Test at 80	47
XIII. Wrong Words and Words Omitted--Test at 80	48
XVIII. Total Errors--Tests at 100 and 120	49
XIX. Transcription Rates--Tests at 80 and 100	50
XX. Median Scores by Dictation Rates	52
XXI. Error Competency Levels	57
XXII. Speed Competency Levels	58
XXXIII. Cumulative Error Analysis--Test at 60	61
XXIV. Cumulative Error Analysis--Test at 80	64
XXV. Cumulative Error Analysis--Test at 100	68
XXVI. Cumulative Error Analysis--Test at 120	71

TABLE	PAGE
XXVII. Misspelled Words--Test at 60	75
XXVIII. Misspelled Words--Test at 80	76
XXIX. Misspelled Words--Test at 100	78
XXX. Misspelled Words--Test at 120	80
XXXI. Word Substitution Analysis	A115*
XXXII. Cumulative Punctuation and grammar Error Analysis	86
XXXIII. Typing Scores--Range and Median in each GPA range	A126
XXXIV. Median Scores by Dictation Rates in Each GPA range--Test at 80	A127
XXXV. Median Scores by Dictation Rates in Each GPA range--Test at 100	A129
XXXVI. Median Scores by Dictation Rates in Each GPA range--Test at 120	A131

*Page numbers preceded by an A are located in Appendix A.

CHAPTER I

THE PROBLEM, THE SHORTHAND SYSTEMS USED, DEFINITIONS OF TERMS USED, AND PROCEDURES

One of the most serious problems facing shorthand teachers today is the amount of time now required to teach students to become proficient stenographers and secretaries. The time factor is becoming more and more troublesome with the current emphasis upon taking the students into more fields and taking them there faster than ever before. Many investigators have compared the learning time and achievement levels acquired in two or more systems of shorthand, but there has been no previous study comparing Gregg Shorthand, Diamond Jubilee Series, Functional Method, and Forkner Shorthand.

I. THE PROBLEM

Statement of the problem. It was the purpose of this study (1) to compare end-of-the-year achievement of the students taking Gregg Shorthand with those taking Forkner Shorthand in the Seattle Public Schools, (2) to make an error analysis of student transcripts to determine the kinds of transcription errors that were made, and (3) to determine whether any particular errors were more prevalent in one shorthand system than in the other.

Importance of the study. In the fall of 1964, a one-year course in Forkner Shorthand was introduced on an experimental basis in the Seattle Public Schools. It has been stated (39:iv-v) that Forkner Shorthand requires less time for the learner to achieve competency in the writing and transcribing of shorthand than does the Gregg Shorthand System. It was believed that some comparison of achievement should be made between the two systems; therefore, this study was made in the spring of 1965 to determine the success of students in Forkner Shorthand and in Gregg Shorthand. This study compared the Forkner student achievement as determined by transcription tests at different rates of dictation with the results achieved on the same tests by students who had completed one year of Gregg Shorthand and by students who had completed two years of Gregg Shorthand.

II. THE SHORTHAND SYSTEMS USED IN THIS STUDY

Forkner Shorthand. Hamden L. Forkner, the author of Forkner Shorthand, has for many years felt the need for a system of shorthand that would lessen the learning load presented by the traditional, symbol shorthand systems and still make it possible for the learner to achieve dictation and transcription speeds that meet employment standards. If the principles and theory could be learned easily and rapidly, he believed the teacher and the students could devote a

major portion of their time to developing vocational transcription skills instead of spending months on theory. In the introduction to his book, Hamden L. Forkner (39:iv-v) describes his system:

Forkner Shorthand is a scientific combination of longhand letters and a few symbols to form a system of rapid writing. The fact that longhand letters are used for writing most words makes it easy for the student to learn to write Forkner Shorthand rapidly and to read it readily. The student no longer must read in one language and think in another. He no longer needs to memorize long lists of abbreviations represented by symbols. The teacher no longer needs to spend long hours learning the system before he can teach it. Forkner Shorthand is based on what the learner already knows, and by a gradual process of simple learning steps he rapidly becomes able to take dictation at business rates. The teacher learns the system as he teaches it--it is so simple. . . . the student will at the end of thirty-six weeks, be comparable in secretarial skills to those who study traditional shorthand systems for four semesters plus a semester of secretarial practice.

Gregg Shorthand, Functional Method, Diamond Jubilee Series. The authors of the new Gregg Shorthand, Diamond Jubilee Series, likewise, were convinced of the need of lightening the learning load in order to speed up the learning process. The authors, Louis A. Leslie and Charles E. Zoubek, (65:iv) state in the preface to the new shorthand manual:

The changes are concerned mainly with the elimination of word-building principles that caused hesitation on the part of the learner when he was taking dictation. The changes also lighten the learning load, so that the learner can cover the

principles of the system in less time with less effort than in previous editions of Gregg Shorthand. Thus the learner is able to begin sooner the second stage of his shorthand instruction--shorthand speed development. . . . Teachers who have successfully used Gregg Shorthand Manual Simplified, Functional Method, Second Edition, will be able to change over to the Diamond Jubilee Series without any special preparation, without changing their basic teaching procedures, and with very little unlearning or relearning of shorthand outlines.

Comparison of the Gregg Shorthand and the Forkner

Shorthand systems. Both shorthand systems are alike in that they both include instruction in English, spelling, word usage, letter styles, and general information useful to the stenographer; such as, tips on work habits, office dress and behavior. Both texts contain theory lessons, review lessons, and lessons for dictation, transcription, and reading.

The shorthand systems are different in that Forkner Shorthand is a one-year course of alphabetic longhand using a few symbols in place of hard-to-write letters. The notes are in longhand. They are easy to read and write, and retention is longer. Gregg Shorthand, on the other hand, is a two-year course using symbols for all letters. It takes longer to learn the symbols, the notes are not as easy to read, and retention is shorter.

The teacher of Forkner can, as the author suggests, learn the system as he teaches. The Gregg teacher, however, should be proficient in Gregg Shorthand before he attempts to teach the system.

The suggested methodology in teaching the Gregg Shorthand system and the Forkner Shorthand system also differs:

In Forkner Shorthand, students take dictation and transcribe business letters from the first week. Theory is not separated from practice; but instead, it is woven into the learning steps. Material is dictated at high rates of speed from the beginning. Students transcribe at the typewriter from the first day.

In Gregg Shorthand, Functional Method, the students read for the first four weeks and then begin to write. For the first year, while the students are learning the theory, the authors suggest that all transcription be in longhand, that no new-matter dictation be given, and that dictation rates may start as low as 40 words per minute. In Gregg Shorthand, speed development, new-matter dictation, and machine transcription are not started until the second year.

III. DEFINITIONS OF TERMS USED

Actual words. The actual words dictated with no allowance made for difficulty.

All-city straight-copy typing test. This is a test that all typing, shorthand, and office practice students take each semester. All students take the same test each time,

but use grading scales applicable to their achievement level. It is a straight-copy test with no numbers in the copy.

Average. To prevent the distortion caused by very high or very low scores, the measure of central tendency used in this study was the median.

Cumulative grade point. The cumulative grade point average was made up of grades earned in the 10th, 11th, and 12th grades in all subjects except physical education and any other subject for which partial credit was given. The grades for the fall semester of the 1964-1965 school year, but not those for the mid-term of the spring quarter of 1965, were included.

Dictation rate. The dictation rate was the number of standard words dictated in one minute.

Forkner Shorthand 2. Forkner Alphabet Shorthand taken for two semesters--50-minute periods daily for 165 days.

Gregg Shorthand 2. Gregg Shorthand, Diamond Jubilee Series, Functional Method, taken for two semesters--50-minute periods daily for 165 days.

Gregg Shorthand 4. Gregg Shorthand, Diamond Jubilee Series, Functional Method, taken for four semesters--50-minute periods daily for 345 days.

Mailable transcript. The student transcribes the material but may make additions or substitutions of words as long as the dictator's meaning remains clear.

Punctuation errors. Omission of a mark of punctuation or the incorrect use of a mark of punctuation were classified as punctuation errors.

Secretarial skills. In this study, the component skills of the secretary were considered to be skill in typewriting, skill in shorthand, and skill in applying the mechanics of English usage, grammar, and punctuation.

Related learnings. For the purposes of this study, the term related learnings referred to spelling, punctuation, grammatical construction, and word usage.

Shorthand transcription errors--extra word. Any words that were not dictated and were not classified as wrong words were classified as extra words.

Shorthand transcription errors--words omitted. Any dictated words that were omitted from the transcription were classified as words omitted.

Shorthand transcription errors--wrong word. Wrong words were classified as (1) the incorrect form of the dictated word--including incorrect verb form, use of plural

or singular form, or other incorrect word endings; (2) words similar in sound to the dictated word; and (3) words that required the same or similar shorthand form as the dictated word.

Silverthorn list of high frequency words. (83)

Silverthorn's study of word usage in business communication entailed a count of words used in a stratified random sample of business letters, telegrams, and reports collected from all kinds of business establishments.

Spelling errors. Words not spelled correctly and words used incorrectly (some time for sometime--maybe for may be) were classified as spelling errors.

Standard word. "Today the standard word of 1.4 syllable intensity is generally used in equating the difficulty of test material, both for speed tests and for transcription tests." (64:197)

Transcription rate. The transcription rate was determined by dividing the number of actual words in the test by the time required by the student to complete the transcript. If words were omitted in a transcript, the omitted words were deducted from the actual words to determine the transcription rate. The rate was figured to the nearest tenth of a point.

Transcription time. The transcription time included the time, figured to the nearest half-minute, required by the student to type the transcript, to proofread the copy, and to correct his errors.

Typing errors. Incorrect spacing between words, raised capitals, obvious proofreading errors, and strikeovers were classified as typing errors.

Typing rate. The total number of words typed in three minutes was divided by three to arrive at a one-minute typing rate.

Verbatim transcript. The students transcribe the dictated material word for word. They do not make substitutions or add words. If they can't read a form or omit one, they leave a blank.

Wpm. Words per minute.

IV. DELIMITATIONS OF THE STUDY

Only ninety students were included in the population. The majority of the students were seniors, although there were ten juniors in the Gregg 2 group. All members of the population were girls who attended the Seattle Public Schools during the 1964-1965 school year.

V. PROCEDURES

Forkner Shorthand was taught in six classes in four Seattle high schools for the first time during the 1964-1965 school year. The schools in which Forkner Shorthand was taught were chosen on the basis of the interest displayed by the principal, by the business department heads, and by the teachers. The schools also had to have enough students for a beginning Gregg and a beginning Forkner class. The teachers learned Forkner Shorthand in in-service and summer school classes. The only restrictions for student membership in a Forkner class were that they must be seniors and that they must agree to stay for the entire year. Gregg Shorthand was taught in all 12 Seattle high schools. Gregg Shorthand was offered only to juniors and seniors. Most students begin Gregg Shorthand as juniors, but some wait until they are seniors to begin.

The data for the study were obtained from four transcription tests and the comparison factors. Four 3-minute tests, dictated at 60, 80, 100, and 120 words per minute, were dictated, taped, and sent to each school. All teachers of Forkner Shorthand 2, Gregg Shorthand 2, and Gregg Shorthand 4 gave the same test on the same day.

Comparison factors included the cumulative grade point--taken from the permanent school records by the classroom teacher; straight-copy typing rate--the results from

the mid-term all-city typing test for spring semester; and the shorthand transcription rate and accuracy--as measured by the four 3-minute tests.

For the purposes of this study, three groups of thirty students each were used. The thirty students in the Forkner control group were chosen by selecting thirty papers from the total group of Forkner papers by a stratified random sample. Each Forkner student was matched with a student in the Gregg 2 group and also in the Gregg 4 group. The students in the three groups were matched by the comparison factors, grade in school, comparable ability, and background. Each student who took the tests had an IBM card punched with the comparison factors and other background information.

This study compared (1) the performance of the Forkner 2 students with that of the Gregg 2 students, (2) the performance of the Forkner 2 students with that of the Gregg 4 students, and (3) the performance of the Gregg 2 students with the performance of the Gregg 4 students.

The error analysis was made by classifying the transcription errors on all four tests of each of the ninety students. The information was tabulated and a statistical analysis of the errors was made.

CHAPTER II

REVIEW OF THE LITERATURE

There is little disagreement today among business educators and authors that shorthand is a vocational subject. However, there is considerable disagreement concerning the definition of vocational competency and the length of time it takes to acquire vocational competency. In some cases there is even disagreement as to whether one means competency in taking shorthand dictation or competency in transcribing the dictation.

Literature Relating to Vocational Competency

Jones (59:41) in his research, found that a shorthand writing speed between seventy-five and one hundred words a minute is considered necessary for the beginning stenographer.

Many authorities believe that the minimum transcription rate necessary for stenographic work is twenty-five words a minute. Bright (22:17) and Jones (59:41) agreed that the minimum transcription rate for the beginning stenographer should be twenty-five words per minute.

Winter (104:43) studied the speeds of dictation in business offices to determine what the level of training should be for stenographic jobs. She timed 253 letters being dictated to regular secretaries in 87 business firms.

The timing involved 498 minutes of dictation. She found that most of the dictation was given at a rate of from 60 to 80 words per minute. Green (47:86) after studying the nature of business dictation, suggested:

A stenographer who cannot write at least 100 words per minute in shorthand has limited opportunity for stenographic employment and limited efficiency in the job if she does obtain one.

He also advised that the teacher must make the student realize that the stenographer has complete responsibility for the accuracy of typing, the correctness of meaning, and the completeness of details in every letter, and major responsibility for correctness of punctuation and paragraphing.

Kyle (60:11) in evaluating beginning stenographers at the New York Banking Company, found that they made many transcription errors. She reported that:

One of the most frequent transcription errors is confusion of word endings; another is confusion of simple prepositions; another is confusion of analogous words in transcribing notes. They make strikeouts rather than erase. Proofreading is a problem. They do not recognize when something doesn't make sense. They do not seem to understand the continuity of context well enough to pick up mistakes.

The time required to provide the minimum initial job competency as a stenographer is the subject of considerable controversy in the business education literature as well as in the minds of many teachers. Some business educators felt that job competency could not be obtained in less than two years. Anderson and Bright (11:117) concluded:

The value of one year of shorthand in the high school has long been a controversial issue among business educators. Many teachers have argued that in one year of training a student can be given sufficient training and develop enough skills to obtain an office position. However, the studies of the achievement of students taking only one year of shorthand have not generally supported this contention.

Rainey (72:168) arrived at a similar conclusion:

It is next to impossible in a one-year training program to develop 100 wpm dictation speeds and 20-25 wpm transcription rates. Not many businessmen would consider an individual vocationally competent with less than this.

Many authors and business educators felt that shorthand should be offered for one year only; but they believed that this could be done only if the course were reorganized, if the system used were simplified, or if selective enrollment were used so that only the better students were accepted in the class.

Literature Relating to Student Achievement

According to Haggblade (50:11), an examination of twelve courses of study from various states and cities throughout the nation revealed that the speed standard commonly accepted for a passing grade in first-year shorthand is 60 wpm--on new matter dictated for 3-5 minutes and transcribed with 95 per cent accuracy.

In general the achievement of stenographic graduates is considered low, and the findings of research tend to

substantiate this belief. Frink (41:16) in reviewing ten years of research, found that of those completing one year of instruction in the secondary school, from 11 to 20 per cent were reported capable of producing mailable transcripts from material dictated at 60 wpm; of those completing two years, less than 50 per cent were capable of producing mailable transcripts from material dictated at 80 wpm.

Douglas, Blanford, and Anderson (35:204) stated: Surveys measuring the dictation and transcription ability of students who have completed only one year of shorthand have shown that the majority of these students were unable to produce a single mailable letter dictated at 60 wpm.

Bright (22:17) in her study of students after one year of shorthand, found that 86 per cent of the students were unable to transcribe even one mailable letter on material dictated at 40 wpm and 62 per cent were unable to transcribe a mailable letter at 80 wpm. Her feeling was that the majority of the students enrolled in one-year shorthand classes would be unable to use their skill without additional training.

Rainey (72:168) came to a similar conclusion: ". . . the truth of the matter is that at the end of one year most students are in the 60-80 speed group, with no transcription rate whatsoever."

Literature Relating to Error Analyses

Many factors contribute to the poor performance of shorthand students. In analyses of shorthand and transcription errors, the investigators of the various studies generally agreed that the cause of errors in transcription was the inability of the pupils to apply punctuation, capitalization, spelling, and English usage to a practical situation in transcribing.

Anderson (6:108) in an analysis of the errors made in students' transcripts reported in 27 different studies, found that in the majority of these studies, there had been general agreement in the findings of the various investigators that the frequency of errors in transcription occurred in the following order: errors in punctuation, typing, grammar, spelling, capitalization, substitution of words, omission of words, arrangement of letters and mechanical details, and syllabication.

Frink (47:27), however, reported that error analyses of thousands of students' transcripts revealed the majority of all errors were due to shorthand errors (incorrect outline, omission of words, substitution) or to errors in the related learnings (punctuation, grammar, typing), with shorthand errors ranking first in frequency in some instances and the related learnings second and, in other instances, the reverse.

In studies by Bright (22:18), Jensen (58:89), William (103:60), and Byrne (24:87), the most common punctuation errors reported were the omission of commas, the omission of apostrophes, incorrect use of the hyphen, incorrect compounding and division of words, and unnecessary punctuation.

They found that frequently made errors in English usage included incomplete sentences, the transcribing of meaningless sentences, and sentences in which there was a lack of agreement between the subject and predicate. Results of error analyses were most frequently expressed and compared as averages or percentages.

Literature Relating to Other Factors Affecting Performance

It was the belief of many investigators that mastery of theory was essential due to the fact that experience has shown that neither dictation speed nor transcribing ability can be effectively developed otherwise. It was also believed that, although transcription involved the fusion of different skills and knowledges, there was a direct relationship between mastery of theory and transcription ability.

Danielson (31:21) found a substantial relationship between achievement in shorthand transcription and general scholastic ability at five of six different levels of dictation speed.

West (102:8) suggested that the ceiling for a student's transcription rate was set by the learner's typewriting proficiency.

Literature Relating to Comparison of Shorthand Systems

Anderson (6:Ch. V) found twelve studies based on comparisons of systems. Most of these studies were so very limited in scope that scientific conclusions could not be drawn. In many of them, many uncontrolled factors had not been taken into consideration.

The only comprehensive comparison study was the Harvard study by Walter L. Deemer (32). The experiment was a comparison of the achievement of high-school students in a two-year course in Gregg Shorthand with those in a two-year course in Script Shorthand.

High schools that participated in the study were neither a random sample nor a stratified selection, but rather a haphazard sample, being those in the vicinity of Cambridge that had a two-year course in shorthand and were willing and able to co-operate. Students were assigned to one of a pair of classes in a variety of ways ranging from selection of the system by the student to pure random division.

Shorthand achievement tests were administered at six-week intervals, starting the second half of the first year

of instruction and continuing through the second year--making ten tests in all. Test ten contained ten items ranging in speed of dictation from 70 to 120 wpm. Fourteen pairs of classes did not type their transcripts and seven pairs did.

All tests were administered by outside testers carefully trained through rigorous practice for uniformity in the dictation of the material. The transcripts only were scored. Comparisons between the two systems of shorthand were made using mean accuracy scores, composite accuracy scores, and mean speed scores on the tests given. Multiple correlations were computed from simple correlations by the "within-groups" method.

Results of twenty-six separate comparisons showed that the Gregg students had more aptitude for learning and using shorthand than did the Script students. There were 12 comparisons which were significant in favor of Script and 7 in favor of Gregg. Employers rated the Gregg students somewhat higher on speed of transcription.

Betts (19) also compared the achievement of students taught by two different systems of shorthand. Her study was undertaken to compare the time required to develop a vocationally usable writing skill in Gregg Shorthand and Speedscript Shorthand.

The experiment included students in two colleges over a four-year period. She divided the groups into:

a theory class, and separate speed classes for students performing at 80, 90 and 100 wpm.

The students in the theory class spent 2 forty-minute periods a day in class. When they had completed the theory, passed a brief form test with 100 per cent accuracy, and a 100-word theory test with 85 per cent accuracy, they entered the 80-word speed class.

The students had to pass a four minute dictation at 80 wpm before they could advance to the 90-word speed class, and at 90 and 100 they had to pass 5-minute tests before moving on.

The students in the 80- and 90-word speed classes had two periods of dictation and one period of transcription daily. The students in the 100-word speed class spent two periods in dictation and two periods in transcription daily.

The comparison was based on the number of students of each system passing each speed class. Miss Betts found that Speedscript students required slightly longer than Gregg students to attain a dictation rate of 80 and 90 wpm, seven weeks less to master the theory, and two weeks less to attain a speed level in dictation of 100 wpm. Thus Speedscript students reached 100 wpm in seven weeks' less time than the Gregg students.

One of the more recent studies compared the results of shorthand classes using Thomas Natural shorthand with the

results of classes using Gregg Simplified Shorthand.

Katherine Stewart (87) compared the achievement of students at the end of one year of high school study.

The two publishing companies co-operated in the study by supplying a list of schools teaching each system. Twenty-one schools in Nebraska, Iowa, Kansas, Ohio, Arizona, and Wisconsin, with a total of 603 students--256 students of Thomas Natural Shorthand and 347 students of Gregg Shorthand--participated in the study. The testing material included a complete theory test of words taken from the Gregg Simplified Manual and dictation tests for dictation at 60, 80, 100, and 120 wpm. These tests were prepared and assembled by the researcher for administration by the class teachers at the end of one year of instruction.

There were ten participating teachers with an average of 2.7 years of experience in teaching Thomas Natural Shorthand, and twelve teachers with one year of experience each in the teaching of Gregg Simplified Shorthand. The average length of class periods for both groups was approximately the same. Most schools had no method of selection of first-year shorthand students. The methods of presentation listed were: functional, manual, direct, and combinations. Stewart graded the greatest proportion of the tests herself and supervised her assistants, following predetermined arbitrary methods.

Scores for each test were tabulated for each system. The means, standard deviations, and critical ratios were computed; and a comparison made of the two systems.

Although the Gregg pupils were intellectually superior to the Thomas pupils--the difference between the mean intelligence scores was 7.68; the mean score for the Gregg group was higher--five out of five comparisons, on the theory test and four achievement tests dictated at 60, 80, 100, and 120 wpm, were in favor of the Thomas group.

The literature indicates that there is a need for more studies comparing student achievement using various shorthand systems, but suggests that researchers need to do a better job of equating the students involved in the tests and also to institute better control of influential factors.

Literature Relating to the Method of Research

Normative-Survey method. Normative-survey research is directed toward ascertaining the prevailing conditions. It seeks to answer the question, "What are the real facts with regard to the existing conditions?" The compound adjective "normative-survey" is applied to this method in order to suggest the two closely related aspects of this kind of study. The word "survey" indicates the gathering of data regarding current conditions. The word "normative" is

used because surveys are frequently made for the purpose of ascertaining what is the normal or typical condition or practice (45:289)

A study of the status of conditions at any given time may be repeated later, thus affording descriptions at different periods of time so that comparisons can be made, the direction of change noted and evaluated, and future growth guided.

Technique. The normative-survey method of research finds expression through a variety of techniques. Perhaps the most common example of normative-survey research in education is survey testing. The primary purpose of such testing is not to reveal detailed facts about any particular person individually, as in the case study, but rather to indicate the prevailing conditions throughout the group. Good (44:264) refers to this type of study as a comprehensive school survey.

Kinds of statistical analysis. The kinds of statistical analysis which are employed in normative-survey research are such measures as per cent, median, mean, range, and rank.

Error Analyses. These investigations have been devoted chiefly to language in its various phases. Studies

of errors have been made in considerable number, especially in the "usage" fields. Fifty-eight of these error analyses are reviewed and classified as to technique of gathering data by Brownell and Easley (25:302-7).

Sampling. The Encyclopedia of Educational Research (67:1272) defines randomness as being achieved if every element in the population is equally likely to appear in the sample. "A random sample can be taken by some form of lottery or by the use of a table of random sampling numbers." Garrett (43:203) defined randomness in a different way. He believed that the criteria for randomness in a sample was met when (1) every member of the population had the same chance of being chosen for the sample; and (2) when the selection of one unit in no way influenced the choice of another--and when the selection was not subject to the whims or biases of the experimenter.

Stratified sampling. Van Dalen (96:252) suggested that to employ the technique of stratified sampling the researcher should divide his population into strata by some characteristic and from each of these smaller homogeneous groups draw at random a predetermined number of units.

CHAPTER III

ORGANIZATION OF MATERIALS AND TEST PROCEDURES

This study was made to determine the success of students in Forkner Shorthand and in Gregg Shorthand. The study compared the Forkner student achievement as determined by transcription tests at different rates of dictation with the results achieved on the same tests by students who had completed one year of Gregg Shorthand and by students who had completed two years of Gregg Shorthand.

All students in shorthand classes in the 12 senior high schools of the Seattle Public Schools were given four tests. Each test was dictated at a different rate of dictation. The dictation rates were: 60, 80, 100, and 120 words per minute. The dictation was given by means of a tape recorder. The test at 60 words per minute was given on May 11, 1965; the test at 80 words per minute, May 12, 1965; the test at 100 words per minute, May 13, 1965; and the test at 120 words per minute, May 14, 1965. The teachers were given the tape on which the test was recorded the day and period the test was to be administered. Printed copies of the tests were not available to the teachers before the tests were given.

Selecting the Sample

The population of this study was taken from the total of 135 Forkner Shorthand students, of 480 Gregg Shorthand 2 students, and of 333 Gregg Shorthand 4 students who took the four tests. The population of this study consisted of a stratified random sample of 90 students--30 Forkner students, 30 Gregg Shorthand 2 students, and 30 Gregg Shorthand 4 students.

The thirty students in the Forkner control group were chosen at random by selecting 30 papers from the total group of 135 Forkner students. The Forkner population was stratified by teacher. Six classes of Forkner Shorthand were taught in four schools; two teachers taught two classes each. The per cent of the total of 135 Forkner students was determined for each teacher. If a teacher had 20 per cent of the students, then she was allotted 20 per cent of the 30 Forkner test sets included in this study. The tests were grouped according to teacher, and the allotted number of tests for each teacher were then selected at random. As soon as a test set was drawn, it was checked to see if that student had taken all four tests. If the test set was incomplete, another set was immediately drawn to replace it.

Each Forkner student was matched with a student in the Gregg 2 group and also with a student in the Gregg 4 group. The stratified random selection of the Gregg

Shorthand 2 students and the Gregg Shorthand 4 students in the population was made by computer, matching the comparison factors; grade in school; comparable ability; and background. Other variables considered which may have affected performance were: school, age, sex, time of day the shorthand class met, previous experience with a shorthand system, language arts grades, length of time in Seattle Public Schools, and the student's plans for the future--college, additional vocational training, or a secretarial position upon graduation. The variables are shown in Appendix D.

Since the per cent of seniors in Gregg Shorthand 2 was not large, it was necessary to include some juniors in the Gregg Shorthand 2 sample in order to match the grade point average and other comparison factors with the Forkner samples. Table I shows the distribution of grade point averages and the median GPA in each range for the three groups making up the population of this study.

Comparing Test Results

This study compared the performance of the Forkner students with that of the Gregg 2 students and Gregg 4 students. It also compared the performance of the Gregg 2 students with that of the Gregg 4 students. The achievement of the groups was evaluated by comparisons and error analyses. The types of comparisons included:

TABLE I
DISTRIBUTION OF GRADE POINT AVERAGES AND
MEDIAN GPA IN EACH RANGE

Grade Point Average Range	Total Number of Students Tested					Median GPA			
	F-2	G-2J*	G-2S*	Total	G-2	G-4	F-2	G-2	G-4
3.6-4.0	2	0	3	3	2		3.66	3.69	3.66
3.1-3.5	9	4	3	7	8		3.24	3.26	3.24
2.6-3.0	7	1	5	6	8		2.78	2.80	2.77
2.1-2.5	8	3	6	9	8		2.43	2.41	2.43
1.6-2.0	4	2	3	5	4		1.80	1.79	1.82
1.1-1.5	0	0	0	0	0		0	0	0
Total	30	10	20	30	30		2.696	2.665	2.700

*The Forkner and Gregg 4 groups are made up entirely of seniors. The Gregg 2 group, however, is made up of both juniors (J) and seniors (S).

1. Using median scores and measuring performance for each dictation rate and GPA range, comparisons were made of transcription rates, and typing, spelling, punctuation, and transcription errors.

2. Using total error scores and measuring performance for each dictation rate, comparisons were made of wrong words, words omitted, words added, misspelled words, word substitutions, and capitalization and paragraphing errors.

3. Comparisons were made of the median typing rates and median transcription rates for each group.

4. A comparison of student performance was made along with each error analysis.

A detailed error analysis was made:

1. Of all misspelled words.

2. Of word substitution errors which were due to the following: words having the same shorthand form, words having a similar shorthand form, proportion or writing errors, similar words or careless proofreading, and phrasing.

3. Of punctuation and grammar errors.

The error analyses were also made to determine the kinds of errors made and to determine whether certain types of errors were more prevalent in one shorthand system or the other.

TEST MATERIALS

Four tests were written. The standard shorthand word count of 1.4 syllables per word was used in counting the words for dictation.

Each test was constructed as a series of paragraphs pertaining to a specific subject. No letter parts were included in the tests as the purpose of the tests was not to measure the ability of the students to produce mailable letters.

The tests consisted of high-frequency words. The Word Division Manual by J. E. Silverthorn was used as the authority for word frequency in business communications. Business dictation consists of the most frequently used words according to the following findings reported by Silverthorn (83:516):

The 100 words used most frequently account for about 50 per cent of all running words; the 500 words used most frequently, approximately 70 per cent; the 1,000 words used most frequently, about 95 per cent.

The analysis of the word frequency of each test is shown in Table II. The Silverthorn list of high frequency words does not include the days of the week or the months of the year, which account for several of the words in the tests counted in the group "% over 5,000 or not listed."

TABLE II
ANALYSIS OF SHORTHAND TESTS

	<u>60 WPM</u>	<u>80 WPM</u>	<u>100 WPM</u>	<u>120 WPM</u>
Total Actual Words	180	240	300	360
Total Different Words	98	136	166	174
% of Different Words	54.4	56.6	55.3	48.5
% of Words--Occur More Than Once	45.6	42.4	44.7	51.5
High-frequency Words				
% in 1st 1,000	78	59	71	78
% in 2d 1,000	12	15.4	15	10
% in 3d 1,000	3	3	4	4
% in 1st 3,000	93	77.4	90	92
% in 4,000-5,000	4	6.6	4	4
% over 5,000 or Not Listed	3	16	6	4
Length of Sentences:				
Number of Words - Range	4-24	5-28	3-28	8-28
Median Number of Words	14.5	16	12	14
Syllabic Intensity	1.4	1.4	1.4	1.4

The test materials were analyzed to determine the actual number of words, the number of different words, and the number of words occurring more than once. The analysis was made so that the tests would consist of at least 50 per cent of words that were different words and so that no word or words would be repeated so many times that the shorthand writer could transcribe the correct word by guessing what the word should be because he had heard it so many times. The analysis is reported in Table II, page 31.

The syllabic intensity of the material was approximately 1.4 for each test. The syllabic intensity of the material was determined for each quarter minute of the test to maintain approximately the same syllabic intensity throughout each test. In the preparation of the test materials, the word frequency was considered to be more important than the syllabic intensity of the material. The syllabic intensity of each test is reported in Table II, page 31.

The number of words in each sentence in each test were counted to avoid the use of long sentences that cause problems for the shorthand writer and transcriber. The range of the number of words per sentence and the median number of words in the sentences for each test is reported in Table II, page 31.

Only a few sentences required internal punctuation, and the rules of punctuation to be applied were common ones.

Special problems for the transcriber such as the application of number rules, capitalization rules, hyphenated-word rules, and possessive forms of words were avoided except in a few instances.

The warm-up material was constructed on the same basis as the test material and was analyzed on the same basis as the test material. The warm-up material provided one minute of dictation material for each test at a rate 20 wpm higher than the test rate.

Four 3-minute tests were prepared to provide practice dictation for the students at 60, 80, 100, and 120 words per minute. The practice tapes were higher in syllabic and stroke intensity and word usage than the test tapes, and different subject matter was used.

Practice materials were prepared to provide an opportunity for the students to become accustomed to taking dictation from a tape recorder and so that they would be accustomed to the voice and manner of dictation of the dictator. The practice and test tapes were dictated by Dr. James Warren, Supervisor of Information, Publications and Information Department, Seattle Public Schools.

Preparing and Using the Tapes

Tests and practice tests were recorded by means of special tape recording equipment at the Administrative and Service Center of the Seattle Public Schools. Duplicate copies of the tapes were made by the Audio-Visual Department of the Seattle Public Schools.

A tape recording of the practice tests was made available to every shorthand class several weeks before the tests were given. Each test, along with the warm-up dictation material for the test, was recorded on a separate tape.

Instructions to students were recorded so each class would receive the same instructions. Printed instructions were given to teachers, also. Instructions were given to stop the tape recorder at the end of the warm-up dictation to make certain that each student could hear and understand each word clearly.

The master recordings were checked by two people before duplicate tape recordings were made. A secretary took each test in shorthand from the master recordings played on an ordinary tape recorder. Two people listened to and checked the tests from reproduced recordings played on an ordinary tape recorder.

Administering the Practice Tests

A rough draft of the practice tests and directions for administering the tests were sent to the Business

Education Department heads for study by them and their shorthand teachers in February. These materials are identified in Appendix B. A week later, the department heads returned all the papers with their schools' suggestions for modifications and change.

A meeting of the shorthand teachers was then held to discuss the tests and the procedures for administering and correcting the tests. As a result of this meeting, it was decided that the final test would be in paragraph form instead of letter form for ease in scoring. The Transcription Score Sheet was simplified and all the teachers had a uniform interpretation of how the tests were to be administered and scored.

The practice shorthand test tapes, Shorthand Test Information Sheets, Transcription Score Sheets, and instructions for administering the practice tests were sent to the department heads for all shorthand teachers in March. The classes used these materials to become familiar with taped dictation, with scoring their papers, and with recording the required information on the Transcription Score Sheets. Examples of the Shorthand Test Information Sheets and the Transcription Score Sheets are provided in Appendix C.

Administering the Tests

Printed instructions for administering the tests and instructions to the students were sent to all shorthand teachers early in May.

Teachers were given information on the nature of the dictation material but were not given copies of the tests. The printed instructions to teachers included the procedures and materials necessary for administering the tests, timing the transcription, the handling and disposition of the test papers, and the dates the tests were to be given. The instructions sent to the teachers are included in Appendix C.

Students were expected to be familiar with the following directions prior to the time the first test was given:

1. Use regular white typing paper.
2. Type your name on each sheet of paper you use for transcription.
3. No part of the dictation will be repeated.
4. No longhand may be written into the notes.
5. Notes must be transcribed the same day the dictation is taken.
6. Transcribe the notes in the order dictated. If you missed part of the dictation or cannot transcribe your notes, skip that part and continue where you can.
7. Transcripts are to be double spaced, on a 70-stroke line, with 5-space paragraph indentions.

8. No carbons are to be made.
9. A dictionary and reference manuals may be used.
10. Erase and correct all errors. If you erase too hard and make a hole in the paper, continue. You may not start over.
11. No help may be secured from a classmate or your teacher.
12. Transcription is to start when the teacher indicates that you are to begin.
13. Indicate on your Transcription Score Sheet the length of time it took you to transcribe. (This includes the time for proofreading and correcting errors.)
14. After you have written your name on each page of your shorthand notes, attach them and your transcript to your Transcription Score Sheet.

Directions for administering the tests were exactly the same as those for administering the practice tests.

Instructions for the student were given by the teacher. Some instructions, however, were also given by the dictator. Students were instructed that paragraphing would be indicated by the dictator and that punctuation would not be given by the dictator. The dictator also told them to use a 70-space line, with a 5-space indention for paragraphs; to double space; to proofread; to erase and correct errors; and to use the dictionary.

The maximum time for transcription of any one of the four tests was thirty minutes. The transcription was timed to the nearest half minute.

Scoring the Tests

A set of Transcription Test Keys for each rate of dictation was provided each shorthand teacher. Each student was supplied with a key, a correct transcript, of the dictation. The teachers were directed to have each student check his own paper as the teacher read the copy slowly, spelling some words, indicating punctuation, capitalization, and paragraphs. The tests were later rechecked twice.

Transcription errors. If a word was omitted, a check for each word omitted was placed at the point where the word or words were omitted. If a word was incorrectly transcribed with the wrong word or if extra words were added, a neat X was placed over the word to indicate this type of error.

Using the transcription score sheet. Each student was given a Transcription Score Sheet for each test. An example of this score sheet is provided in Appendix C. On this sheet were recorded the student's transcription time, rate, and error scores. The student attached his shorthand notes and transcript to the Transcription Score Sheet. The IBM cards were punched with the test information from this sheet.

The teachers were instructed to collect all student transcripts and shorthand notes and check them for accuracy.

The papers were then placed in specially prepared envelopes and delivered to the head of the Business Education Department; the taped recording of the test was also returned to the department head. The papers and the taped recording were sent to the Administrative and Service Center of the Seattle Public Schools, where all papers were rechecked by the researcher and five qualified assistants before the information was put on IBM cards for tabulation and before the sampling for the population of this study took place.

All transcripts at 60, 80, 100, and 120 wpm were rechecked for accuracy. Transcripts were scored on the basis of transcription errors, typewriting-spelling-punctuation errors, and total errors. Copies of the four tests are provided in Appendix E.

Each student was also asked to fill out an information sheet. This sheet contained information on the variables which were considered in choosing the population for this study. These variables were factors which might affect student performance. An example of this Information Sheet is included in Appendix D. These sheets were returned with the test sets.

After the population of the study was selected, the test papers of these ninety students were given a detailed analysis. All transcription errors were analyzed and classified for the three groups and then broken down into separate

classifications to determine whether some types of errors occurred more often in one system or the other.

In analyzing the use of wrong words, the errors were broken down into these categories: misspelled words, forms of the right word, words with the same or similar shorthand form, and substitutions. Other types of errors that were analyzed were: words omitted, words added, capitalization, paragraphing, and punctuation.

CHAPTER IV
INTERPRETATION OF DATA

The data obtained from the four achievement tests dictated at 60, 80, 100, and 120 wpm were organized into seven classifications. These classifications are:

(1) transcription rates and typing, spelling, punctuation, and transcription errors; (2) transcription errors--wrong words and words omitted; (3) median scores by dictation rates in each GPA range; (4) a cumulative error analysis--wrong words, words omitted, words added, capitalization, and paragraphing; (5) misspelled words; (6) a word-substitution analysis; (7) a cumulative punctuation and grammar error analysis.

I. COMPARISONS OF STUDENT ACHIEVEMENT

Transcription Rates; Typing, Spelling, Punctuation, and Transcription Errors; Wrong Words and Words Omitted.

The difference between two totals or scores is expressed in points in the following analyses.

Test at 60 WPM

Median total errors. The Gregg 2 median of 34 total errors was 23 points, or 209.1 per cent, higher than the Forkner median of 11 total errors and 31 points, or 1033.3

per cent, higher than the Gregg 4 median of 3 total errors. The Forkner median of 11 total errors was 8 points, or 266.7 per cent, higher than the Gregg 4 median of 3 total errors. These figures are presented in Table III.

TABLE III
TOTAL ERRORS
TEST AT 60 WPM

Test Groups	Range	Median
Forkner	2- 46	11
Gregg 2	4-100	34
Gregg 4	0- 16	6

The range of total errors for the Gregg 2 group of 4-100 errors was much higher than the Forkner range of 2-46 errors and the Gregg 4 range of 0-16 errors.

Typing, spelling, and punctuation errors. The Gregg 2 median of 5 errors was 1 point, or 25 per cent, higher than the Forkner median of 4 errors and 2 points, or 66.7 per cent, higher than the Gregg 4 median of 3 errors. The Forkner median of 4 errors was 1 point, or 33.3 per cent, higher than the Gregg 4 median of 3 errors. These figures are presented on Table IV.

TABLE IV
T-S-P ERRORS--TEST AT 60 WPM

Test Groups	Range	Median
Forkner	1-15	4
Gregg 2	1-18	5
Gregg 4	0- 9	3

Transcription errors. The Forkner median score of 6 transcription errors was twice as high as the Gregg 4 median score of 3 errors. The Gregg 2 median of 28 transcription errors was 9.3 times as high as the Gregg 4 median of 3 errors and 4.7 times as high as the Forkner median of 6 transcription errors. These figures are presented in Table V.

TABLE V
TRANSCRIPTION ERRORS--TEST AT 60 WPM

Test Groups	Range	Median
Forkner	0-31	6
Gregg 2	1-96	28
Gregg 4	0-11	3

Wrong Words. The data with regard to wrong words are presented in Table VI. The Gregg 2 median score of 10 wrong words was 3.3 times as high as the Gregg 4 score of 3 wrong words and 2.5 times as high as the Forkner score of 4 wrong words.

TABLE VI
WRONG WORDS--TEST AT 60 WPM

Test Groups	Range	Median
Forkner	0-20	4
Gregg 2	0-38	10
Gregg 4	0- 8	3

Words omitted. Table VII shows the data regarding the words omitted. The Gregg 2 group omitted a median of 17 words--17 times as high as the Gregg 4 median of 0 omitted words and 8.5 times as high as the Forkner median of 2 omitted words.

TABLE VII

WORDS OMITTED--TEST AT 60 WPM

Test Groups	Range	Median
Forkner	0-29	2
Gregg 2	0-60	17
Gregg 4	0- 6	0

Transcription rates. The Forkner median transcription rate of 16.8 wpm was 2.5 wpm, or 17.4 per cent, higher than the Gregg 2 median score of 14.3 wpm. The Gregg 4 median of 20.3 wpm was 3.5 wpm, or 17.2 per cent, higher than the Forkner median rate and 6 wpm, or 29.5 per cent, higher than the Gregg 2 median rate. Table VIII portrays this data.

TABLE VIII

TRANSCRIPTION RATES--TEST AT 60 WPM

Test Groups	Range	Median
Forkner	8.6-27.8	16.8
Gregg 2	4.4-20.1	14.3
Gregg 4	9.9-40.0	20.3

The range of the transcription rates varied widely. For the entire group of ninety students, the range was

4.4-40 wpm. The Forkner range was 8.6-27.8 wpm; the Gregg 4 range was 9.9-40 wpm; and the Gregg 2 range was 4.4-20.1 wpm.

Typing scores. An analysis of the typing scores showing the range and median rate for each test group, shown on Table IX, indicated that the median typing rate for the Forkner group and the Gregg 2 group varied by only .8 of a point.

TABLE IX
TYPING SCORES

Test Groups	Range	Median Typing Rate
Forkner	42-69	52.5
Gregg 2	30-62	51.7
Gregg 4	45-81	60.4

The median Forkner typing rate was 52.5 wpm, and the median typing rate of the Gregg 2 group was 51.7 wpm. The Gregg 4 median typing rate of 60.4 wpm was higher than the average of the scores of the other two groups by 7.5 points, or 14.2 per cent.

Comparison--typing rate and transcription rate. A comparison of the median transcription rate on the test at 60 wpm and the median typing rate for each group shows that the Forkner transcription rate of 16.8 wpm was 32 per cent of the typing rate of 52.5 wpm; the Gregg 2 transcription rate of 14.3 wpm was 27.7 per cent of the typing rate of

51.7 wpm; and the Gregg 4 transcription rate of 20.3 wpm was 33.6 per cent of the typing rate of 60.4 wpm.

Test at 80 WPM

Total errors. The median of 57 total errors for the Forkner group was 1.9 times as high as the Gregg 4 median of 30 total errors. The Gregg 2 median of 100 total errors was 1.9 times as high as the Forkner median of 57 total errors and 3.3 times as high as the Gregg 4 median of 30 total errors. Table X shows that the range of total errors for the Gregg 2 group, 18-215, was much higher than the Forkner range of 4-146 errors and the Gregg 4 range of 1-121 errors.

TABLE X

TOTAL ERRORS--TEST AT 80 WPM

Test Groups	Range	Median
Forkner	4-146	57
Gregg 2	18-215	100
Gregg 4	1-121	30

Typing, spelling, and punctuation errors. Table XI, page 47, shows that these errors remained uniform for the Forkner and Gregg 4 groups but were higher for the Gregg 2 group. The Gregg 2 median of 6 typing, spelling, and punctuation errors was twice as high as the Forkner and Gregg 4 median of 3 errors.

TABLE XI
TYPING, SPELLING, AND PUNCTUATION ERRORS
TEST AT 80 WPM

Test Groups	Range	Median
Forkner	0-14	3
Gregg 2	2-16	6
Gregg 4	0-12	3

Transcription errors. The Forkner median score of 53 transcription errors was twice as high as the Gregg 4 median score of 26 transcription errors. The Gregg 2 median score of 93 transcription errors was 3.6 times as high as the Gregg 4 median of 26 transcription errors and 1.8 times as high as the Forkner median of 53 transcription errors. This data is presented on Table XII.

TABLE XII
TRANSCRIPTION ERRORS--TEST AT 80 WPM

Test Groups	Range	Median
Forkner	4-142	53
Gregg 2	16-205	93
Gregg 4	1-117	26

Wrong words. Table XIII, page 48, shows that the Gregg 4 group had a median score of 8 wrong words. The Forkner median of 12 wrong words was 1.5 times as high as the Gregg 4 median of 8 wrong words. The Gregg 2 median of 21 wrong words was 2.6 times as high as the Gregg 4 median of 8 and 1.5 times as high as the Forkner median of 12 wrong words.

Words omitted. The Forkner median of 40 omitted words was 2.2 times as high as the Gregg 4 median of 18 omitted words. The Gregg 2 group omitted a median of 71 words--3.9 times as high as the Gregg 4 median of 18 and 1.8 times as high as the Forkner median of 40 omitted words. This data is presented on Table XIII.

TABLE XIII

WRONG WORDS AND WORDS OMITTED--TEST AT 80 WPM

Test Groups	Wrong Words		Words Omitted	
	Range	Median	Range	Median
Forkner	0-20	12	0- 79	40
Gregg 2	3-99	21	3-129	71
Gregg 4	1-29	8	0-110	18

Tests at 100 and 120 WPM

The performance level of all three groups was much lower at the higher speeds. The Gregg 4 group's performance, however, was better than the performance of the Forkner group, and both the Gregg 4 group and the Forkner group showed better results than did the Gregg 2 group. The performance of the three groups was so poor that valid comparisons could not be made; however, the data on transcription rates and typing, spelling, punctuation, transcription errors, wrong words, and words omitted are presented in Appendix A, pages 111-114, Tables 14-17, for the reader's information.

Total errors--test at 100 wpm. The Forkner median of total errors was 130 with a range of 58-213. The Gregg 2 median of 159 total errors was 1.2 times as high as the Forkner median of 130 total errors. The Gregg 2 range of errors, 86-244, was also higher. The Gregg 4 range of errors was 7-170. The Forkner median of 130 total errors was 1.8 times as high as the Gregg 4 median of 73 total errors. The Gregg 2 median of 159 total errors was 2.2 times as high as the Gregg 4 median of 73 total errors. This data is shown on Table XVIII.

TABLE XVIII

TOTAL ERRORS--TESTS AT 100 AND 120 WPM

Test Groups	Test at 100		Test at 120	
	Range	Median	Range	Median
Forkner	58-213	130	111-283	192
Gregg 2	86-244	159	144-314	219
Gregg 4	7-170	73	21-238	128

Total errors--test at 120 wpm. Table XVIII shows that the Forkner median of total errors was 192 with a range of 111-283. The Gregg 2 median of 219 errors was 1.1 times as high as the Forkner median of 192 errors. The Gregg 2 range of errors, 144-314, was also higher. The Gregg 4 range of errors was 21-238. The Forkner median of 192 total errors was 1.5 times as high as the Gregg 4 median of 128

errors. The Gregg 2 median of 219 was 1.7 times as high as the Gregg 4 median of 128 total errors.

Variations in transcription rates. The data presented on Table XIX show that as the dictation rates increased, the transcription rates decreased. The Forkner median transcription rate of 16.8 wpm dropped to 10.4 wpm on the test at 80 wpm, to 11.1 wpm on the test at 100 wpm, and to 13.4 wpm on the test at 120 wpm. The Gregg 2 median transcription rate of 14.3 wpm dropped to 10.1 wpm on the test at 80 wpm, to 11.7 wpm on the test at 100 wpm, and to 13.2wpm on the test at 120 wpm. The Gregg 4 median transcription rate dropped from 20.3 wpm to 14.8 wpm on the test at 80 wpm, to 16 wpm on the test at 100 wpm, and to 14 wpm on the test at 120 wpm.

TABLE XIX

TRANSCRIPTION RATES--TESTS AT 80 AND 100 WPM

Test Groups	Test at 80		Test at 100	
	Range	Median	Range	Median
Forkner	6.3-17.6	10.36	5.8-20.8	11.08
Gregg 2	4.4-18.0	10.14	4.2-19.0	11.70
Gregg 4	7.0-36.9	14.82	8.0-29.2	16.04

Of twenty comparisons, in five categories on each of four tests, 18 comparisons favored the Gregg 4 group. In two comparisons, the Gregg 4 group and the Forkner group had identical scores. Both groups had fewer typing, spelling,

and punctuation errors; transcription errors; wrong words; and words omitted and had higher transcription rates at all dictation rates than the Gregg 2 group.

Median Scores by Dictation Rates in Each GPA Range--Test at 60 WPM

Median total errors. Table 20 shows that in the GPA range of 3.6-4.0 the Forkner and Gregg 4 median scores of total errors were the same--both groups had a median score of 7 errors. This score was not significantly lower than the Gregg 2 median of 8 total errors.

In the GPA range 3.1-3.5, there was no significant difference between the Forkner median score of 5 total errors and the Gregg 4 median score of 6 total errors. The Gregg 2 median score of 30 total errors was 5 times as high as the Gregg 4 median score of 6 total errors and 6 times as high as the Forkner median score of 5 total errors.

In the 2.6-3.0 GPA range, the Gregg 2 median score of 38 total errors was 3.2 times as high as the Forkner median score of 12 total errors and 7.6 times as high as the Gregg 4 median score of 5 total errors. The Forkner median score of 12 total errors was 2.4 times as high as the Gregg 4 median score of 5 total errors.

Table 20 shows that the performance level of the Gregg 2 group was low in the 2.1-2.5 GPA range. In this

TABLE XX

MEDIAN SCORES BY DICTATION RATES IN EACH GPA RANGE

GPA Range	Total Errors ^{###} Median @ 60 WPM				Transcription Errors Median @ 60 WPM			
	F-2	G-2J*	G-2S**	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	7	0	8	7	1	0	3	2
3.1-3.5	5	25	5	6	3	20	3	5
2.6-3.0	12	11	27	5	7	8	23	2
2.1-2.5	12	57	36	5	7	49	31	2
1.6-2.0	21	40	85	12	12	32	76	7
0-1.5	0	0	13	0	0	0	7	0
Median of Total	9	22	27	5	5	18	23	2

GPA Range	T-S-P [#] Errors Median @ 60 WPM				Transcription Rate Median @ 60 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	1	0	4	4	32	0	15	19
3.1-3.5	2	4	2	1	16	13	13	16
2.6-3.0	5	3	4	3	14	10	14	25
2.1-2.5	5	8	5	2	14	9	11	19
1.6-2.0	9	7	8	5	14	12	31	16
0-1.5	0	0	6	0	0	0	10	0
Median of Total	3	3	4	2	13.3	7.3	15.8	16

^{###}This table combines the median typing, spelling, punctuation, and transcription errors; wrong words; and words omitted as total errors.

*The term G-2J refers to the group of Gregg 2 Juniors.

**The term G-2S refers to the group of Gregg 2 Seniors.

[#]The term T-S-P refers to Typing, Spelling, and Punctuation.

TABLE XX (continued)

GPA Range	Wrong Words Median @ 60 WPM				Words Omitted Median @ 60 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	1	0	3	2	0	0	0	0
3.1-3.5	3	4	3	3	0	16	0	1
2.6-3.0	4	8	8	2	2	0	4	0
2.1-2.5	5	19	7	2	2	30	2	0
1.6-2.0	4	11	5	4	8	21	1	2
0-1.5	0	0	5	0	0	0	2	0
Median of Total	3	7	10	2	11	11	13	.5

range, the Gregg 2 median score of 93 total errors was 7.8 times as high as the Forkner median score of 12 total errors and 18.6 times as high as the Gregg 4 median score of 5 total errors. The Forkner median score of 12 total errors was 2.4 times as high as the Gregg 4 median score of 5 total errors.

In the 1.6-2.0 GPA range, the Gregg 2 median score of 125 total errors was 5.9 times as high as the Forkner median score of 21 total errors and 10.4 times as high as the Gregg 4 median score of 12 total errors. The Forkner median score of 21 total errors was 1.8 times as high as the Gregg 4 median score of 12 total errors.

In an analysis of median total errors distributed by grade point, in the five categories tabulated on all four tests, the students in all three groups had fewer median errors in the GPA range of 2.6-4.0 than did the students in the GPA range of 0-2.5. Even at the lower GPA ranges, the Gregg 4 group had fewer errors than the Forkner group and the Gregg 2 group.

Transcription Rate--GPA Distribution

The median transcription rates, cited on Table 20, page 52, were higher for all three groups in the GPA range of 2.6-4.0.

In the 3.6-4.0 GPA range, the Forkner median transcription rate of 32 wpm was 2.1 times as high as the Gregg 2

median transcription rate of 15 wpm and 1.6 times as high as the Gregg 4 median rate of 19 wpm. The Gregg 4 median rate of 19 wpm was 1.3 times as high as the Gregg 2 median rate of 15 wpm.

The Forkner and Gregg 4 median transcription rates in the 3.1-3.5 GPA range were the same--16 wpm. This rate of 16 wpm was 1.2 times as high as the Gregg 2 median transcription rate of 13 wpm.

In the 2.6-3.0 GPA range, the Gregg 4 median transcription rate of 25 wpm was 1.8 times as high as the Forkner median transcription rate of 14 wpm and 2.1 times as high as the Gregg 2 median transcription rate of 12 wpm. The Forkner median transcription rate of 14 was 1.2 times as high as the Gregg 2 median transcription rate of 12 wpm.

In the 2.1-2.5 GPA range, the Gregg 4 median transcription rate of 19 wpm was 1.4 times as high as the Forkner median transcription rate of 14 wpm and 1.9 times as high as the Gregg 2 median transcription rate of 10 wpm. The Forkner median transcription rate of 14 wpm was 1.4 times as high as the Gregg 2 median transcription rate of 10 wpm.

In the 1.6-2.0 GPA range, the Gregg 2 median transcription rate of 21 wpm was 1.5 times as high as the Forkner median transcription rate of 14 wpm and 1.3 times as high as the Gregg 4 median transcription rate of 16 wpm. The Gregg 4 median transcription rate of 16 wpm was 1.1 times as high

as the Forkner median transcription rate of 14 wpm. The Gregg 2 median transcription rate of 10 wpm was the only rate in the 0-1.5 GPA range.

Evaluation of Student Performance--Total Errors and the Number of Students Who Passed the Tests

The number of students passing a test was determined by the 5 per cent error allowance on speed progression tests recommended by Gregg Shorthand authors.

The figures presented in Table XXI indicated that on the test dictated at 60 wpm, 13, or 43.3 per cent, of the Forkner students; 10, or 33.3 per cent, of the Gregg 2 students; and 22, or 73.3 per cent, of the Gregg 4 students had error scores within the 5 per cent error allowance and passed the test.

On the test dictated at 80 wpm, 2, or 6.7 per cent, of the Forkner students; none of the Gregg 2 students; and 15, or 50 per cent, of the Gregg 4 students passed the test.

None of the Forkner or Gregg 2 students passed the test dictated at 100 wpm, but 11, or 36.7 per cent, of the Gregg 4 students passed the test.

None of the students passed the test at 120 wpm.

Transcription Rates

A transcription rate of 20 to 25 wpm is considered vocationally acceptable (72:168), (22:17), (59:41).

TABLE XXI

TOTAL ERRORS ON ACHIEVEMENT TESTS--COMPETENCY LEVELS

Number of Errors	Test at 60			Test at 80			Test at 100			Test at 120		
	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
0- 1	0	0	4			2						
2- 4	8	4	8	1		3						
5- 7	5	3	7	1		4			3			
8-10		3	3*			3						
11-13	5	3	5			3			3			
14-16	4		3	1		11			5			
17-19	2	1		2	2	1			2			
20-29	2			2	2				2			3
30-49	4	7		5	2	11						8
50-89		6		14	10	1	4	2	11	4		3
90-139		3		3	10	1	10	8	3	11		8
140-199				1	5		13	11	1	9	14	5
200-259					1		3	9		5	10	3
260+										1	6	

* This line indicates the 5 per cent error allowance; 9 errors at 60 wpm; 12 errors at 80 wpm; 15 errors at 100 wpm; and 18 errors at 120 wpm.

TABLE XXII

DISTRIBUTION OF TRANSCRIPTION RATES--COMPETENCY LEVELS

Transcription Rates	Test at 60			Test at 80			Test at 100			Test at 120		
	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
31-35			5			2						
26-30	2		4			1			2			
<u>20-25</u>	<u>3</u>	<u>1</u>	<u>7</u>			<u>4</u>			<u>5</u>			<u>5</u> *
16-19	6	5	7	3	3	6	3	5	4	2	4	4
11-15	17	13	6	9	8	11	10	11	11	18	18	14
0-10	2	11	1	18	19	6	17	14	8	10	8	7

* This line represents the level of transcription speed considered vocationally acceptable--20 wpm or above.

On the test dictated at 60 wpm, 5, or 16.7 per cent, of the Forkner students; 1, or 3.3 per cent, of the Gregg 2 students; and 16, or 53.3 per cent, of the Gregg 4 students had transcription rates of 20 wpm or above.

None of the Forkner or Gregg 2 students; and 7, or 23.3 per cent, of the Gregg 4 students had transcription rates of 20 wpm or above on the test dictated at 80 wpm.

The Gregg 4 group had 7, or 23.3 per cent, students who had transcription rates of 20 wpm or above on the test at 100 wpm; and 5, or 16.7 per cent, students who had transcription rates of 20 wpm or above on the test at 120 wpm. Neither the Forkner group nor the Gregg 2 group had transcription rates of 20 wpm on the tests at 100 or 120 wpm. Table XXII presents the transcription rates on the four achievement tests and the number of students attaining each rate.

II. CUMULATIVE ERROR ANALYSIS

The errors made on the four tests were tabulated in ten categories for analysis: (1) misspelled words, (2) a wrong form of the right word, (3) a word with a same or similar shorthand form, (4) substituted words, (5) words omitted, (6) words added, (7) capitalization, (8) paragraphing, (9) punctuation, and (10) grammar errors.

The figures on the tables pertaining to the error analyses represent total errors on each test paper--not median errors as presented on Tables III-XX. Table XXIII indicates the types of errors analyzed in the cumulative error analysis of the test at 60 wpm.

Test at 60 WPM

Wrong words. The Gregg 2 total of 364 wrong words was 106 points, or 67.1 per cent, higher than the Forkner total of 158 wrong words and 224 points, or 160 per cent, higher than the Gregg 4 total of 140 wrong words. The Forkner total of 158 wrong words was 18 points, or 12.8 per cent, higher than the Gregg 4 total of 140 wrong words.

Words omitted. The Gregg 2 total of 494 words omitted was 426 points, or 626 per cent, higher than the Forkner total of 68 words omitted and 458 points, or 1272 per cent, higher than the Gregg 4 total of 36 words omitted. The Forkner total of 68 words omitted was 32 points, or 88.9 per cent higher than the Gregg 4 total of 36 words omitted.

The Forkner total of 68 words omitted was 1.25 per cent of the 5,400 total words dictated (180 words times 30 students' papers). The Gregg 2 total of 494 words omitted was 9.1 per cent of the 5,400 total words dictated, and the Gregg 4 total of 36 words omitted was .66 per cent of the 5,400 total words dictated.

TABLE XXIII
 CUMULATIVE ERROR ANALYSIS*
 TEST AT 60 WPM

Types of Errors	Total Errors	Forkner	Gregg 2	Gregg 4
Wrong Words				
Misspelled Words	114	24	57	33
Wrong Form of Right Word	94	30	43	21
Word with Same/Similar Shorthand Form	95	15	56	24
Substituted Words	359	89	208	62
Total Wrong Words	662	158	364	140
Words Omitted	598	68	494	36
Words Added	47	9	31	7
Capitalization	27	2	7	18
Paragraphing	22	7	11	4
Total Transcription Errors	1,356	244	907	205

*Punctuation and grammar errors are not included in these figures; they are analyzed on Table XXXII, page 86.

Words added. The Gregg 2 total of 31 words added was 22 points, or 244.4 per cent, higher than the Forkner total of 9 words added and 24 points, or 342.8 per cent, higher than the Gregg 4 total of 7 words added. The Forkner total of 9 words added was 2 points, or 28.6 per cent, higher than the Gregg 4 total of 7 words added.

Capitalization. The Gregg 4 total of 18 capitalization errors was 16 points, or 800 per cent, higher than the Forkner total of 2 capitalization errors and 11 points, or 157.1 per cent higher than the Gregg 2 total of 7 capitalization errors. The Gregg 2 total of 7 capitalization errors was 5 points, or 250 per cent, higher than the Forkner total of 2 capitalization errors.

Paragraphing. The Gregg 2 total of 11 paragraphing errors was 4 points, or 57.1 per cent, higher than the Forkner total of 7 paragraphing errors and 7 points, or 175 per cent, higher than the Gregg 4 total of 4 paragraphing errors. The Forkner total of 7 paragraphing errors was 4 points, or 75 per cent, higher than the Gregg 4 total of 4 paragraphing errors.

Total transcription errors. The Gregg 2 total of 907 transcription errors was 663 points, or 271.7 per cent, higher than the Forkner total of 244 transcription errors

and 702 points, or 342.4 per cent, higher than the Gregg 4 total of 205 transcription errors. The Forkner total of 244 transcription errors was 39 points, or 19 per cent, higher than the Gregg 4 total of 205 transcription errors.

Of the six comparisons--total wrong words, words omitted, words added, capitalization, paragraphing, and total transcription errors--presented on Table XXIII, page 61, five comparisons indicated that the Gregg 4 group had fewer errors and out-performed the other groups; and one comparison favored the Forkner group.

On the test at 60 wpm, errors of omission (598) out-ranked every other type of error. The other errors occurred in the following order of frequency: substituted words (359), misspelled words (114), word with a same or similar shorthand form (95), wrong form of right word (94), words added (47), capitalization (27), paragraphing (22).

Test at 80 WPM

The data pertaining to the cumulative error analysis on the test at 80 wpm are presented on Table XXIV.

Wrong words. The Forkner Group and the Gregg 2 group each had a total of 389 wrong words. This total of 389 wrong words was 106 points, or 37.4 per cent, higher than the Gregg 4 total of 283 wrong words.

TABLE XXIV
 CUMULATIVE ERROR ANALYSIS*
 TEST AT 80 WPM

Types of Errors	Total Errors	Forkner	Gregg 2	Gregg 4
Wrong Words				
Misspelled Words	113	41	42	30
Wrong Form of Right Word	214	88	68	58
Word With Same/Similar Shorthand Form	112	21	49	42
Substituted Words	622	239	230	153
Total Wrong Words	1,061	389	389	283
Words Omitted	4,044	1,200	2,321	523
Words Added	105	5	63	37
Capitalization	3	0	3	0
Paragraphing	25	0	17	8
Total Transcription Errors	5,238	1,594	2,793	851

*Punctuation and grammar errors are not included in these figures; they are analyzed in Table XXXII, page 86.

Words omitted. The Gregg 2 total of 2,321 words omitted was 1,121 points, or 93.4 per cent, higher than the Forkner total of 1,200 words omitted and 523 points, or 343.7 per cent, higher than the Gregg 4 total of 523 words omitted. The Forkner total of 1,200 words omitted was 677 points, or 129.4 per cent, higher than the Gregg 4 total of 523 words omitted.

The Forkner total of 1,200 words omitted was 16.7 per cent of the 7,200 total words dictated (240 words times 30 students' papers). The Gregg 2 total of 2,321 words omitted was 32.2 per cent of the 7,200 total words dictated, and the Gregg 4 total of 523 words omitted was 7.3 per cent of the 7,200 total words dictated.

Words added. The Gregg 2 total of 63 words added was 32 points, or 1160 per cent, higher than the Forkner total of 5 words added and 26 points, or 70.3 per cent, higher than the Gregg 4 total of 37 words added. The Gregg 4 total of 37 words added was 32 points, or 640 per cent, higher than the Forkner total of 5 words added.

Capitalization. Neither the Forkner group nor the Gregg 4 group made capitalization errors on the test at 80 wpm. The Gregg 2 group made 3 capitalization errors.

Paragraphing. The Gregg 2 total of 17 paragraphing errors was 17 points higher than the Forkner total of 0

paragraphing errors and 9 points, or 112.5 per cent, higher than the Gregg 4 total of 8 paragraphing errors. The Gregg 4 total of 8 paragraphing errors was 8 points higher than the Forkner total of 0 paragraphing errors.

Total transcription errors. Table XXIV, page 64, shows that the Gregg 2 total of 2,793 transcription errors was 1,199 points, or 75.2 per cent, higher than the Forkner total of 1,594 transcription errors and 1,942 points, or 228.2 per cent, higher than the Gregg 4 total of 851 transcription errors. The Forkner total of 1,594 transcription errors was 743 points, or 87.3 per cent, higher than the Gregg 4 total of 851 transcription errors.

Of the six comparisons--wrong words, words omitted, words added, capitalization, paragraphing, total transcription errors--on the test at 80 wpm, presented on Table XXIV, page 64, four comparisons favored the Gregg 4 group; one favored the Forkner group; and the capitalization category was a tie because neither the Forkner group nor the Gregg 4 group made an error.

On the test at 80 wpm, errors of omission (4,044) out-ranked every other type of error. The other errors occurred in the following order of frequency: substituted words (622), wrong form of the right word (214), misspelled word (113), word with a same or similar shorthand form (112), word added (105), paragraphing (25), capitalization (3).

Test at 100 WPM

Table XXV outlines the types of errors on the cumulative error analysis on the test at 100 wpm.

Wrong words. The Forkner total of 716 wrong words was 226 points, or 47.1 per cent, higher than the Gregg 2 total of 490 wrong words and 420 points, or 141.8 per cent, higher than the Gregg 4 total of 296 wrong words. The Gregg 2 total of 490 wrong words was 194 points, or 65.5 per cent, higher than the Gregg 4 total of 296 wrong words.

Words omitted. The Gregg 2 total of 3,835 words omitted was 689 points, or 21.9 per cent, higher than the Forkner total of 3,146 words omitted and 2,408 points, or 168.6 per cent, higher than the Gregg 4 total of 1,427 words omitted.

The Forkner total of 3,147 words omitted was 35 per cent of the 9,000 total words dictated (300 words times 30 students' papers). The Gregg 2 total of 3,835 words omitted was 42.6 per cent of the 9,000 total words dictated, and the Gregg 4 total of 1,427 words omitted was 15.9 per cent of the 9,000 total words dictated.

Words added. The Forkner total of 82 words added was 29 points, or 54.7 per cent, higher than the Gregg 2 total of 53 words added and 17 points, or 26 per cent, higher than the Gregg 4 total of 65 words added. The Gregg 4 total of

TABLE XXV
 CUMULATIVE ERROR ANALYSIS*
 TEST AT 100 WPM

Types of Errors	Total Errors	Forkner	Gregg 2	Gregg 4
Wrong Words				
Misspelled Words	90	48	29	13
Wrong Form of Right Word	215	101	79	35
Word With Same/Similar Shorthand Form	248	96	74	78
Substituted Words	1,049	471	308	270
Total Wrong Words	1,502	716	490	296
Words Omitted	8,408	3,146	3,835	1,427
Words Added	200	82	53	65
Capitalization	26	14	8	4
Paragraphing	33	16	8	9
Total Transcription Errors	10,270	3,974	4,395	1,901

*Punctuation and grammar errors are not included in these figures; they are analyzed in Table XXXII, page 86.

65 words added was 12 points, or 22.6 per cent, higher than the Gregg 2 total of 53 words added.

Paragraphing. The Forkner total of 16 paragraphing errors was 8 points, or 100 per cent, higher than the Gregg 2 total of 8 paragraphing errors and 7 points, or 77.7 per cent, higher than the Gregg 4 total of 9 paragraphing errors. The Gregg 4 total of 9 paragraphing errors was 1 point, or 12.5 per cent, higher than the Gregg 2 total of 8 paragraphing errors.

Total transcription errors. Table XXV, page 68, showed that the Gregg 2 total of 4,395 transcription errors was 421 points, or 10.6 per cent, higher than the Forkner total of 3,974 transcription errors and 2,494 points, or 131.2 per cent, higher than the Gregg 4 total of 1,901 transcription errors. The Forkner total of 3,974 transcription errors was 2,073 points, or 109 per cent, higher than the Gregg 4 total of 1,901 transcription errors.

Of the six comparisons--wrong words, words omitted, words added, capitalization, paragraphing, and total transcription errors--on the test at 100 wpm, presented on Table XXV, page 68, four comparisons favored the Gregg 4 group; and two favored the Gregg 2 group.

On the test at 100 wpm, errors of omission (8,408) out-ranked every other type of error. The other errors

occurred in the following order of frequency: substituted words (1,049), word with a same or similar shorthand form (248), wrong form of the right word (215), words added (200), misspelled word (90), paragraphing (26), capitalization (7).

Test at 120 WPM

The data pertaining to the cumulative error analysis of the test at 120 wpm are presented on Table XXVI.

Wrong words. The Forkner total of 682 wrong words was 242 points, or 55 per cent, higher than the Gregg 2 total of 440 wrong words and 325 points, or 91 per cent, higher than the Gregg 4 total of 357 wrong words. The Gregg 2 total of 440 wrong words was 83 points, or 23.2 per cent, higher than the Gregg 4 total of 357 wrong words.

Words omitted. The Gregg 2 total of 5,632 words omitted was 657 points, or 13.2 per cent, higher than the Forkner total of 4,975 words omitted and 3,024 points, or 115.9 per cent higher than the Gregg 4 total of 2,608 words omitted. The Forkner total of 4,975 words omitted was 2,367 points, or 90.8 per cent, higher than the Gregg 4 total of 2,608 words omitted.

The Forkner total of 4,975 words omitted was 46.1 per cent of the 10,800 total words dictated (360 words dictated

TABLE XXVI
 CUMULATIVE ERROR ANALYSIS*
 TEST AT 120 WPM

Types of Errors	Total Errors	Forkner	Gregg 2	Gregg 4
Wrong Words				
Misspelled Words	47	30	11	6
Wrong Form of Right Word	187	87	64	36
Word With Same/Similar Shorthand Form	229	108	64	57
Substituted Words	1,016	457	301	258
Total Wrong Words	1,479	682	440	357
Words Omitted	13,215	4,975	5,632	2,608
Words Added	185	100	45	40
Capitalization	24	15	6	3
Paragraphing	38	25	7	6
Total Transcription Errors	14,941	5,797	6,130	3,014

*Punctuation and grammar errors are not included in these figures; they are analyzed in Table XXXII, page 86.

times 30 students' papers). The Gregg 2 total of 5,632 words omitted was 52.2 per cent of the 10,800 total words dictated, and the Gregg 4 total of 2,608 words omitted was 24.2 per cent of the 10,800 words dictated.

Words added. The Forkner total of 100 words added was 55 points, or 122.2 per cent, higher than the Gregg 2 total of 45 words added and 60 points, or 150 per cent, higher than the Gregg 4 total of 40 words added. The Gregg 2 total of 45 words added was 5 points, or 12.5 per cent, higher than the Gregg 4 total of 40 words added.

Capitalization. The Forkner total of 15 capitalization errors was 9 points, or 150 per cent, higher than the Gregg 2 total of 6 capitalization errors and 12 points, or 400 per cent, higher than the Gregg 4 total of 3 capitalization errors. The Gregg 2 total of 6 capitalization errors was 3 points, or 100 per cent, higher than the Gregg 4 total of 3 capitalization errors.

Paragraphing. The Forkner total of 25 paragraphing errors was 18 points, or 257.1 per cent, higher than the Gregg 2 total of 7 paragraphing errors and 19 points, or 316.7 per cent, higher than the Gregg 4 total of 6 paragraphing errors. The Gregg 2 total of 7 paragraphing errors was 1 point, or 16.7 per cent, higher than the Gregg 4 total of 6 paragraphing errors.

Total transcription errors. The results of the test at 120 wpm, as presented on Table XXVI, page 71, showed that the Gregg 2 total of 6,130 transcription errors was 333 points, or 5.8 per cent, higher than the Forkner total of 5,797 transcription errors and 3,116 points, or 103.3 per cent, higher than the Gregg 4 total of 3,014 transcription errors. The Forkner total of 5,797 transcription errors was 2,783 points, or 92.3 per cent, higher than the Gregg 4 total of 3,014 transcription errors.

On the basis of the results of the test at 120 wpm, as presented on Table XXVI, page 71, of the six comparisons made--wrong words, words omitted, words added, capitalization, paragraphing, and total transcription errors--six comparisons favored the Gregg 4 group.

On the test at 120 wpm, errors of omission (13,215) out-ranked every other type of error. The other errors occurred in the following order of frequency: substitutions (1,016), word with a same or similar shorthand form (229), a wrong form of a right word (187), word added (185), misspelled (47), paragraphing (38), capitalization (24).

On the basis of the results of the four tests at 60, 80, 100, and 120 wpm, presented on Tables XXIII-XXVI, pages 61, 64, 68, 71, of twenty-four comparisons--wrong words, words omitted, words added, capitalization, paragraphing, and total transcription errors--nineteen comparisons favored

the Gregg 4 group; two comparisons favored the Forkner group; two comparisons favored the Gregg 2 group; and one comparison was a tie between the Forkner group and the Gregg 4 group.

Misspelled Words

A breakdown of the words misspelled on the test at 60 wpm is itemized on Table XXVII.

Test at 60 wpm. The Gregg 2 total of 57 misspelled words was 33 points, or 137.5 per cent, higher than the Forkner total of 24 misspelled words and 24 points, or 72.7 per cent, higher than the Gregg 4 total of 33 misspelled words. The Gregg 4 total of 33 misspelled words was 9 points, or 37.5 per cent, higher than the Forkner total of 24 misspelled words.

The Forkner total of 24 misspelled words was 21.1 per cent of the 114 total misspelled words. The Gregg 2 total of 57 misspelled words was 50 per cent of the 114 total misspelled words, and the Gregg 4 total of 33 misspelled words was 28.8 per cent of the 114 total misspelled words.

Table XXVIII outlines the misspelled words on the test at 80 wpm.

Test at 80 wpm. The Gregg 2 total of 42 misspelled words was 1 point, or 2.4 per cent, higher than the Forkner total of 41 misspelled words and 12 points, or 40 per cent,

TABLE XXVII
 MISSPELLED WORDS
 TEST AT 60 WPM

Word Misspelled	Total Words Misspelled	Forkner	Gregg 2	Gregg 4
affect	25	7	15	3
almost	3	1	1	1
amount	1			1
be	1		1	
because	1			1
biggest	7	1	4	2
corporations	2		1	1
ease	1			1
education	1		1	
effective	3		2	1
factor	1		1	
far	1		1	
greatest	1	1		
income	1			1
interest	1	1		
its	31	7	11	13
money	1	1		
national	1		1	
natural	1		1	
people	1		1	
receive	2		2	
received	1		1	
resources	3		1	2
salaries	1		1	
sources	3		2	1
stockholders*	25	(25)		
stopped	10	4	3	3
too	8		6	2
true	1	1		
Total	114	24	57	33

*Twenty-five Forkner students wrote stockholders as two words, but this total was not counted in the total of misspelled words.

TABLE XXVIII
 MISSPELLED WORDS
 TEST AT 80 WPM

Word Misspelled	Total Words Misspelled	Forkner	Gregg 2	Gregg 4
abroad	3	2		1
again	1		1	
apart	1	1		
automobile	5	3	1	1
beautiful	1		1	
believe	2	1	1	
brakes	3	2	1	
build	1		1	
can	1	1		
cannot	5	3	1	1
chief	7	4	2	1
else	1	1		
enjoy	1		1	
excitement	5	1	1	3
honestly	1		1	
its	15	2	5	8
luxurious	2	2		
minutes	1		1	
more	1	1		
motoring	5		4	1
performance	2		2	
pleasant	2		2	
power	1	1		
prove	1			1
quietness	5	3		2
realize	7	3	2	2
realm	2		1	1
recreation	3	2		1
save	1		1	
silence	1			1
something	3	1	2	
spacious	2	2		
steering	7	1	2	4
swimming	1	1		
things	1		1	
thrift	1	1		
thrill	3		3	
tomorrow	1		1	
trailer	5	1	2	2
would	1		1	
yourself	1	1		
Total	113	41	42	30

higher than the Gregg 4 total of 30 misspelled words. The Forkner total of 41 misspelled words was 11 points, or 36.7 per cent, higher than the Gregg 4 total of 30 misspelled words.

The Forkner total of 41 misspelled words was 36.2 per cent of the 113 total misspelled words. The Gregg 2 total of 42 misspelled words was 37.2 per cent of the 113 total misspelled words. The Gregg 4 total of 30 misspelled words was 26.5 per cent of the 113 total misspelled words.

The data pertaining to the words misspelled on the test at 100 wpm are cited on Table XXIX.

Test at 100 wpm. The Forkner total of 48 misspelled words was 19 points, or 65.5 per cent, higher than the Gregg 2 total of 29 misspelled words and 35 points, or 269.2 per cent, higher than the Gregg 4 total of 13 misspelled words. The Gregg 2 total of 29 misspelled words was 16 points, or 123.1 per cent, higher than the Gregg 4 total of 13 misspelled words. The Gregg 2 total of 29 misspelled words was 16 points, or 123.1 per cent, higher than the Gregg 4 total of 13 misspelled words.

The Forkner total of 48 misspelled words was 53.3 per cent of the 90 total misspelled words; the Gregg 2 total of 29 misspelled words was 32.2 per cent of the 90 total misspelled words; and the Gregg 4 total of 13 misspelled words was 14.4 per cent of the 90 total misspelled words.

MISSPELLED WORDS
TEST AT 100 WPM

Word Misspelled	Total Words Misspelled	Forkner	Gregg 2	Gregg 4
able	1	1		
accountant	5	3	1	1
accounting	1	1		
addition	1		1	
alert	3	3		
beginning	1	1		
bookkeeping	6	1	4	1
chances	2		1	1
clients	4	3		1
competently	4	2		2
course	3	3		
enable	4	4		
entrance	6	3	3	
field	1	1		
figures	1		1	
fourth	1	1		
goodwill	1		1	
however	1		1	
its	4	2	1	1
needed	1	1		
patient	1		1	
private	1	1		
proficiency	4	1	3	
public	1		1	
qualities	1	1		
regard	7	4	1	2
school	2	1	1	
secure	2		1	1
should	4	3		1
stressed	2		2	
taken	1	1		
taking	1	1		
teachers	1	1		
their	2	2		
there	3	1	1	1
to	1		1	
trustworthy*	8	(8)		
women	5	1	3	1
Total	90	48	29	13

*Eight Forkner students hyphenated trustworthy, but it was not counted in the total of misspelled words.

Test at 120 wpm. The Forkner total of 30 misspelled words was 19 points, or 172.7 per cent, higher than the Gregg 2 total of 11 misspelled words and 24 points, or 300 per cent, higher than the Gregg 4 total of 6 misspelled words. The Gregg 2 total of 11 misspelled words was 5 points, or 83.3 per cent, higher than the Gregg 4 total of 6 misspelled words.

The Forkner total of 30 misspelled words was 63.9 per cent of the 47 total misspelled words; the Gregg 2 total of 11 misspelled words was 23.4 per cent of the 47 total misspelled words; and the Gregg 4 total of 6 misspelled words was 12.8 per cent of the 47 total misspelled words.

Table XXX presents the data pertaining to the words misspelled on the test at 120 wpm.

On the basis of the data presented on Tables XXVII-XXX, pages 75, 76, 78, and 80, of four comparisons made, three comparisons favored the Gregg 4 group; and one comparison favored the Forkner group.

The word "its" was misspelled most frequently--a total of 50 times on the four tests; the word "affect" was next with 25 misspellings. The most frequent types of errors included failure to double letters or unnecessary doubling, confusion of similar words, homonyms, silent letters, confusion of vowel sounds, and confusion of consonant sounds.

TABLE XXX
 MISSPELLED WORDS
 TEST AT 120 WPM

Word Misspelled	Total Words Misspelled	Forkner	Gregg 2	Gregg 4
abilities	1	1		
anyone	1	1		
assure	2			2
beautifully	5	3	2	
bond	1	1		
complete	4	1	3	
determination	1	1		
easy	1	1		
excellence	7	4	2	1
graduate	3	1		2
including	1	1		
itself	1	1		
job	1	1		
know	2	2		
learned	2		2	
of	1	1		
personal	1	1		
place	1	1		
position	2		1	1
references	1	1		
right	1		1	
these	1	1		
typed	1	1		
typist	1	1		
use	3	3		
your	1	1		
Total	47	30	11	6

Although the Forkner group did not spell as well as the Gregg 4 group, an analysis of the total spelling errors for all four tests showed that the Forkner total of 143 errors was 39.3 per cent; the Gregg 2 total of 139 errors was 38.1 per cent; and the Gregg 4 total of 82 errors was 22.5 per cent of the 364 total spelling errors. The performance of the Forkner group and the Gregg 2 group was very similar.

Word Substitution Analysis

All words substituted on the four tests were analyzed, but only the words that fit these categories--same shorthand form, similar shorthand form, proportion or writing error, similar word or careless proofreading, or phrasing--were listed on Table XXXI, pages 115-125. The figures listed on Table XXXI are presented as the total number of errors made on all four tests. A word may fit into more than one category, depending on how it was used on the student's test paper.

Same shorthand form. The Forkner total of 63 errors due to words with the same shorthand form was 24 points, or 61.6 per cent, higher than the Gregg 2 total of 39 errors and 41 points, or 140.9 per cent, higher than the Gregg 4 total of 22 errors. The Gregg 2 total of 39 errors was 17 points, or 77.3 per cent, higher than the Gregg 4 total of 22 errors.

The Forkner total of 63 errors was 50.8 per cent of 124 total errors due to words with the same shorthand form; the Gregg 2 total of 39 errors was 31.5 per cent of the 124 total errors; and the Gregg 4 total of 22 errors was 17.7 per cent of the 124 total errors due to words with the same shorthand form.

Similar shorthand form. The Forkner total of 211 errors due to words with similar shorthand forms was 92 points, or 47.8 per cent, higher than the Gregg 2 total of 119 errors and 100 points, or 90.1 per cent, higher than the Gregg 4 total of 111 errors. The Gregg 2 total of 119 errors was 8 points, or 7.2 per cent, higher than the Gregg 4 total of 111 errors due to words with similar shorthand forms.

The Forkner total of 211 errors was 47.8 per cent of 441 total errors; the Gregg 2 total of 119 errors was 26.9 per cent of the 441 total errors; and the Gregg 4 total of 111 errors was 25.2 per cent of the 441 total errors due to similar shorthand forms.

Proportion or writing error. The Gregg 2 total of 147 errors due to a proportion or writing error was 3 points, or 2.1 per cent, higher than the Forkner total of 144 errors and 25 points, or 20.5 per cent, higher than the Gregg 4 total of 122 errors. The Forkner total of 144 errors was

22 points, or 18 per cent higher than the Gregg 4 total of 122 errors due to a proportion or writing error.

The Gregg 2 total of 147 errors was 35.6 per cent of the 413 total errors; the Forkner total of 144 errors was 34.9 per cent of the 413 total errors; and the Gregg 4 total of 122 errors was 29.5 per cent of the 413 total errors due to proportion or other writing errors.

Similar word or careless proofreading. The Forkner total of 76 errors due to similar words or careless proofreading was 5 points, or 7 per cent, higher than the Gregg 2 total of 71 errors and 26 points, or 54 per cent, higher than the Gregg 4 total of 50 errors. The Gregg 2 total of 71 errors was 21 points, or 42 per cent higher than the Gregg 4 total of 50 errors. The Gregg 2 total of 71 errors was 21 points, or 42 per cent higher than the Gregg 4 total of 50 errors due to similar words or careless proofreading.

The Forkner total of 76 errors was 38.6 per cent of 197 total errors; the Gregg 2 total of 71 errors was 36.6 per cent of the 197 total errors; and the Gregg 4 total of 50 errors was 25.4 per cent of the 197 total errors due to similar words or careless proofreading.

Phrasing. The Gregg 2 total of 17 errors due to phrasing was 9 points, or 112.5 per cent, higher than the Forkner total of 8 errors and 6 points, or 54.5 per cent,

higher than the Gregg 4 total of 11 errors. The Gregg 4 total of 11 errors was 3 points, or 37.5 per cent, higher than the Forkner total of 8 errors due to phrasing.

The Gregg 2 total of 17 errors was 47.2 per cent of the 36 total errors; the Gregg 4 total of 11 errors was 30.6 per cent of the 36 total errors; and the Forkner total of 8 errors was 22.2 per cent of the 36 total errors due to incorrect phrasing.

On the basis of data presented on Table XXXI, pages 115-125 of Appendix A, of five comparisons made--errors due to same or similar shorthand form, proportion or writing error, similar word or careless proofreading, and phrasing--four comparisons favored the Gregg 4 group; and one comparison favored the Forkner group.

Errors due to words having similar shorthand forms out-ranked every other type of error with 441 total errors. The other errors occurred in the following order of frequency: proportion or writing error (413), similar word or careless proofreading (197), word with same shorthand form (124), and phrasing (36).

The Forkner performance was below that of the Gregg 4 group on all but the phrasing category, the Forkner group performance and the Gregg 2 group performance on two categories--proportion or writing error and similar word or careless proofreading--was very similar.

In two categories--words with the same shorthand form and words with a similar shorthand form--the Forkner group made about 50 per cent of the total errors: The Forkner total of 63 errors was 50.8 per cent of the 124 total errors due to words with the same shorthand form while the Gregg 2 total of 39 errors was 31.5 per cent of the 124 total errors due to words with the same shorthand form. The Forkner total of 211 errors was 47.8 per cent of the 441 total errors due to similar shorthand form while the Gregg 2 total of 119 errors was 26.9 per cent of the 441 total errors due to similar shorthand form.

In the phrasing category, both the Gregg groups had higher total errors than the Forkner group. The Gregg 2 total of 17 errors was 47.2 per cent of the 36 total errors, and the Gregg 4 total of 11 errors was 30.6 per cent of the 36 total errors.

Cumulative Punctuation and Grammar Error Analysis

Table XXXII presents a breakdown of the total number of punctuation and grammar errors made on all four tests. The difference between two totals or scores is expressed in points in the following analysis.

Comparison of student achievement. The Forkner total of 274 punctuation and grammar errors was 158 points, or 136.2 per cent, higher than the Gregg 2 total of 116 errors

TABLE XXXII

CUMULATIVE PUNCTUATION AND GRAMMAR ERROR ANALYSIS

Type of Error	Total Errors	F-2	G-2	G-4
Commas Omitted				
Following introductory words	23	17	3	3
Following introductory phrases	35	7	14	14
Following introductory clauses	49	18	15	16
Setting off parenthetical expressions--Before	27	18	7	2
--After	14	9	2	3
In a series	11	10	0	1
Setting off restrictive clauses	21	21	0	0
Between adjectives	29	12	8	9
Before conjunctions connecting independent clauses	21	7	9	5
Commas Added				
After the verb	11	5	2	4
Before the verb	10	5	2	3
Before clauses at the end of the sentence	10	3	1	6
Before "and"--no independent clause following conjunction	41	19	9	13
Substituted for a period	3	3	0	0
Inserted where there was no series	2	2	0	0
Inserted where there was no restrictive clause	3	3	0	0
Inserted where there was no parenthetical expression	1	1	0	0
Period omitted or misplaced	77	50	15	12
Question mark omitted	49	13	26	10
Unneeded hyphens added	26	26	0	0
Grammar Errors				
Incomplete sentences	8	5	0	3
Misplaced clauses				
At the beginning of sentence	14	12	1	1
At the end of sentence	9	6	2	1
Incorrectly written numbers	2	2	0	0
Total	496	274	116	106

and 168 points, or 158.4 per cent higher than the Gregg 4 total of 106 errors. The Gregg 2 total of 116 errors was 10 points, or 9.4 per cent, higher than the Gregg 4 total of 106 errors.

The Forkner total of 274 errors was 55.2 per cent of the 496 total punctuation and grammar errors; the Gregg 2 total of 116 errors was 23.4 per cent of the 496 total errors; and the Gregg 4 total of 106 errors was 21.4 per cent of the 496 total punctuation and grammar errors.

Error Analysis

Commas omitted. The types of errors occurred in the following order of frequency: following introductory clauses (49), following introductory phrases (35), between adjectives (29), before parenthetical expressions (27), following introductory words (23), setting off restrictive clauses (21), before conjunctions connecting independent clauses (21), after parenthetical expressions (14), and in a series (11).

Commas added. The types of errors occurred in the following order of frequency: before and--no independent clause following the conjunction (41), after the verb (11), before the verb (10), before clauses at the end of the sentence (10), substituted for a period (3), inserted where there was no restrictive clause (3), inserted where there

was no series (2), inserted where there was no parenthetical expression (1).

Incorrect use of the comma out-ranked the other types of errors--311 total comma errors, 230 commas omitted and 81 commas added.

Other punctuation and grammar errors. The other errors occurred in the following order of frequency: period omitted or misplaced (77), question mark omitted (39), unneeded hyphens added (26), misplaced clauses at the beginning of a sentence (14), misplaced clauses at the end of a sentence (9), incomplete sentences (8), incorrectly written numbers (2).

The Forkner total of 274 grammar and punctuation errors was 55.2 per cent of the total of 496 grammar and punctuation errors made by all students included in this study. The Gregg 2 total of 116 total errors was 23.4 per cent of the total of 496 grammar and punctuation errors.

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

I. SUMMARY

Comparisons of Student Achievement

The performance of the three groups--Forkner, Gregg 2 and Gregg 4--was compared on 54 classifications based on the results of four achievement tests. Results of these 54 comparisons showed 47 comparisons in favor of the Gregg 4 group; five comparisons in favor of the Forkner group; and two comparisons in favor of the Gregg 2 group.

Transcription Rates

On the test at 60 wpm, the Forkner median transcription rate was 16.8 wpm with a range of 8.6-27.8 wpm; the Gregg 4 median transcription rate was 20.3 wpm with a range of 9.9-40.0 wpm; and the Gregg 2 median transcription rate was 14.3 wpm with a range of 4.4-20.1 wpm.

On the test at 80 wpm, the Forkner median transcription rate dropped to 10.36 with a range of 6.3-17.6 wpm; the Gregg 4 median transcription rate dropped to 14.82 wpm with a range of 9.9-40.0 wpm; and the Gregg 2 median transcription rate dropped to 10.14 wpm with a range of 4.4-18.0.

Comparison of Transcription Rate With Typing Rate

A comparison of the median transcription rate on the test at 60 wpm and the median typing rate for each group

showed that the Forkner transcription rate of 16.8 wpm was 32 per cent of the typing rate of 52.5 wpm; the Gregg 4 transcription rate of 20.3 wpm was 33.6 per cent of the typing rate of 60.4 wpm; and the Gregg 2 transcription rate of 14.3 wpm was 27.7 per cent of the typing rate of 51.7 wpm.

Median Scores in Each GPA Range

An analysis of median total errors distributed by grade point, disclosed that the students in all three groups had fewer median errors in the 2.6-4.0 GPA range than did the students in the 0-2.5 GPA range. The median transcription rates were also higher for all three groups in the 2.6-4.0 range. Even at the lower GPA ranges, the Gregg 4 group was more successful than the Forkner group and the Gregg 2 group.

Comparison of Performance of Gregg 2 Seniors and Gregg 2 Juniors

Although a comparison of Gregg 2 seniors and juniors is outside the scope of this study, some interesting facts have appeared. The performance of the Gregg 2 juniors was higher than that of the Gregg 2 seniors in five out of six GPA ranges. The performance level of the Gregg 2 juniors was higher than that of the Gregg 2 seniors in ten out of twelve categories compared.

The Gregg 2 juniors had higher median typing scores than the Gregg 2 seniors in all but the 2.1-2.5 GPA range; but the median transcription rate of the Gregg 2 seniors of 15.8 wpm was 8.5 points, or 35.8 per cent, higher than the median transcription rate of the Gregg 2 juniors of 7.3 wpm.

Evaluation of Student Performance--The Number of Students Who Passed the Tests

Thirteen, or 43.3 per cent, of the Forkner students; 10, or 33.3 per cent, of the Gregg 2 students; and 22, or 73.3 per cent, of the Gregg 4 students had error scores within the 5 per cent error allowance and passed the test dictated at 60 wpm.

On the test dictated at 80 wpm, 2, or 6.7 per cent, of the Forkner students; none of the Gregg 2 students; and 15, or 50 per cent, of the Gregg 4 students passed the test.

None of the Forkner or Gregg 2 students passed the test dictated at 100 wpm, but 11, or 36.7 per cent, of the Gregg 4 students passed the test.

None of the students passed the test at 120 wpm.

Transcription Rates Considered Vocationally Acceptable

On the test dictated at 60 wpm, 16.7 per cent of the Forkner students; 3.3 per cent of the Gregg 2 students, and 53.3 per cent of the Gregg 4 students had transcription rates of 20 wpm or above.

None of the Forkner or Gregg 2 students had transcription rates of 20 wpm or above on the test at 80 wpm; but 23.3 per cent of the Gregg 4 students had transcription rates of 20 wpm or above.

The Gregg 4 group had 23.3 per cent of the students with a transcription rate of 20 wpm or above on the test at 100 wpm, and 16.7 per cent on the test at 120 wpm. Neither the Forkner group nor the Gregg 2 group had transcription rates of 20 wpm on the tests at 100 or 120 wpm.

Cumulative Error Analysis

On the test at 60 wpm, on ninety test papers, errors of omission (598) out-ranked every other type of error. The other errors occurred in the following order of frequency: substituted words (359), misspelled words (114), a word with a same or similar shorthand form (95), wrong form of right word (ing, ed, ly, tion, and s were the most common additions or deletions) (94), words added (47), capitalization (27), paragraphing (22).

A cumulative summary of the errors on all four tests, on 360 test papers, revealed that errors of omission out-ranked every other type of error with 26,265 total errors. The other errors occurred in the following order of frequency: substituted words (3,046), a wrong form of a right word (710), a word with a same or similar shorthand

form (684), words added (537), punctuation (463), misspelled words (364), paragraphing (111), capitalization (61), grammar (33).

Misspelled Words

The word "its" was misspelled most frequently--50 times on the four tests; the word "affect" was next with 25 misspellings. In a summary of the errors on all four tests, on 360 test papers, the most frequent types of errors in the total of 364 misspelled words included failure to double letters or unnecessary doubling, confusion of similar words, homonyms, silent letters, confusion of vowel sounds, and confusion of consonant sounds.

Word Substitution Analysis

In a summary of the word substitutions on all four tests, on 360 test papers, 1,211 of the total of 3,046 word substitutions fitted into these categories: Errors due to words having similar shorthand forms out-ranked every other type of error with 441 total errors. The other errors occurred in the following order of frequency: proportion or writing error (413), similar word or careless proofreading (197), a word with same shorthand form (124), phrasing (36).

Punctuation and Grammar Analysis

Incorrect use of the comma out-ranked the other types of punctuation and grammar errors by a wide margin--311

total comma errors, 230 commas omitted and 81 commas added. On 360 test papers, the types of errors occurred in the following order of frequency: period omitted or misplaced (77), comma omitted following introductory clauses (49), comma added before and--no independent clause following the conjunction (41), question mark omitted (39), comma omitted following introductory phrases (35), comma omitted between adjectives (29), comma omitted before parenthetical expressions (27), unneeded hyphens added (26), comma omitted following introductory words (23), comma omitted setting off restrictive clauses (21), comma omitted before conjunctions connecting independent clauses (21), comma omitted after a parenthetical expression (14), misplaced clauses at the beginning of a sentence (14), commas omitted in a series (11), comma added after the verb (11), comma added before the verb (10), comma added before clauses at the end of the sentence (10), misplaced clauses at the end of a sentence (9), incomplete sentences (8), comma substituted for a period (3), comma added where there was no series (2), incorrectly written numbers (2), comma added where there was no parenthetical expression (1).

II. CONCLUSIONS

On the basis of the results of the tests evaluated in this investigation, and only to the extent that the ninety students participating in this study are representative of the students at large, the investigator finds justification for drawing the following conclusions:

1. The Forkner students are not, at the end of one year, comparable in secretarial skills to the Gregg 4 students at the end of two years.

2. There is a significant difference in success in transcription at 60 wpm between Gregg 4 students and the Forkner students. The Gregg 4 students are more successful. The Gregg 2 students are less successful than the Forkner students.

3. The Gregg 4 students are much more successful at 80 wpm than the Forkner students. The performance of the Forkner students and the Gregg 2 students is similar on the test at 80 wpm.

4. The Gregg 4 students are more successful at 100 wpm. The Forkner students and the Gregg 2 students are unsuccessful at 100 wpm.

5. The Gregg 4 students are not highly successful at 120 wpm. The Forkner students and the Gregg 2 students are unsuccessful at 120 wpm.

6. The performance of the Forkner students and the Gregg 2 students on the tests at 80, 100, and 120 wpm is so poor that comparisons are difficult.

7. The training and experience of the Forkner Shorthand teachers is very limited in the teaching of Forkner Shorthand compared to the training and experience of the teachers of Gregg Shorthand in teaching Gregg Shorthand. Perhaps the training and the experience of the teacher affected the performance of the students.

8. The performance of the Gregg 2 juniors is higher than that of the Gregg 2 seniors in all categories except transcription speed.

9. The Gregg 4 transcription rate is higher than the Forkner transcription rate on all tests. The Forkner transcription rate is higher than the Gregg 2 transcription rate on the test at 60 wpm; but at the higher dictation rates the Forkner transcription rate drops to the same speed as the Gregg 2 transcription rate. At 80 wpm, the Forkner median rate and the Gregg 2 median rate are 10 wpm; at 100 wpm, both groups have a median transcription rate of 11 wpm. Since no transcription is taught in Gregg 2, this uniformity in rates seems to indicate that the Forkner students need more transcription practice and speed building.

10. The transcription rate on the test at 60 wpm is, on the average of the three groups, 31.1 per cent of the typing rate.

11. The various levels of performance, as demonstrated by the transcription rates, seem to indicate that typing speed is not enough--that transcription practice is necessary for the building of transcription speed. All three groups need more transcription practice and speed building.

12. Success in transcription in each of the three groups is affected by the inability of the students to apply punctuation, capitalization, spelling, and English usage to a practical situation in transcribing. This is more true of the Forkner and Gregg 2 groups. Few students are capable of transcribing notes into mailable copy after completing only one year of shorthand.

13. The development of a high degree of shorthand skill is not enough; the shorthand teacher must plan to devote class time and attention to the learning and application of spelling, punctuation, and English fundamentals.

14. Certain types of errors appear more prevalent in a certain shorthand system: Forkner--errors due to a word with the same shorthand form, errors due to a word with a similar shorthand form, errors due to writing a wrong form of the right word (ed, ing, tion, s, and er were the most common additions or deletions), punctuation and grammar errors. Gregg--errors due to phrasing.

III. RECOMMENDATIONS

The following recommendations are based upon the findings and conclusions of this study:

1. Further evaluation on the Forkner system of shorthand is suggested before it is substituted for other systems. Student achievement and teacher competency are two areas which need to be studied further.

2. This study indicates that the Forkner system should be analyzed to determine why some types of errors occur more often and to determine whether revisions in the system would be helpful.

3. Colleges and universities should consider making teacher-training courses available in Forkner shorthand.

4. The study indicates a need for shorthand to be taught as a two-year course in order to achieve shorthand dictation speed and accuracy and shorthand transcription speed and accuracy.

5. Students working for vocational competency should take a two-year course in shorthand.

6. The need for more emphasis on the teaching and application of spelling, punctuation, and grammar in the shorthand classroom is indicated.

7. Student performance on transcription speed and accuracy indicates a need for the teacher to integrate the

teaching of shorthand, typewriting, and transcription from the beginning of shorthand instruction--combining shorthand and typing skills into a usable product. To achieve this goal, provision should be made to teach shorthand in rooms equipped with typewriters.

8. This study suggests several other studies.

Recommendations for further study are:

A. A repeat of this study comparing student achievement in Forkner and Gregg Shorthand.

B. Using two or more control groups and competent teachers, research should be done to compare student achievement and teacher competency in Forkner Shorthand.

C. Follow-up studies of Forkner and Gregg students to see how many actually do go to work and use their skills on the job.

D. Forkner students should be contacted on the job to determine if they have developed adequate skills and speed to handle a secretarial job competently.

E. Teaching Forkner Shorthand as a two-year course and Gregg Shorthand as a two-year course and using two control groups, a comparison should be made of the achievement of the two groups at the end of two years.

F. An error analysis should be made on transcripts of a large number of Forkner students to analyze their transcription errors--especially spelling, punctuation, and grammar.

G. A study involving the development of techniques to build transcribing speed would be helpful. It is necessary to work to build speed in production typing. Would some of the same techniques help build transcription speed or will extensive transcribing practice do it? Would a combination of the two accomplish more?

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APPENDIX A
TABLES

TABLE XIV
 TRANSCRIPTION RATES AND TYPING, SPELLING, PUNCTUATION
 AND TRANSCRIPTION ERRORS
 TEST AT 100 WPM

Test Groups	Total Errors		T-S-P* Errors		Transcription Errors		Transcription Rate	
	Range	Median	Range	Median	Range	Median	Range	Median
Forkner	58-213	130	2-36	9	57-202	120	5.8-20.8	11.08
Gregg 2	86-244	159	0-25	9	74-231	148	4.2-19.0	11.70
Gregg 4	7-170	73	1-15	6	4-122	66	8.0-29.2	16.04

*The term T-S-P refers to Typing, Spelling, Punctuation.

TABLE XV
TRANSCRIPTION ERRORS--WRONG WORDS AND WORDS OMITTED
TEST AT 100 WPM

Test Groups	Wrong Words Range	Median	Words Omitted Range	Median
Forkner	4-96	20	46-190	100
Gregg 2	2-99	23	31-231	124
Gregg 4	1-54	16	2-136	49

TABLE XVI

TRANSCRIPTION RATES AND TYPING, SPELLING, PUNCTUATION
AND TRANSCRIPTION ERRORS
TEST AT 120 WPM

Test Groups	Total Errors		T-S-P* Errors		Transcription Errors		Transcription Rate	
	Range	Median	Range	Median	Range	Median	Range	Median
Forkner	111-283	192	2-28	14	93-259	178	7.1-21.4	13.35
Gregg 2	144-314	219	0-35	12	111-311	207	5.7-22.9	13.22
Gregg 4	21-238	128	0-26	11	14-195	116	8.0-24.8	13.97

*The term T-S-P refers to Typing, Spelling, Punctuation.

TABLE XVII
 TRANSCRIPTION ERRORS--WRONG WORDS AND WORDS OMITTED
 TEST AT 120 WPM

Test Groups	Wrong Words		Words Omitted	
	Range	Median	Range	Median
Forkner	7-99	23	81-231	155
Gregg 2	5-99	29	70-265	176
Gregg 4	3-82	23	5-192	92

TABLE XXXI

WORD SUBSTITUTION ANALYSIS--REASONS FOR TRANSCRIPTION ERRORS*

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
a	an		1	1								1	1			
able	about		5													
act	acknowledge	1														
act	count				1			1								
affect	estimate								1							
affect	effect				1			1								
after	for				1											
ahead	had				1		1									
ahead	head				1											
ahead	made				1			1								
all	of our								1							1
an	a		6	7												
and	for								1							
and	have						1			1						
and	will						1	1		1	1					
another	one of the								1							1
are	and								1							
are	or				1	1										
are	will						4				4					
are	well						4				4					
as	is				1		1									
as	has						1									
as	so						5			5						
as	his						4			4						

*All substituted words are included in the totals in Tables XXIII-XXVI, pages 61-71 but only those substitutions which fit the classifications on the above table are analyzed here.

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
as	in				2			2								
at	it	3	1													
at	the						1				1					
at	which						3			3						
basic	beside				1											
be	by	2	2													
be	but	1					1			1						
be	have						1			1						
beautiful	powerful						1			1						
begin	began				1							1				
both	beyond							1					1			
bring	behind				1											
business	public									1	6					
but	be	2														
but	by	6														
buy	be							1					1			
by	be	1														
by	for						1			1						
by	have						1			1						
by	and						1			1						
by the	but						1			1					1	
can	good						1			1						
comfort	confident							1					1			
continue	contain				1											
corporation	cooperation							1				1			1	
data	delay				1				1							
day	do				1											
day	that							1					1			
discover	discuss							1					1			

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
do	day				2			2								
do	to					1			1			1				
dream	thrill												1			
drivers	travelers					1				1						
each	every														1	
earnings	arms						9								9	
ease	ever					1				1						
either	end					1	1			1			1			
either	with					1				1						
else	years						1								1	
entrust	interest				7				7							
ever	every	1				1				1						
every	ever	1														
every	its				1				1							
fact	checked					1				1						
fine	find						1			1		1		1	1	
fine	fire									1						
finish	furnish									1	2		1	2		
for	if				1				1							
for	and					5	1			5	1					
for	their						1								1	
for	up														1	
for	which									1						
form	from		1												1	
from	form		1												1	
get	made						1								1	
get	mean									1						
get	meet						1			1						
gets	goes				1				1							

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
goodwill	goodway	1						1								
goodwill	goes well				1			1			1					
got	get				6			6			6					
got	glad				1			1			1					
great	made									1					1	
half	has					1			1				1			
have	be					5	4		5	4			5	4		
have	for						2			2						
he	I					1		5	1							
high	my				4			4								
his	is	1	1	1								1	1	1		
his	the						1									
his	their					1	1		1	1						
hold	all						1			1						
how	out		1										1			
I	can				1			1								
if	after				1			1								
impressive	improved								1							
in	at						1			1						
in	on				1											
is	as				8											
is	for					1	7		1	7			1	7		
is	his	1														
is	the					1			1							
is	there					1			1							
is	if								1				1			
it	at		1										1			
it	the					4			4							
it	there								1							

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
it	I				1			1								
it is	its				1						1					
itself	it is	1												1		
its	to the								1							1
its	it has						5					5				5
its	it is						3					3				3
its	of				1			1								
June	January				1											
know	knew				5						5					
know	new				2						2					
knowledge	college					1	1		1	1		1	1			
last	least				2						2					
last	list						1			1				1		
learning	training				1			1								
like	look				1			1			1					
like	take				2			2								
like	make								1							
list	last				1			1			1					
listed	left						1			1				1		
made	had				1			1			1					
makes	means								1							
many	money				3			3			3					
may	many						1			1				1		
may	money					1			1			1				
me	my				5			4		4	5			4		
me	myself							3		3				3		
me	many							4		4				4		
me	may						1		1			1				
me	money						1		1							

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
met	meet		5									5				
met	needed									1						
mind	him				1			1								
minutes	months				1			1								
money	many		1	1								1	1			
money	may					1	1		1	1						
more	the				6				6							
more	may				1				1							
most	must				2				2			2				
motoring	modern									6	1					
motoring	modeling						1				1					
move	must be					1				1					1	
move	may have				1				1						1	
move	have				1				1							
much	important					1				1						
name	knowing				1				1							
natural	material						1					1				
needs	meets					1				1						
not	in				1				1							
not	know				7				7							
now	know				2				2							
of	your									1						
offers	often					1				1						
on	own	1														
one	on					2	2			2	2					
one	once					1				1						
one	own						1				1					
one	some					1	1			1	1					
one	when				8				8							

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
open	upon				1			1			1					
open	opportunity					5	5		5	5						
opportunity	apart				1											
opportunity	part				1											
or	of our			1												1
other	of the						1			1						1
other	our				4			4								
other	over	1														
our	are		5	8								5	8			
our	and					1			1			1				
out	our	5														
own	on	1										1				
own	one	2										2				
paper	properly				1			1								
part	between					1			1							
pay	position				1			1								
pay	that					1			1							
place	plus				1			1				1				
play	place								1							
power	pour				1							1				
production	protection					1			1				1			
public	people								1				1			
qualities	goals				1			1								
realize	relive					1	1		1	1						
realm	limit						1			1						
rent	rate					1	3		1	3						
respect	rest				1			1								
rest	list						1									
searching	serving					1			1							
secure	figure					1			1							

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
secure	fill						1			1						
secure	secret				1				1							
set	fit					1	1			1	1					
show	so				1							1				
silence	style				1				1							
silence	fine line						1				1					1
size	wise						1			1			1			
so	as				9											
so	is				1											
some	same										1			1		
special	social				2				2							
spend	send				1											
spend	spent	3										3				
steering	still						1				1					
steering	styling						1				1					
stockholders	stockowners						1				1					
stood	should				3				3							
stood	showed				2				2							
style	steering						1			1			1			
tea	day							1			1					
teachers	teacher has				5	1	5							5	1	5
than	then						2	3					2	3		
that	they				1				1							
that	of				2				2							
that	to				1				1							
that	in								1							
that	day						1			1						
the	you				9							9				

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
the	more				4			4			4					
the	for								1							
the	it									1						
the	they						1		1							
the	those						1		1							
their	through				1			1								
their	and											1				
their	the											1				
them	then						1		1				1			
then	than				1							1				
there	it									3			3			
there	the						2			2						
there	have						1			1						
these	this						5			5			5			
these	take							1				1				
they	that				9	1	4	9	1	4						
this	that				1			1								
this	you						1		1				1			
those	there is						1		1						1	
those	these				5			5				5				
thrift	driving						6	4	6	4						
thrift	trip							1				1				
thrill	dream											1				
thrill	trial								1							
time	to do							1		1						1
time	but				1			1								
to	it	14														
to	at	7														

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
to	all				1			1								
to	I				1						1					
to	do						4					4				
to do	today				1											
training	trade											1				
trip	drive									5						
use	us				2											
used	how					1			1							
way	will				1				1							
way	well				1				1							
week	we can		2													2
well	will	7										7				
wheel	feel					1							1			
when	one				4							4				
which	have								1				1			
which	it					1			1							
will	can								4							
will	and						1				1					
will	are						1				1					
will	well			1										1		
with	the					1			1				1			
with	that								1				1			
with	how						1			1				1		
with the	I think								2				2			2
women	we cannot								1				1			1
work	worry				1				1							
would	should								1				1			
wrote	write				3				3				3			

TABLE XXXI (continued)

Words Dictated	Words Transcribed	Same Shorthand Form			Similar Shorthand Form			Proportion or Writing Error			Similar Word or Careless Proofreading			Phrasing		
		F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4	F-2	G-2	G-4
wrote	right				2			2								
you	to								1				1			
you	the				1			1								
your	you		8										8			
Total for each test group		63	39	22	211	119	111	144	147	122	76	71	50	8	17	11
Total for each category		124			441			413			197			36		

TABLE XXXIII
 TYPING SCORES--RANGE AND MEDIAN SCORE
 IN EACH GPA RANGE

GPA Range	Forkner		Gregg 2 Juniors		Gregg 2 Seniors		Gregg 4	
	Range	Median	Range	Median	Range	Median	Range	Median
3.6-4.0	56-62	59	0	0	49-61	55	59-63	61
3.1-3.5	42-65	42.3	52-60	56.5	47-61	53	48-71	56.7
2.6-3.0	44-69	57.4	59	59	40-62	50.2	54-81	67
2.1-2.5	49-57	53.1	41-56	48	39-60	50.3	52-65	59
1.6-2.0	46-57	51	58	58	30-52	47	45-68	57.5
0-1.5	0	0	0	0	0	0	0	0

TABLE XXXIV

MEDIAN SCORES BY DICTATION RATES IN EACH GPA RANGE

GPA Range	Total Errors## Median @ 80 WPM				Transcription Errors Median @ 80 WPM			
	F-2	G-2J*	G-2S**	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	54	0	43	12	53	0	38	7
3.1-3.5	36	107	52	13	33	103	47	12
2.6-3.0	58	87	90	23	52	78	84	19
2.1-2.5	63	126	101	33	57	117	93	31
1.6-2.0	78	110	166	79	74	102	155	72
0-1.5	0	0	86	0	0	0	79	0
Median of Total	48	70	89	26	44	66	82	23

GPA Range	T-S-P## Errors Median @ 80 WPM				Transcription Rate Median @ 80 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	1	0	5	5	14	0	13	12
3.1-3.5	1	4	5	1	10	11	12	16
2.6-3.0	5	9	5	4	31	8	10	17
2.1-2.5	5	9	8	2	10	8	23	14
1.6-2.0	4	8	10	6	9	9	27	8
0-1.5	0	0	7	0	0	0	7	0
Median of Total	2.6	5	6.5	3	12.3	6	11.3	15.3

This table combines the median typing, spelling, punctuation, and transcription errors; wrong words; and words omitted as total errors.

*The term G-2J refers to the group of Gregg 2 Juniors.

**The term G-2S refers to the group of Gregg 2 Seniors.

#The term T-S-P refers to Typing, Spelling, and Punctuation.

TABLE XXXIV (continued)

GPA Range	Wrong Words Median @ 80 WPM				Words Omitted Median @ 80 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	7	0	19	3	45	0	19	3
3.1-3.5	7	13	5	5	29	89	41	6
2.6-3.0	15	14	25	8	37	64	58	11
2.1-2.5	15	28	23	9	42	89	70	22
1.6-2.0	14	11	43	19	60	91	106	53
0-1.5	0	0	7	0	0	0	72	0
Median of Total	9	11	20	7	36.5	55.5	61	15

TABLE XXXV

MEDIAN SCORES BY DICTATION RATES IN EACH GPA RANGE

GPA Range	Total Errors## Median @ 100 WPM				Transcription Errors Median @ 100 WPM			
	F-2	G-2J*	G-2S**	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	105	0	97	46	95	0	86	40
3.1-3.5	118	169	114	64	111	158	108	58
2.6-3.0	142	131	147	62	132	118	141	54
2.1-2.5	129	169	164	79	118	159	154	71
1.6-2.0	147	190	219	114	134	179	203	108
0-1.5	0	0	186	0	0	0	113	0
Median of Total	106	109	154	60	98	102	120	55

GPA Range	T-S-P# Errors Median @ 100 WPM				Transcription Rate Median @ 100 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	9	0	11	5	12	0	11	11
3.1-3.5	6	10	6	5	33	15	13	11
2.6-3.0	9	13	6	7	10	10	12	15
2.1-2.5	11	9	9	7	10	9	10	14
1.6-2.0	12	13	15	6	10	10	9	29
0-1.5	0	0	3	0	0	0	8	0
Median of Total	7.5	7.2	8	5	12.5	7.3	10.5	13

##This table combines the median typing, spelling, punctuation, and transcription errors; wrong words; and words omitted as total errors.

*The term G-2J refers to the group of Gregg 2 Juniors.

**The term G-2S refers to the group of Gregg 2 Seniors.

#The term T-S-P refers to Typing, Spelling, and Punctuation.

TABLE XXXV (continued)

GPA Range	Wrong Words Median @ 100 WPM				Words Omitted Median @ 100 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	8	0	30	9	87	0	56	31
3.1-3.5	25	14	11	12	85	144	97	46
2.6-3.0	19	12	21	15	113	106	120	38
2.1-2.5	18	28	21	15	100	130	133	55
1.6-2.0	25	36	50	33	109	147	126	74
0-1.5	0	0	5	0	0	0	178	0
Median of Total	16	15	23	14	82.3	87	101.6	39

TABLE XXXVI

MEDIAN SCORES BY DICTATION RATES IN EACH GPA RANGE

GPA Range	Total Errors## Median @ 120 WPM				Transcription Errors Median @ 120 WPM			
	F-2	G-2J*	G-2S**	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	179	0	159	135	165	0	143	118
3.1-3.5	162	223	176	92	149	213	167	85
2.6-3.0	199	162	207	118	190	150	191	104
2.1-2.5	195	249	224	144	181	233	216	133
1.6-2.0	224	256	277	180	200	244	260	168
0-1.5	0	0	199	0	0	0	196	0
Median of Total	159	148	206	111	147	140	195	101

GPA Range	T-S-P# Errors Median @ 120 WPM				Transcription Rate Median @ 120 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	14	0	15	17	12	0	11	11
3.1-3.5	13	9	9	7	33	15	13	11
2.6-3.0	8	12	15	14	10	10	12	15
2.1-2.5	14	16	8	11	10	9	10	14
1.6-2.0	24	12	17	11	10	10	27	29
0-1.5	0	0	3	0	0	0	8	0
Median of Total	12	8	11	10	12.5	7.5	13.5	13

##This table combines the median typing, spelling, punctuation, and transcription errors; wrong words; and words omitted as total errors.

*The term G-2J refers to the group of Gregg 2 Juniors.

**The term G-2S refers to the group of Gregg 2 Seniors.

#The term T-S-P refers to Typing, Spelling, and Punctuation.

TABLE XXXVI (continued)

GPA Range	Wrong Words Median @ 120 WPM				Words Omitted Median @ 120 WPM			
	F-2	G-2J	G-2S	G-4	F-2	G-2J	G-2S	G-4
3.6-4.0	9	0	47	29	156	0	96	89
3.1-3.5	25	10	12	11	129	203	155	73
2.6-3.0	17	3	23	23	173	147	168	81
2.1-2.5	25	42	40	19	156	190	176	111
1.6-2.0	32	32	53	53	170	212	193	115
0-1.5	0	0	1	0	0	0	195	0
Median of Total	18	14	29	22	130.6	108.6	148	78

APPENDIX B
MATERIALS AND INSTRUCTIONS FOR
PRACTICE TESTS

(Simplified after use and conferences
with participating teachers)

SEATTLE PUBLIC SCHOOLS
Administrative and Service Center
815 Fourth Avenue North
Seattle, Washington 98109

February 8, 1965

TO Business Education Department Heads

FROM Verner Dotson and Margaret S. Roberts

Shorthand Evaluation and Comparison Test

Copies of the practice shorthand test and the procedures for testing the students in Gregg Shorthand II, Gregg Shorthand IV, and Forkner Shorthand II are enclosed for you and your shorthand teachers.

We want the testing to be as objective, reliable, and easy to score as possible. Will you and your teachers please read and discuss these procedures. Then will each of you make suggestions for improvement, ask questions, or give us your statement of approval, checking on the cover sheet the items on which you make comment. Please return all copies to us by February 15.

To assist us in sending out materials, will you please complete the information for your school on the enclosed Shorthand Class Information Blank, and return it to us today?

Tape recorders have been ordered for all schools and will be available in time for extensive use of the practice tests.

SPECIAL NOTE: Teachers who took Forkner last year may take it again for credit--one credit for the eight sessions. If any teacher is in doubt whether or not to enroll, he should plan to attend the first session at Roosevelt High School at 4 p.m. on February 16 and then decide.

SUMMARY:

1. Tell you teachers about the Forkner Class
2. Distribute and discuss the test procedures and return the booklets by February 15.
3. Fill out the Shorthand Class Information Blank and return it Today.

ch

Enclosures - Shorthand Practice Test and Test Procedures
Shorthand Class Information Blank

SEATTLE PUBLIC SCHOOLS

TO Verner Dotson and Margaret S. Roberts

FROM _____

SHORTHAND EVALUATION AND COMPARISON TEST

I have read and discussed the procedures for the shorthand test and checked the items on which I have made suggestions for change or modification or have a question.

- ___ 1. Shorthand Evaluation and Comparison Test (5 pages)
 - ___ a. Statement of Purpose
 - ___ b. Time Schedule
 - ___ c. Students who are to Take the Test
 - ___ d. Nature of Dictation to be Given
 - ___ e. Shorthand Test Information Sheet
 - ___ f. Dictation Information
 - ___ g. Transcription - Student Directions
 - ___ h. Test Procedure
 - ___ i. Typing Test
- ___ 2. Shorthand Test Information Sheet (1 page)
- ___ 3. Dictation (19 pages)
 - ___ a. Dictation Script for Practice 60- and 120-Word Dictation (3 pages)
 - ___ b. Dictation Script for Practice 80- and 100-Word Dictation (3 pages)
 - ___ c. Practice Letters No. 1 and No. 2 for 60-, 80-, 100- and 120-WPM Dictation (8 pages)
 - ___ d. Statistical Breakdown of Letter Content (1 page)
 - ___ e. Punctuation and Capitalization - Letters No. 1 and No. 2 - 60, 80, 100, and 120 (4 pages)
- ___ 4. Transcription (11 pages)
 - ___ a. Student Transcription Information Sheet for Practice 60- and 120-Word Dictation (1 page)
 - ___ b. Student Transcription Information Sheet for Practice 60- and 120-Word Dictation (1 page)
 - ___ c. Transcription Score Sheets for 60-, 80-, 100-, and 120-WPM Dictation (4 pages)
 - ___ d. Using the Transcription Score Sheets (4 pages)
 - ___ e. Letterhead (1 page)

RETURN THIS TO YOUR DEPARTMENT HEAD BY FEBRUARY 12.

STATEMENT OF PURPOSES - Forkner Shorthand has been promoted as a system that can be learned in two semesters with students fully prepared to do secretarial work. We must find out if this is true. It may be true, but there may be good reasons for continuing both Gregg and Forkner. As professional business educators, we must get the facts and then together decide what is best for our students. The immediate purpose, then, of this test is to answer two questions?

1. Can students learn Forkner Shorthand in two semesters and achieve as well as students who have studied Gregg for four semesters?
2. Can students learn Gregg Shorthand in two semesters and achieve as well as Forkner students in the same length of time?

TIME SCHEDULE

- September 9, 1964 - Forkner Shorthand classes were begun
- January 21, 1965 - Shorthand Evaluation Committee* Meeting
- February 8, 1965 - Rough draft of practice test and procedures for administering the test sent to Business Education Department Heads for study by them and their shorthand teachers.
- February 15, 1965 - Department Heads return all papers with their school's suggestions for modification and change.
- March 29, 1965 - Practice Shorthand test tapes, SHORTHAND TEST INFORMATION SHEETS, and instructions sent to department heads for all shorthand teachers.
- March 29, 1965 - Students fill out Sections A and B of their individual SHORTHAND TEST INFORMATION SHEETS.
- March 29 - April 2 - On regular Mid-Term test day, All-City Straight Copy and Number-Symbol Copy Typing Test is given to all shorthand students. Mid-Term Typing III scales are to be used in scoring the papers. Students record the Mid-Term Typing Test scores in Section D of their SHORTHAND TEST INFORMATION SHEET and attach their papers to the sheet.
- April 9, 1965 - In Section C of the SHORTHAND TEST INFORMATION SHEET, have the students record their mid-term grades. (This is report card day, and it will be easy to verify the correctness of the report.)
- May 2, 1965 - Tapes of Shorthand Test sent to Principal of each high school.
- May 10-14, 1965 - Shorthand tests are given.
- May 12-21, 1965 - Tests are scored, TRANSCRIPTION SCORE SHEETS are completed, and the shorthand notes and the transcripts are attached to their respective TRANSCRIPTION SCORE SHEETS.
- May 17-21, 1965 - Students, using their TRANSCRIPTION SCORE SHEETS, complete Section E of their SHORTHAND TEST INFORMATION SHEETS and attach their TRANSCRIPTION SCORE SHEETS to which have been attached their shorthand notes and transcripts to their SHORTHAND TEST INFORMATION SHEETS to which their typing test is already attached.
- May 24, 1965 - Teachers give to department heads the SHORTHAND TEST INFORMATION SHEETS with their attachments; each class fastened together and labeled.
- June 1, 1965 - Department heads send all test materials to the Business Education Office, Administrative and Service Center.
- June 3, 1965 - Data to be placed on IBM cards and processed.

COMMITTEE MEMBERS: Lorraine Fairfield, Elizabeth Montgomery, Louise Mutschler, Ethel Robinson, Verner Dotson, and Margaret S. Roberts

STUDENTS WHO ARE TO TAKE THE TEST - Those in Forkner Shorthand II
 Those in Gregg Shorthand II
 Those in Gregg Shorthand IV

NATURE OF DICTATION TO BE GIVEN

1. All of the dictation will be in the form of letters.

2. There will be two, 6-minute dictations as follows:

a.	<u>TIME</u>	<u>RATE</u>	<u>TOTAL WORDS</u>	<u>LETTERS</u>	<u>WORDS PER LETTER</u>
	3	60	180	2	90
	3	120	360	2	180
b.	<u>TIME</u>	<u>RATE</u>	<u>TOTAL WORDS</u>	<u>LETTERS</u>	<u>WORDS PER LETTER</u>
	3	80	240	2	120
	3	100	300	2	150

3. The syllabic intensity will be approximately 1.5 on each dictation rate.

4. The stroke intensity will be approximately 1.15.

5. The dictation will be counted in the Gregg and Forkner standard word count of 1.4 syllables per word.

6. Words used will include those found in the first 6000 words in the Horn-Peterson list and the Silverthorn list.

7. For determining the transcription rate, the 5-stroke word will be used except when words are omitted, actual words be counted.

8. For determining errors, actual words will be used.

9. The only marks of punctuation used will be the comma, the period, the apostrophe, the hyphen, and the question mark.

SHORTHAND TEST INFORMATION SHEET

1. This sheet summarizes the information that will be needed for punching the IBM cards.

2. Sections A and B to be completed by students soon after March 29 to allow time to verify accuracy.

3. Section C to be completed by students on April 9.

4. Section D to be completed by students between March 29 and April 2.

5. Section E is to be completed by students between May 17 and 21.

6. Section F to be completed by the teacher when verifying the accuracy of Sections A and B.

DICTATION INFORMATION

1. Paragraphs will be indicated in the dictation.
2. The salutation and complimentary close will be dictated and counted in the words dictated.
3. If a student misses part of the dictation, he is to pick it up where he can and continue.
4. No part of the dictation will be repeated.
5. Punctuation will not be dictated.
6. If there is an enclosure, that fact will not be dictated except in the context.
7. The student's shorthand notes should be kept in neat and legible form as they will be attached to the TRANSCRIPTION SCORE SHEET.

TRANSCRIPTION - STUDENT DIRECTIONS

1. Use letterhead paper.
2. Use full block style.
3. Use open punctuation.
4. Use the current date on all letters.
5. The inside address and the signature will be supplied on a separate (Student Information Sheet for Practice 60- and 120-WPM or 80- and 100-WPM Dictation."
6. Letter placement is important - judge carefully.
7. Transcribe the letters in the order they were dictated. If you missed part of the dictation or can't transcribe your notes, skip that part and continue where you can.
8. No carbons are to be made.
9. No envelopes are to be addressed.
10. You may use a dictionary and reference manuals.
11. If the context indicates there is an enclosure, make that notation on the letter.
12. Erase and correct all errors. If you erase too hard and make a hole in the paper, continue. DO NOT START OVER. The hole will be only one point deduction.
13. You may not secure help from a classmate or your teacher.
14. You are to begin transcribing as soon as the dictation is finished. Notes must be transcribed on the day the dictation is taken.
15. Be sure to indicate on your TRANSCRIPTION SCORE SHEET the time you began Letter No. 1 at that rate and the time that you finished Letter No. 2 at that rate.
16. Attach your shorthand notes and your transcript to your TRANSCRIPTION SCORE SHEET.
17. You will correct your transcripts on another day.

TEST PROCEDURES

1. Giving the Tests

- a. All teachers of Forkner Shorthand II, Gregg Shorthand II, and Gregg Shorthand IV must give the SAME test on the same day. The 60- and 120-WPM dictation tests will be given on one day, and the 80- and 100-WPM dictation tests will be given on another day.
- b. Tests are to be transcribed on the same day that the dictation is given.
- c. Obtaining the tests
 - (1) Teachers are to secure the tape for the 60- and 120-WPM dictation tests from their principal the day these tests are to be given.
 - (2) Teachers are to secure the tape for the 80- and 120-WPM dictation tests from their principal the day these tests are to be given.
- d. The test tapes will be the same in syllabic and stroke intensity and word usage as the practice tests tapes, but different words will be used.
- e. Directions for administering the tests are exactly the same as those for administering the practice tests.
 - (1) Previous to the day of the test, the students should understand and be able to apply all directions for taking the test and transcribing it.
 - (2) Previous to the test, check to see that the dictating equipment is in proper working condition.
 - (3) Have the material, letterhead, **TRANSCRIPTION SCORE SHEETS**, shorthand notebooks, dictionary, **STUDENT TRANSCRIPTION INFORMATION SHEET**, erasers, and pens, organized so that on the day of the test the students can quickly type their names on the four sheets of letterhead they will be using and the dictation can be begun immediately.
 - (4) When all are ready, turn on the recorder and have the students take the dictation.
 - (5) Do not repeat any part of the dictation.
 - (6) The students should have had many opportunities to take dictation from the practice dictation tapes so that taking the dictation from the tape will present no problem to them.
- f. Immediately when the dictation is finished, the students are to begin transcribing.
 - (1) The transcription will be timed to the nearest half-minute.
 - (2) Record the time every half minute on the board. (You may wish to have a reliable student do this.) For example: 1:01; then add $\frac{1}{2}$, and it becomes 1:01 $\frac{1}{2}$; then erase the $\frac{1}{2}$, and it becomes 1:02, etc.

This will be necessary as students will be finishing the 60-word dictation, for instance, and beginning and finishing the 120-word dictation at different times on the day the 60- and 120-WPM dictation tests are taken. The same thing will be true for the 80- and 100-WPM dictation test.

TEST PROCEDURES (continued)

- (3) Do not permit one student to help another.
- (4) Be sure that the students record their beginning and finishing time for each transcription rate accurately.
- (5) At the end of the hour, have the students attach their transcripts and their shorthand notes to the TRANSCRIPTION SCORE SHEET for that particular dictation.

g. Scoring the papers

- (1) The students will score the papers on the day after the test.
- (2) See the four pages "Using the Transcription Score Sheets."
- (3) After the students have scored their papers, have them count the figures in the left or right margin of their letters and record the information on the TRANSCRIPTION SCORE SHEET and make the necessary computations.
- (4) If a student did not transcribe a letter, the total deductions would equal the total possible points and the points earned would be "0."
- (5) After the information has been recorded on the TRANSCRIPTION SCORE SHEET, have the students fill in the Section E of their SHORTHAND TEST INFORMATION SHEET. (The other parts of this have been filled in previously.)
- (6) Have each student attach to his SHORTHAND TEST INFORMATION SHEET the following:
 - a. The Mid-Term All-City Typing Test Papers are already there.
 - b. TRANSCRIPTION SCORE SHEETS for 60-, 80-, 100-, and 120-WPM dictation with the shorthand notes and the two letters attached.

h. The teacher will then audit the papers, see that everything is in order, and give each class set to his department head.

i. The department head will collect the papers for each shorthand class, check to see that everything is in order and send all of the school's test materials, clearly labeled, to the Business Education Office, Administrative and Service Center.

TYPING TEST

1. All students in the shorthand classes being tested will take the All-City Straight Copy and Number-Symbol Typing Test at Mid-Term, Spring Semester, 1965.
2. All students in these classes will use the Typing III Mid-Term scales.

a. Straight Copy Scales

	A	B	C	D
0 -	55	47	39	28
1 -	59	50	42	30
2 -	63	54	45	32
3 -	67	58	49	34

b. Number-Symbol Copy Scales

	A	B	C	D
0 -	44	34	25	16
1 -	50	40	29	21

3. After the scores have been recorded in Section D on the student's SHORTHAND TEST INFORMATION SHEET, the typing test papers are to be attached to this sheet.

DICTIONATION SCRIPT FOR PRACTICE 60- and 120-WORD DICTIONATION

This is a practice test which is like one you will be taking in May. The words will be different, but the stroke and syllabic intensity will be approximately the same as in these letters.

The dictation will be for six minutes, three minutes at 60 words a minute and three minutes at 120 words a minute. There will be two letters dictated at each of these speeds, the first two will be at 60 words a minute and the last two at 120 words a minute. Do you have your letterhead sheets and your 60- and 120-word Dictation Transcription Score Sheets ready beside your typewriter?

First, will you check the mimeographed sheet you have been given containing the inside addresses and the signatures for these letters. You understand, of course, that you are to use the current date.

The first letter to be dictated at 60 words a minute is to be written to:

Miss Mary Ann Gill
724 South Market Street
Tacoma, Washington 98402

This letter is to be signed by Charles L. Armstrong, Sales Manager.

The second letter at 60 is to be written to: Mr. Fred Johanson
School Supply Company
8976 East Lake Drive
Renton, Washington 98055

This letter will be signed by Frank K. Houston, Sales Manager.

The first letter at 120 words a minute is to be written to:
Mrs. Lucy Masterson
East High School
Denison, Washington 99007

The letter to Mrs. Masterson is signed by John H. Lewis, Professor of Labor Economics.

The second letter at 120 is to be written to: Mr. Ray Lee, Personnel Division
Lay, Fine, Fry, and Lee
139 East Wall Way
Dallas, Texas 75221

The letter to Mr. Lee will be signed by Ray Shaw of Personnel.

The paragraphs will be indicated in the dictation, but the punctuation and enclosures will not. If you miss some of the dictation, do not stop; but pick it up where you can as, when the dictation is finished, you are to transcribe all of the

letters--or as much of each as you can--beginning with the first one. You have ample time to transcribe the four letters as there are only 675 words including the inside address and the signature. Be very sure that you record on the 60-WPM Score Sheet the time you begin the transcription of the 60-word dictation and the time you finish it; and on the 120-WPM Score Sheet, the time you begin the transcription of the 120-word dictation and the time you finish it.

Are your notebooks ready for the 60-word dictation? Good. Let's begin.

Dear Miss Gill At times in spending prudently, we're inclined to practice econo^{1/4}mies that in reality result in waste. (Paragraph) There is a time in the life of every automobile when the cost of upkeep exceeds the value of the service rendered. To^{3/4}day new car prices are lower, styling is more functional, and values are greater / than^{1 Min.} ever before in the industry's history. Take advantage of this by trading / in your old car. (Paragraph) See the new Jet Ride. Our showroom is open evenings. Yours very truly^{1/2}

Dear Mr. Johanson We appreciate very much your initial order for 1/00^{3/4} typewriter desks, which we have entered for delivery on June 1. (Paragraph) We wel^{2 Min.}come you as a new customer and anticipate that this first order is only the be^{1/4}ginning of a long business relationship, which we shall endeavor to make pleasant / and profitable^{1/2} for both of us. You can depend on our complete coopera^{3/4}tion. (Paragraph) Please write to us whenever we might be able to help you boost your sales. Sincerely yours/^{3 Min.}

And now the 120-word dictation.

Dear Mrs. Masterson Thank you for your letter of March 1. I appreciate your asking me for suggestions on how to explain the concepts of unions and guaran^{1/4}teed annual wages as developed in my book on the history of the labor movement in the United States. (Paragraph) As you know, trade and craft unions are the same. I, there^{1/2}fore, emphasize that basically there are just two types of unions. There are trade and craft unions on the one hand and industrial unions on the other.

3/4

Your students will / be able easily to grasp this important concept when it is made this simple for them. (Paragraph) The significant point that I stress when discussing the guaranteed annual / wage is that it has worked eminently well in some industries but that it's likely to be a complete failure in others. I illustrate this by citing specific / industries and the reasons for the success or failure of the wage program in each. (Paragraph) If you have further questions, Mrs. Masterson, please do write again. Yours very truly/

Dear Mr. Lee Is is a real pleasure to answer your inquiry of May 1 relative to the business ability of James G. Smith. (Paragraph) Mr. Smith has been employed / in our main stenographic department for three years. During this time, he has given ample evidence of being a hard and willing worker and a completely re/sponsible person. His work is accurate, neat, and dependable. He is held in high regard by all the members of our firm and has been of great help to us in the / office. (Paragraph) He had had very little business experience when he joined our staff, but his persistence enabled him to meet our most exacting requirements. It is / with deep regret that we learn of his intention to change his position. We realize, however, that this new opening offers opportunities in the field in / which he intends to specialize. (Paragraph) I am only too glad to recommend Mr. Smith. I know that you will find him an exceedingly valuable man. Very truly yours/

This ends the dictation. As no part of it will be repeated, record the time on your 60-WPM Score Sheet and begin transcription immediately.

DICTATION SCRIPT FOR PRACTICE 80- and 100-WORD DICTATION

This is a practice test which is like one you will be taking in May. The words will be different, but the stroke and syllabic intensity will be approximately the same as in these letters.

The dictation will be for ~~six minutes~~^{three minutes} at 80 words a minute and ~~three minutes~~ at 100 words a minute. There will be two letters dictated at each of these speeds, the first two will be at 80 words a minute and the last two at 100 words a minute. Do you have your letterhead sheets and your 80 and 100-word Dictation Transcription Score Sheet ready beside your typewriter?

First, will you check the mimeographed sheet you have been given containing the inside addresses and the signatures of these letters. You understand, of course, that you are to use the current date.

The first letter at 80 is written to: Lake Contracting Company
Point Roberts
Washington 98281

The letter will be signed by Warren Dean, Sales Manager.

The second letter at 80 is written to: Mr. Dan Anderson
9761 East Pike Street
Seattle, Washington 98122

This letter to Mr. Anderson will be signed by Rexford K. Bloom, Sales Manager.

The first letter at 100 is written to: Mr. Robert Davidson
8178 Fourth Avenue
Seattle, Washington 98101

The letter to Mr. Davidson is to be signed by Joe L. Briggs, Sales Manager.

The second letter at 100 is written to: Mr. T. L. Barker
Star Route
Walla Walla, Washington 99362

The letter to Mr. Barker will be signed by John L. Brown, Sales Manager.

The paragraphs will be indicated in the dictation, but the punctuation and enclosures will not. If you miss some of the dictation, do not stop; but pick it up where you can as, when the dictation is finished, you are to transcribe all of the letters or as much of each as you can--beginning with the first one. You have ample time to transcribe the four letters as there are only 667 words including the inside address and the signature. Be very sure that you record on the 80-WPM

Score Sheet the time you begin the transcription of the 80-word dictation and the time you finish it; and on the 100-WPM Score Sheet, the time you begin the transcription of the 100-word dictation and the time you finish it.

Are your notebooks ready for the 80-word dictation? Good. Let's begin.

Gentlemen Thank you for the order you placed with our salesman on May 7, 1965, for two steel file / cabinets. Because of inventory clearance, we do not have the cabinets you ordered. We regret that our / stock is currently depleted. (Paragraph) However, we have a similar model which should be satisfactory. You / will notice on the enclosed picture that it is identical in size, finish, and price to the ones you ordered. / Patterned after our best cabinet, it differs in styling. (Paragraph) Would you like us to send you two of these cabinets / on approval, or would you prefer to wait until a shipment of the ones you ordered arrives? Sincerely yours/

Dear Mr. Anderson Thank you for giving us this chance to acquaint you with our investment services. (Paragraph) Our goal / is to provide you with a superior investment plan at low cost. We believe that the primary service we / can provide is advising you when you should buy and sell securities. Our knowledge is based on the best inform/ation available in the current market. (Paragraph) We do hope that you will choose to place your assets selected for / investment purposes with us. You may be assured that you will obtain the best minds, the most thorough research, and / the goodwill of one of the outstanding investment-research organizations in the country. Sincerely yours/

And now the 100-word dictation.

Dear Mr. Davidson Thank you for your order of March 1, which, with the exception of the paper, has been shipped to you. We are sorry that / we could not supply it at once. Your order was larger than we could handle from our own stock, and we have sent it to the factory. (Paragraph) So that / you will not be seriously inconvenienced and that your manufacturing schedule will be met, we shall do everything possible / to

see that you receive your order by April 1, 1965. We have urged the factory to expedite delivery, pointing / out that you must have the paper for your business, that you are an old customer of ours, and that whatever is vital to your business is / vital to us. (Paragraph) As soon as the paper arrives from our factory, we shall make immediate delivery to you. Yours very sincerely/

Dear Mr. Barker Enclosed is the pamphlet that you requested in your letter of May 1. We suggest that you study it carefully to / obtain the background you need. (Paragraph)

In addition to providing those who desire training in the operation of power machines the skills that / they need to obtain employment, our course has been prepared to provide up-to-date assistance to persons who are currently employed. We know / that you will welcome the opportunity to work on machines along with the work that will be done in the classrooms. (Paragraph) Plan to begin our course / immediately.

There is a large amount of this work being done now, and you will be able to enjoy the advantage while the demand / for workers in this area of employment exceeds the supply. (Paragraph) Should you have further questions, we shall welcome your letters. Sincerely yours/

This ends the dictation. As no part of it will be repeated, record the time on your 80-WPM Score Sheet and begin transcription immediately.

May 14, 1965

Miss Mary Ann Gill
724 South Market Street
Tacoma, Washington 98402

Dear Miss Gill

At times in spending prudently, we're inclined to practice economies that in reality result in waste.

There is a time in the life of every automobile when the cost of upkeep exceeds the value of the service rendered. Today new car prices are lower, styling is more functional, and values are greater than ever before in the industry's history. Take advantage of this by trading in your old car.

See the new Jet Ride. Our showroom is open evenings.

Yours very truly

Charles L. Armstrong
Sales Manager

ti

May 14, 1965

Mr. Fred Johanson
School Supply Company
8976 East Lake Drive
Renton, Washington 98055

Dear Mr. Johanson

We appreciate very much your initial order for 100 typewriter desks, which we have entered for delivery on June 1.

We welcome you as a new customer and anticipate that this first order is only the beginning of a long business relationship, which we shall endeavor to make pleasant and profitable for both of us. You can depend on our complete cooperation.

Please write to us whenever we might be able to help you boost your sales.

Sincerely yours

Frank K. Houston
Sales Manager

ti

*craft
sequence*

60-80-100-120

May 14, 1965

Mrs. Lucy Masterson
East High School
Denison, Washington 99007

Dear Mrs. Masterson:

Thank you for your letter of March 1. I appreciate your asking me for suggestions on how to explain the concepts of unions and guaranteed annual wages as developed in my book on the history of the labor movement in the United States.

As you know, trade and craft unions are the same. I, therefore, emphasize that basically there are just two types of unions. There are trade and craft unions on the one hand and industrial unions on the other. Your students will be able easily to grasp this important concept when it is made this simple for them.

The significant point that I stress when discussing the guaranteed annual wage is that it has worked eminently well in some industries but that it's likely to be a complete failure in others. I illustrate this by citing specific industries and the reasons for the success or failure of the wage program in each.

If you have further questions, Mrs. Masterson, please do write again.

Yours very truly

John H. Lewis
Professor of Labor Economics

May 14, 1965

Mr. Ray Lee, Personnel Division
Lay, Fine, Fry, and Lee
139 East Wall Way
Dallas, Texas 75221

Dear Mr. Lee

It is a real pleasure to answer your inquiry of May 1 relative to the business ability of James G. Smith.

Mr. Smith has been employed in our main stenographic department for three years. During this time, he has given ample evidence of being a hard and willing worker and a completely responsible person. His work is accurate, neat, and dependable. He is held in high regard by all the members of our firm and has been of great help to us in the office.

He had had very little business experience when he joined our staff, but his persistence enabled him to meet our most exacting requirements. It is with deep regret that we learn of his intention to change his position. We realize, however, that this new opening offers opportunities in the field in which he intends to specialize.

I am only too glad to recommend Mr. Smith. I know that you will find him an exceedingly valuable man.

Very truly yours

Ray Shaw, Personnel

ti

May 14, 1965

Lake Contracting Company
Point Roberts
Washington 98281

Gentlemen

Thank you for the order you placed with our salesman on May 7, 1965, for two steel file cabinets. Because of inventory clearance, we do not have the cabinets you ordered. We regret that our stock is currently depleted.

However, we have a similar model which should be satisfactory. You will notice on the enclosed picture that it is identical in size, finish, and price to the ones you ordered. Patterned after our best cabinet, it differs in styling.

Would you like us to send you two of these cabinets on approval, or would you prefer to wait until a shipment of the ones you ordered arrives?

Sincerely yours

Warren Dean
Sales Manager

ti

Enclosure

May 14, 1965

Mr. Dan Anderson
9761 East Pike Street
Seattle, Washington 98122

Dear Mr. Anderson

Thank you for giving us this chance to acquaint you with our investment services.

Our goal is to provide you with a superior investment plan at low cost. We believe that the primary service we can provide is advising you when you should buy and sell securities. Our knowledge is based on the best information available in the current market.

We do hope that you will choose to place your assets selected for investment purposes with us. You may be assured that you will obtain the best minds, the most thorough research, and the goodwill of one of the outstanding investment-research organizations in the country.

Sincerely yours

Rexford K. Bloom
Sales Manager

ti

May 14, 1965

Mr. Robert Davidson
8178 Fourth Avenue
Seattle, Washington 98101

Dear Mr. Davidson

Thank you for your order of March 1, which, with the exception of the paper, has been shipped to you. We are sorry that we could not supply it at once. Your order was larger than we could handle from our own stocks, and we have sent it to the factory.

So that you will not be seriously inconvenienced and that your manufacturing schedule will be met, we shall do everything possible to see that you receive your order by April 1, 1965. We have urged the factory to expedite delivery, pointing out that you must have the paper for your business, that you are an old customer of ours, and that whatever is vital to your business is vital to us.

As soon as the paper arrives from our factory, we shall make immediate delivery to you.

Yours very sincerely

Joe L. Briggs
Sales Manager

ti

PRACTICE LETTER NO. 2 - 100 WORDS A MINUTE

May 14, 1965

Mr. T. L. Barker
Star Route
Walla Walla, Washington 99362

Dear Mr. Barker

Enclosed is the pamphlet that you requested in your letter of May 1. We suggest that you study it carefully to obtain the background you need.

In addition to providing those who desire training in the operation of power machines the skills that they need to obtain employment, our course has been prepared to provide up-to-date assistance to persons who are currently employed. We know that you will welcome the opportunity to work on machines along with the work that will be done in the classrooms.

Plan to begin our course immediately. There is a large amount of this work being done now, and you will be able to enjoy the advantage while the demand for workers in this area of employment exceeds the supply.

Should you have further questions, we shall welcome your letters.

Sincerely yours

John L. Brown
Sales Manager

ti

Enclosure

ITEM	PRACTICE 60		PRACTICE 80		PRACTICE 100		PRACTICE 120	
	1	2	1	2	1	2	1	2
MED DICTATION MATERIAL								
Syllables	126	126	168	168	210	210	252	252
Shorthand Words (1.4)	90	90	120	120	150	150	180	180
Actual Words	85	82	111	111	144	142	171	167
Syllabic Intensity	1.50	1.54	1.513	1.514	1.458	1.479	1.474	1.509
Syllables Dictated Each 15 Seconds	21	21	28	28	35	35	42	42
Typing Strokes in Timed Dictation	485	470	632	653	776	827	979	932
5-Stroke Words in Times Dictation	97	94	126.4	130.6	155.2	165.4	195.8	186.4
Typing Stroke Intensity	1.141	1.146	1.139	1.117	1.085	1.165	1.145	1.116
TE, INSIDE ADDRESS, SIGNATURE, REF. INIT.								
Syllables	27	33	28	28	30	30	32	32
Actual Words	19	22	19	19	18	20	20	25
Syllabic Intensity	1.42	1.500	1.424	1.42	1.667	1.50	1.60	1.28
Typing Strokes	120	131	107	113	111	113	121	129
5-Stroke Words	24	26.2	21.4	22.6	22.2	22.6	24.2	25.8
Typing Stroke Intensity	1.263	1.191	1.126	1.189	1.233	1.130	1.210	1.032
L TYPED MATERIAL R TRANSCRIPTION								
Total Syllables	153	159	196	196	240	240	284	284
Total Actual Words	104	104	130	130	162	162	191	192
Syllabic Intensity	1.471	1.529	1.508	1.507	1.481	1.481	1.487	1.479
Total Typing Strokes	605	601	739	766	887	940	1100	1061
Total 5-Stroke Words	121	120.2	147.8	153.2	177.4	188	220	212.2
Total Typing Stroke Intensity	1.164	1.156	1.137	1.179	1.095	1.160	1.146	1.105
PUNCTUATION MARKS								
Commas	5	4	9	4	12	5	7	13
Periods	7	6	6	9	9	12	13	15
Apostrophe	2						1	
Question Marks			1					
Hyphens				1		2		
PITAL LETTERS	27	26	22	24	25	28	34	39

PUNCTUATIONLETTER NO. 1LETTER NO. 2

COMMA

1. May 14,
2. Tacoma,
3. prudently,
4. lower,
5. functional,

1. May 14,
2. Renton,
3. desks,
4. relationship,

PERIOD

1. waste.
2. rendered.
3. history.
4. car.
5. Ride
6. evenings.
7. L.

1. Mr.
2. June 1.
3. us.
4. cooperation.
5. sales.
6. K.

APOSTROPHE

1. we're
2. industry's

CAPITAL LETTERS

1. May
2. Miss
3. Mary
4. Ann
5. Gill
6. South
7. Market
8. Street
9. Tacoma
10. Washington
11. Dear
12. Miss
13. Gill
14. At
15. There
16. Today
17. Take
18. See
19. Jet
20. Ride
21. Our
22. Yours
23. Charles
24. L.
25. Armstrong
26. Sales
27. Manager

1. May
2. Mr.
3. Fred
4. Johanson
5. School
6. Supply
7. Company
8. East
9. Lake
10. Drive
11. Renton
12. Washington
13. Dear
14. Mr.
15. Johanson
16. We
17. June
18. We
19. You
20. Please
21. Sincerely
22. Frank
23. K.
24. Houston
25. Sales
26. Manager

PUNCTUATION

COMMA

LETTER NO. 1

1. 14,
2. 7,
3. 1965,
4. clearance,
5. However,
6. size,
7. finish,
8. cabinet,
9. approval,

LETTER NO. 2

1. 14,
2. Seattle,
3. minds,
4. research,

PERIOD

1. cabinets.
2. ordered.
3. depleted.
4. satisfactory.
5. ordered.
6. styling.

1. Mr.
2. Mr.
3. services.
4. cost.
5. securities.
6. market.
7. us.
8. country.
9. K.

QUESTION MARK

1. arrives?

HYPHEN

1. investment-research

CAPITALS

1. May
2. Lake
3. Contracting
4. Company
5. Paint
6. Roberts
7. Washington
8. Gentlemen
9. Thank
10. May
11. Because
12. We
13. However
14. You
15. Patterned
16. Would
17. Sincerely
18. Warren
19. Dean
20. Sales
21. Manager
22. Enclosure

1. May
2. Mr.
3. Dan
4. Anderson
5. East
6. Pike
7. Street
8. Seattle
9. Washington
10. Dear
11. Mr.
12. Anderson
13. Thank
14. Our
15. We
16. Our
17. We
18. You
19. Sincerely
20. Rexford
21. K.
22. Bloom
23. Sales
24. Manager

PUNCTUATIONLETTER NO. 1LETTER NO. 2

COMMAS

1. 14,
2. Seattle,
3. March 1,
4. which,
5. paper,
6. stocks,
7. met,
8. April 1,
9. delivery,
10. business,
11. ours,
12. factory,

1. 14,
2. Walla Walla,
3. employment,
4. now,
5. questions,

PERIODS

1. Mr.
2. Mr.
3. you,
4. once.
5. factory.
6. 1965.
7. us.
8. you.
9. L.

1. Mr.
2. T.
3. L.
4. Mr.
5. May 1.
6. need.
7. employed.
8. classrooms.
9. immediately.
10. supply.
11. letters.
12. L.

1-2. up-to-date

HYPHENS

CAPITAL LETTERS

1. May
2. Mr.
3. Robert
4. Davidson
5. Fourth
6. Avenue
7. Seattle
8. Washington
9. Dear
10. Mr.
11. Davidson
12. Thank
13. March
14. We
15. Your
16. So
17. April
18. We
19. As
20. Yours
21. Joe
22. L.
23. Briggs
24. Sales
25. Manager

1. May
2. Mr.
3. T.
4. L.
5. Barker
6. Star
7. Route
8. Walla
9. Walla
10. Washington
11. Dear
12. Mr.
13. Barker
14. Enclosed
15. May
16. We
17. In
18. We
19. Plan
20. There
21. Should
22. Sincerely
23. John
24. L.
25. Brown
26. Sales
27. Manager
28. Enclosure

PUNCTUATIONLETTER NO. 1

COMMA

1. 14,
2. Denison,
3. know,
4. I,
5. therefore,
6. questions,
7. Masterson,

LETTER NO. 2

1. 14,
2. Lee,
3. Lay,
4. Fine,
5. Fry,
6. Dallas,
7. time,
8. accurate,
9. neat,
10. staff,
11. realize,
12. however,
13. Shaw,

PERIOD

1. Mrs.
2. Mrs.
3. March 1.
4. States.
5. same.
6. unions.
7. others.
8. them.
9. others.
10. reach.
11. Mrs.
12. again.
13. H.

1. Mr.
2. Mr.
3. G.
4. Smith.
5. Mr.
6. years.
7. person.
8. dependable.
9. office.
10. requirements.
11. position.
12. specialize.
13. Mr.
14. Smith.
15. man.

APOSTROPHE

1. it's

CAPITAL LETTERS

- | | | | |
|---------------|---------------|--------------|---------------|
| 1. May | 23. I | 1. May | 23. Smith |
| 2. Mrs. | 24. I | 2. Mr. | 24. Mr. |
| 3. Lucy | 25. If | 3. Ray | 25. Smith |
| 4. Masterson | 26. Mrs. | 4. Lee | 26. During |
| 5. East | 27. Masterson | 5. Personnel | 27. His |
| 6. High | 28. Yours | 6. Division | 28. He |
| 7. School | 29. John | 7. Lay | 29. He |
| 8. Denison | 30. H. | 8. Fine | 30. It |
| 9. Washington | 31. Lewis | 9. Fry | 31. We |
| 10. Dear | 32. Professor | 10. Lee | 32. I |
| 11. Mrs. | 33. Labor | 11. East | 33. Mr. |
| 12. Masterson | 34. Economics | 12. Wall | 34. Smith |
| 13. Thank | | 13. Way | 35. I |
| 14. March | | 14. Dallas | 36. Very |
| 15. I | | 15. Texas | 37. Ray |
| 16. United | | 16. Dear | 38. Shaw |
| 17. States | | 17. Mr. | 39. Personnel |
| 18. As | | 18. Lee | |
| 19. I | | 19. It | |
| 20. There | | 20. May | |
| 21. Yours | | 21. James | |
| 22. The | | 22. G. | |

60-WORD PRACTICE DICTATION

Practice Letter No. 1 - Inside Address: Miss Mary Ann Gill
724 South Market Street
Tacoma, Washington 98402

No. 1
60 WPM

Signature: Charles L. Armstrong
Sales Manager

Practice Letter No. 2 - Inside Address: Mr. Fred Johanson
School Supply Company
8976 East Lake Drive
Renton, Washington 98055

No. 2
60 WPM

Signature: Frank K. Houston
Sales Manager

120-WORD PRACTICE DICTATION

Practice Letter No. 1 - Inside Address: Mrs. Lucy Masterson
East High School
Denison, Washington 99007

No. 1
120 WPM

Signature: John H. Lewis
Professor of Labor Economics

Practice Letter No. 2 - Inside Address: Mr. Ray Lee, Personnel Division
Lay, Fine, Fry, and Lee
139 East Wall Way
Dallas, Texas 75221

No. 2
120 WPM

Signature: Ray Shaw, Personnel

TRANSCRIPTION - STUDENT DIRECTIONS

1. Use letterhead paper.
2. Use full block style and open punctuation.
3. Use the current date on all letters.
4. The inside addresses and the signatures for practice 60- and 120-WPM or 80- and 100-WPM dictation are listed above.
5. Letter placement is important - judge carefully.
6. Transcribe the letters in the order they were dictated. If you missed part of the dictation or can't transcribe your notes, skip that part and continue where you can.
7. No carbons are to be made, and no envelopes are to be addressed.
8. If the context indicates there is an enclosure, make that notation on the letter.
9. You may use a dictionary and reference manual.
10. Erase and correct all errors. If you erase too hard and make a hole in the paper, continue. DO NOT START OVER. The hole will be only one deduction from your score.
11. You may not secure help from a classmate or your teacher.
12. You are to begin transcribing as soon as the dictation is finished. Notes must be transcribed on the day the dictation is taken.
13. Be sure to indicate on your 60-WPM TRANSCRIPTION SCORE SHEET the time you begin Letter No. 1 of the 60-word dictation and the time you finish Letter No. 2 of the 60-word dictation.
14. Be sure to indicate on your 120-WPM TRANSCRIPTION SCORE SHEET the time you begin Letter No. 1 at the 120-word dictation and the time you finish Letter No. 2 of the 120-word dictation.
15. Attach your shorthand notes and your transcripts to your TRANSCRIPTION SCORE SHEET.

80-WORD PRACTICE DICTATION

Practice Letter No. 1 - Inside Address: Lake Contracting Company
Point Roberts
Washington 98281 No. 1

Signature: Warren Dean
Sales Manager 80 WPM

Practice Letter No. 2 - Inside Address: Mr. Dan Anderson
9761 East Pike Street
Seattle, Washington 98122 No. 2

Signature - Rexford K. Bloom
Sales Manager 80 WPM

100-WORD PRACTICE DICTATION

Practice Letter No. 1 - Inside Address: Mr. Robert Davidson
8178 Fourth Avenue
Seattle, Washington 98101 No. 1

Signature: Joe L. Briggs
Sales Manager 100 WPM

Practice Letter No. 2 - Inside Address: Mr. T. L. Barker
Star Route
Walla Walla, Washington 99362 No. 2

Signature: John L. Brown
Sales Manager 100 WPM

TRANSCRIPTION - STUDENT DIRECTIONS

1. Use letterhead paper.
2. Use full block style and open punctuation.
3. Use the current date on all letters.
4. The inside addresses and the signatures for practice 60- and 120-WPM or 80- and 100-WPM dictation are listed above.
5. Letter placement is important - judge carefully.
6. Transcribe the letters in the order they were dictated. If you missed part of the dictation or can't transcribe your notes, skip that part and continue where you can.
7. No carbons are to be made, and no envelopes are to be addressed.
8. If the context indicates there is an enclosure, make that notation on the letter.
9. You may use a dictionary and reference manual.
10. Erase and correct all errors. If you erase too hard and make a hole in the paper, continue. DO NOT START OVER. The hole will be only one deduction from your score.
11. You may not secure help from a classmate or your teacher.
12. You are to begin transcribing as soon as the dictation is finished. Notes must be transcribed on the day the dictation is taken.
13. Be sure to indicate on your 80-WPM Score Sheet the time you begin and the time you finish the 80-word dictation.
14. Be sure to indicate on your 100-WPM Score Sheet the time you begin and the time you finish the 100-word dictation.
15. Attach your shorthand notes and your letters to your record sheet.

NAME _____

TEACHER _____

DATE _____

PERIOD _____

SCHOOL _____

GREGG II _____

GREGG IV _____

FORKNER II _____

TRANSCRIPTION TIME - _____ Minutes

Time Letter No. 2 was Finished . _____

Time Letter No. 1 was Begun . . . _____

Total time required for transcribing the 2 letters in the 3-minute dictation at 60 words a minute _____

TRANSCRIPTION RATE - _____ WPM

242 (5-stroke words in the 2 letters)
 - (Actual number of words omitted)
 (TOTAL WORDS TYPED)

TRANSCRIPTION RATE = TOTAL WORDS TYPED
 ÷ TRANSCRIPTION TIME (opposite column)

Figure your WPM to the nearest tenth in this space: _____

TRANSCRIPTION SCORE FOR 60-WPM DICTATION

NOTE - Attach your shorthand notes and your two letters to this score sheet.

ITEM SCORED	LETTER NO. 1				LETTER NO. 2				LETTERS No. 1 and 2			
	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED
CORRECTIONS	104	XXXX			104	XXXX			208	XXXX		
PUNCTUATION	14	XXXX			10	XXXX			24	XXXX		
CAPITALIZATION	27	XXXX			26	XXXX			53	XXXX		
<u>READING OF SHORTHAND NOTES</u>												
WRONG WORD	85		XXXX	XXXX	82		XXXX	XXXX	167		XXXX	XXXXXX
WORD OMITTED	85		XXXX	XXXX	82		XXXX	XXXX	167		XXXX	XXXXXX
TOTAL	85	XXXX			82	XXXX			167	XXXX		
SPELLING AND TYPING ERRORS	104	XXXX			104	XXXX			208	XXXX		
<u>LETTER FORM</u>												
DATE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
INSIDE ADDRESS	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
SALUTATION	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
BODY - PARAGRAPHS	3		XXXX	XXXX	3		XXXX	XXXX	6		XXXX	XXXXXX
COMPLIMENTARY CLOSE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
SIGNATURE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
REFERENCE INITIALS	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXXXX
ENCLOSURE	0		XXXX	XXXX	0		XXXX	XXXX	0		XXXX	XXXXXX
MARGINS	2		XXXX	XXXX	2		XXXX	XXXX	4		XXXX	XXXXXX
TOTAL	11	XXXX			11	XXXX			22	XXXX		
TOTAL	345	XXXX			337	XXXX			682	XXXX		

NAME _____
 TEACHER _____ DATE _____ PERIOD _____
 SCHOOL _____ GREGG II _____ GREGG IV _____ FORKNER II _____

<p>TRANSCRIPTION TIME - _____ Minutes</p> <p>Time Letter No. 2 was Finished _____</p> <p>Time Letter No. 1 was Beg.n _____</p> <p>Total time required for transcribing the 2 letters in the 3-minute dictation at 80 words a minute _____</p>	<p>TRANSCRIPTION RATE - ----- WPM</p> <p>301 (5-stroke words in the 2 letters)</p> <p>_____ (Actual number of words omitted)</p> <p>_____ (TOTAL WORDS TYPED)</p> <p>TRANSCRIPTION RATE = TOTAL WORDS TYPED ÷ TRANSCRIPTION TIME (opposite column)</p> <p>Figure your WPM to the nearest tenth in this space: _____</p>
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TRANSCRIPTION SCORE FOR 80-WPM DICTATION

NOTE - Attach your shorthand notes and your two letters to this score sheet.	LETTER NO. 1				LETTER NO. 2				LETTERS NO. 1 and 2			
	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED
ITEM SCORED												
CORRECTIONS	130	XXXX			130	XXXX			260	XXXX		
PUNCTUATION	16	XXXX			14	XXXX			30	XXXX		
CAPITALIZATION	22	XXXX			24	XXXX			46	XXXX		
READING OF SHORTHAND NOTES												
WRONG WORD	111		XXXX XXXX	111		XXXX XXXX		222		XXXX XXXX		XXXX XXXX
WORD OMITTED	1111		XXXX XXXX	1111		XXXX XXXX		222		XXXX XXXX		XXXX XXXX
TOTAL	111	XXXX			111	XXXX			222	XXXX		
PELLING AND TYPING ERRORS	130	XXXX			130	XXXX			260	XXXX		
LETTER FORM												
DATE	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
INSIDE ADDRESS	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
SALUATION	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
BODY - PARAGRAPHS	3		XXXX XXXX	3		XXXX XXXX		6		XXXX XXXX		XXXX XXXX
COMPLIMENTARY CLOSE	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
SIGNATURE	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
REFERENCE INITIALS	1		XXXX XXXX	1		XXXX XXXX		2		XXXX XXXX		XXXX XXXX
ENCLOSURE	1		XXXX XXXX	0		XXXX XXXX		1		XXXX XXXX		XXXX XXXX
MARGINS	2		XXXX XXXX	2		XXXX XXXX		4		XXXX XXXX		XXXX XXXX
TOTAL	12	XXXX			11	XXXX			23	XXXX		
TOTAL	421				420				841			

NAME _____
 TEACHER _____ DATE _____ PERIOD _____
 SCHOOL _____ GREGG II _____ GREGG IV _____ FORKNER II _____

TRANSCRIPTION TIME - _____ Minutes
 Time Letter No. 2 was Finished . _____
 Time Letter No. 1 was Begun. . . . _____
 Total time required for transcribing the 2 letters in the 3-minute dictation at 100 words a minute _____

TRANSCRIPTION RATE - _____ WPM
 366 (5-stroke words in the 2 letters)
 - (Actual number of words omitted)
 (TOTAL WORDS TYPED)
TRANSCRIPTION RATE = TOTAL WORDS TYPED ÷ TRANSCRIPTION TIME (opposite column)
 Figure your WPM to the nearest tenth in this space: _____

TRANSCRIPTION SCORE FOR 100-WPM DICTATION

NOTE - Attach your shorthand notes and your two letters to this score sheet.	LETTER NO. 1				LETTER NO. 2				LETTERS NO. 1 and 2			
	TOTAL POSSIBLE POINTS	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED
ITEM SCORED												
<u>CORRECTIONS</u>	162	XXXX			162	XXXX			324	XXXX		
<u>PUNCTUATION</u>	21	XXXX			19	XXXX			40	XXXX		
<u>CAPITALIZATION</u>	25	XXXX			28	XXXX			53	XXXX		
<u>READING OF SHORTHAND NOTES</u>												
WRONG WORD	144		XXXX	XXXX	142		XXXX	XXXX	286		XXXX	XXXX
WORD OMITTED	144		XXXX	XXXX	142		XXXX	XXXX	286		XXXX	XXXX
TOTAL	144	XXXX			142	XXXX			286	XXXX		
<u>SPELLING AND TYPING ERRORS</u>												
<u>LETTER FORM</u>												
DATE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
INSIDE ADDRESS	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
SALUTATION	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
BODY - PARAGRAPHS	4		XXXX	XXXX	3		XXXX	XXXX	7		XXXX	XXXX
COMPLIMENTARY CLOSE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
SIGNATURE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
REFERENCE INITIALS	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
ENCLOSURE	1		XXXX	XXXX	0		XXXX	XXXX	1		XXXX	XXXX
MARGINS	2		XXXX	XXXX	2		XXXX	XXXX	4		XXXX	XXXX
TOTAL	13	XXXX			11	XXXX			24	XXXX		
TOTAL	527				524				1051			

NAME _____
 TEACHER _____ DATE _____ PERIOD _____
 SCHOOL _____ GREGG II _____ GREGG IV _____ FORKNER II _____

TRANSCRIPTION TIME _____ Minutes
 Time Letter No. 2 was Finished . _____
 Time Letter No. 1 was Begun. . . _____
 Total time required for transcribing the 2 letters in the 3-minute dictation at 120 words a minute . . . _____

TRANSCRIPTION RATE - _____ WPM
 433 (5-stroke words in the 2 letters)
 - _____ (Actual number of words omitted)
 _____ (TOTAL WORDS TYPED)
 TRANSCRIPTION RATE = TOTAL WORDS TYPED
 ÷ TRANSCRIPTION TIME (opposite column)
 Figure your WPM to the nearest tenth in this space: _____

TRANSCRIPTION SCORE FOR 120-WPM DICTATION

NOTE - Attach your shorthand notes and your two letters to this score sheet.	LETTER NO. 1				LETTER NO. 2				LETTERS NO. 1 and 2			
	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED	TOTAL POINTS POSSIBLE	DEDUCTIONS ITEMIZED	TOTAL DEDUCTIONS	TOTAL POINTS EARNED
ITEM SCORED												
CORRECTIONS	191	XXXX			192	XXXX			383	XXXX		
PUNCTUATION	21	XXXX			28	XXXX			49	XXXX		
CAPITALIZATION	34	XXXX			39	XXXX			73	XXXX		
<u>READING OF SHORTHAND NOTES</u>												
WRONG WORD	171		XXXX	XXXX	167		XXXX	XXXX	338		XXXX	XXXX
WORD OMITTED	171		XXXX	XXXX	167		XXXX	XXXX	338		XXXX	XXXX
TOTAL	171	XXXX			167	XXXX			338	XXXX		
<u>SPELLING AND TYPING ERRORS</u>	191	XXXX			192	XXXX			383	XXXX		
<u>LETTER FORM</u>												
DATE	1		XXXX	XXXX	1	XXXX	XXXX	XXXX	2		XXXX	XXXX
INSIDE ADDRESS	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
SALUTATION	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
BODY - PARAGRAPHS	4		XXXX	XXXX	4		XXXX	XXXX	8		XXXX	XXXX
COMPLIMENTARY CLOSE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
SIGNATURE	1		XXXX	XXXX	1		XXXX	XXXX	2		XXXX	XXXX
REFERENCE INITIALS	1		XXXX	XXXX	1		XXXX	XXXX	22		XXXX	XXXX
ENCLOSURE	0		XXXX	XXXX	0		XXXX	XXXX	0		XXXX	XXXX
MARGINS	2		XXXX	XXXX	2		XXXX	XXXX	4		XXXX	XXXX
TOTAL	12	XXXX			12	XXXX			24	XXXX		
TOTAL	620				630				1250			

USING THE TRANSCRIPTION SCORE SHEET

An attempt was made in developing this score sheet to make it as objective as possible and at the same time make it one that the students could easily use.

TRANSCRIPTION TIME

On the day of the dictation and transcription test:

1. Have the students record on the correct **TRANSCRIPTION SCORE SHEET** (60 on the first test day and 80 on the second test day) the time they begin transcribing Letter No. 1 at the lower rate dictated on that day (60 on the first test day and 80 on the second test day).
2. The teacher records the time on the board, changing it every half minute. It would probably be wise to have a reliable student do this.
3. When the student has finished transcribing Letter No. 2 at the lower rate dictated on that day (60 on the first test day and 80 on the second test day), have him record on the **TRANSCRIPTION SCORE SHEET** (either 60 or 80, depending on whether it is the first on the second test day) the time at which he finished.
4. When the student is ready to begin transcription of Letter No. 1 of the higher rate (either 120 or 100) dictated on that particular day, he is to record on the **TRANSCRIPTION SCORE SHEET** for that particular rate of dictation (again either 120 or 100) the time he begins.
5. When the student has finished Letter No. 2 of the higher rate (either 120 or 100) dictated on that particular day, he is to record on his **TRANSCRIPTION SCORE SHEET** for that particular rate of dictation (again either **TRANSCRIPTION OF 120-WORD DICTATION SCORE SCHEET** or **TRANSCRIPTION OF 100-WORD DICTATION SCORE SHEET**) the time.

On the day the transcripts are corrected:

6. Have the students compute the length of time required for transcription of the particular rate by subtracting the time Letter No. 1 was begun as shown on the **TRANSCRIPTION SCORE SHEET** for that particular rate from the time that Letter No. 2 was finished.
7. Have the student record his transcription time in the proper blank at the top of this section of the **SCORE SHEET**.
8. Previous to the test, give the students lots of practice in doing the computations so they will be able to do them quickly, easily, and correctly.

TRANSCRIPT RATE

1. Have the students compute their transcription rate by dividing the number of words typed in the two letters (the number of words given on the **DICTATION SCORE SHEET** less the number of words the student omitted in the two letters) by their own transcription time recorded in the blank just opposite this one.
2. Have students carry the computation out two places so the result will be correct to the nearest tenth. (If the hundredth is 5 or over, raise the figure; e.g., $35.67 = 35.7$ WPM.)
3. Have students make their computations on the **SCORE SHEET** for easy verification.
4. Give students lots of practice in making these computations so they can do them easily, quickly, and correctly.

TRANSCRIPTION SCORE

1. CORRECTIONS

- a. By a correction we mean that the incorrect letter or word has been erased and the correct word or letter typed.
- b. If a correction has been made, one point is deducted if
 - (1) There is a hole in the paper;
 - (2) The correction is so badly smudged the letter is not mailable;
 - (3) The correction looks like a typeover;
 - (4) The letter or word is above or below the line of writing;
 - (5) The letters are so crowded that they cannot be recognized;
 - (6) And, one point is deducted for each word omitted.
- c. Indicate a correction error by circling the entire word containing the correction and writing "1" in the left margin on the same line in which the errors occurred.

2. PUNCTUATION

- a. Deduct one point for each mark of punctuation which is omitted in the transcript.
- b. Deduct one point for each mark of punctuation which is used in the transcript which is not used in the original script.
- c. Deduct one point for incorrect spacing before or after a mark of punctuation.
- d. Indicate a punctuation error by circling the entire word preceding the punctuation mark or the word containing the punctuation mark and writing in the left margin on the same line in which the error occurred the figure "2."
- e. Deduct one point for each word omitted which has a punctuation mark following it. (See punctuation and capitalization sheet)

3. CAPITALIZATION

- a. Deduct one point for each letter which is not capitalized but should be.
- b. Deduct one point for each letter which is capitalized but should not be.
- c. Indicate the capitalization error by circling the entire word containing the error and placing the figure "3" in the left margin on the same line.
- d. Deduct one point for each word omitted which began with a capital letter. (See punctuation and capitalization sheet)

4. READING SHORTHAND NOTES

- a. Only the salutation, the body, and the complimentary close are to be scored for this.
- b. There can be only as many errors in reading shorthand notes as there are actual words in these parts of the letter.
- c. There are, for purposes of this test, two kinds of transcription errors-- either the word is omitted or it is not the word which was dictated (word omitted or wrong word).
- d. One point will be deducted for each word that was dictated but which is omitted in the transcription.
- e. One point is deducted for each word in the transcription that is different from the word which was dictated.
- f. Deduct one point for each word which has been substituted which would make the letter mailable but which is different from the word dictated. This must be counted as a wrong word.
- g. Indicate an error in reading shorthand notes by circling the word and in the left margin on the same line writing 4w for wrong word or 4 for word omitted.

TRANSCRIPTION SCORE (Continued)

5. SPELLING AND TYPING ERRORS

- a. Deduct one point for each spelling or typing error,
- (1) Any word spelled incorrectly
 - (2) Any typographical error the student did not correct
 - (3) Each word omitted in the letter--all parts of it.
- b. The following are not spelling and typing errors; they are counted under other headings:
- (1) Correction errors
 - (2) Punctuation errors
 - (3) Capitalization errors
 - (4) Reading of shorthand error
- c. Indicate a spelling and typing error by circling the word and in the left margin on the same line as the error writing "5."

6. LETTER FORM (Points deducted for form only)

- a. DATE - Deduct one point if
- (1) The date does not begin at the left margin, or
 - (2) The date is not about $\frac{1}{2}$ inch below the letterhead, or
 - (3) The date is omitted.
- b. INSIDE ADDRESS - Deduct one point if
- (1) Each line of the inside address does not begin at the left margin, or
 - (2) All or any part of the inside address is double spaced, or
 - (3) The distance between the date and the inside address is not approximately correct, or
 - (4) The inside address is omitted.
- c. SALUTATION - Deduct one point if
- (1) The salutation does not begin at the left margin, or
 - (2) There is not a double space (one blank line) above the salutation, or
 - (3) The salutation is omitted.
- d. BODY - Deduct one point
- (1) For each paragraph that does not have a blank line above it, or
 - (2) if all lines of the paragraphs do not begin at the left margin.
 - (3) For each paragraph omitted.
- e. COMPLIMENTARY CLOSE - Deduct one point if
- (1) There is not a double space (one blank line) above it, or
 - (2) The complimentary close does not begin at the left margin, or
 - (3) The complimentary close is omitted.

TRANSCRIPTION SCORE (Continued)

6. LETTER FORM (Continued)

f. SIGNATURE - Deduct one point if

- (1) There are not three blank lines above the typed signature, or
- (2) Each line of the signature does not start at the left margin, or
- (3) The signature is omitted.

g. REFERENCE INITIALS - Deduct one point if

- (1) The reference initials do not start at the left margin, or
- (2) The reference initials are omitted.

h. ENCLOSURE - Deduct one point if

- (1) The enclosure notation does not start at the left margin, or
- (2) There is not a blank line between it and the reference initials, or
- (3) The enclosure is omitted.

i. MARGINS - Deduct one point

- (1) If the letter is too high or too low on the page, or
- (2) If the left or right margin is too wide or too narrow, or if some lines are too long or too short, or
- (3) Deduct two points if the letter is not transcribed.

k. Indicate form errors by circling the item in error and writing in the RIGHT margin the following

- (1) "6a" for a date error
- (2) "6b" for an inside address error
- (3) "6c" for a salutation error
- (4) "6d" for a body form error
- (5) "6e" for a complimentary close form error
- (6) "6f" for a signature form error
- (7) "6g" for a reference initial form error
- (8) "6h" for an enclosure form error
- (9) "6i" for a margin form error

7. TRANSCRIPTION SCORES WILL BE WEIGHTED AS FOLLOWS:

- a. Corrections x
- b. Punctuation x
- c. Capitalization x
- d. Reading Shrothand Notes x
- e. Spelling and Typing Errors x
- f. Letter Form x

EXPERT TRANSCRIPTION SERVICE

GREGG AND FORKNER

SEATTLE PUBLIC SCHOOLS

Seattle

Washington

APPENDIX C
MATERIALS AND INSTRUCTIONS FOR
GIVING THE 1965 SHORTHAND TESTS

SEATTLE PUBLIC SCHOOLS
Administrative and Service Center
815 Fourth Avenue North
Seattle, Washington 98109

March 16, 1965

TO Shorthand Teachers and Department Heads

FROM Verner Dotson and Margaret S. Roberts

Shorthand Evaluation and Comparison Test

On February 25, 1965, most of the shorthand teachers and five of the department heads met with us to discuss the comparison test. The following decisions were made and have been incorporated in the test directions:

1. Only one test will be given each day.
2. Four tests, 60-, 80-, 100-, and 120-words per minute, will be given.
3. A one-minute warmup at a rate 20 words per minute higher than the test rate will precede each test.
4. Punctuation and paragraphs will be dictated.
5. Dictation and transcription will be in paragraph form, using a 70-stroke line and double spacing.
6. Only two kinds of errors will be marked and recorded:
 - a. Shorthand transcription errors - words omitted
- wrong words and extra words inserted
 - b. Spelling and typographical errors.

Even though the test is to be transcribed in paragraph form, students should, for the most part, continue to do their class transcripts in regular letter form. The test is being transcribed in this form to simplify its correction and scoring. The practice test may be used in both ways since you have the information for making it into letter form.

Likewise, although the punctuation will be dictated in the test, it should not be dictated for regular class work.

ch

SHORTHAND EVALUATION AND COMPARISON TEST

STATEMENT OF PURPOSE - To compare the success of high school students in transcription from Gregg Shorthand and Forkner Shorthand at dictation rates of 60-, 80-, 100-, and 120-words per minute

COMPARISON FACTORS - Cumulative grade point average
 Straight copy typewriting rate and accuracy
 Shorthand transcription rate
 Shorthand transcription accuracy

TIME SCHEDULE

- September 9, 1964 - Forkner Shorthand classes were begun
- January 21, 1965 - Shorthand Evaluation Committee* Meeting
- February 8, 1965 - Rough draft of practice test and procedures for administering the test sent to Business Education Department Heads for study by them and their shorthand teachers.
- February 15, 1965 - Department Heads return all papers with their school's suggestions for modification and change.
- February 25, 1965 - Meeting of the shorthand teachers.
- March 29, 1965 - Practice Shorthand test tapes, SHORTHAND TEST INFORMATION SHEETS, and instructions sent to department heads for all shorthand teachers.
- March 29, 1965 - Students fill out Sections A of their individual SHORTHAND TEST INFORMATION SHEETS.
- March 29 - April 2 - On regular Mid-Term test day, All-City Straight Copy and Number-Symbol Copy Typing Test is given to all shorthand students. Mid-Term Typing III scales are to be used in scoring the papers. Students record the Straight Copy Mid-Term Typing Test scores in Section C of the SHORTHAND TEST INFORMATION SHEET and attach their papers to the sheet.
- March 29 - April 2 - In Section B of the SHORTHAND TEST INFORMATION SHEET, the teacher will record the cumulative grade point average.
- May 2, 1965 - Tapes of Shorthand Test, Transcription Keys, and TRANSCRIPTION SCORE SHEETS sent to the department heads of each high school.
- May 10-14, 1965 - Shorthand tests are given.
- May 12-21, 1965 - Tests are scored, TRANSCRIPTION SCORE SHEETS are completed, and the shorthand notes and the transcripts are attached to their respective TRANSCRIPTION SCORE SHEETS.
- May 17-21, 1965 - Using their 60-, 80-, 100-, and 120-word per minute TRANSCRIPTION SCORE SHEETS, students complete Section D of their SHORTHAND TEST INFORMATION SHEETS. When they have done this, they attach to the SHORTHAND TEST INFORMATION SHEETS, which already has their typing test attached to it, their four TRANSCRIPTION SCORE SHEETS, including their shorthand notes and transcripts.
- May 24, 1965 - Teachers give to department heads the SHORTHAND TEST INFORMATION SHEETS with their attachments; each class fastened together and labeled.
- June 1, 1965 - Department heads send all test materials to the Business Education Office, Administrative and Service Center.
- June 9, 1965 - Data to be placed on IBM cards and processed.

* COMMITTEE MEMBERS: Lorraine Fairfield, Elizabeth Montgomery, Louise Mutschler, Ethel Robinson, Verner Dotson, and Margaret S. Roberts

STUDENTS WHO ARE TO TAKE THE TEST - Those in Forkner Shorthand II
Those in Gregg Shorthand II
Those in Gregg Shorthand IV

NATURE OF DICTATION TO BE GIVEN

1. All of the dictation will be letter content in paragraph form.
2. There will be one 3-minute dictation at each of the following rates: 60-, 80-, 100-, and 120-words a minute, each to be given on a different day.
3. The syllabic intensity will be approximately 1.4 on each dictation rate.
4. The stroke intensity will be approximately 1.1.
5. The dictation will be counted in the Gregg and Forkner standard word count of 1.4 syllables per word.
6. Words used will include those found in the first 5,000 words in the Horn-Peterson list and the Silverthorn list.
7. For determining the transcription rate for this test, actual words will be used.
8. For determining errors, actual words will be used.
9. The test tapes will be lower in syllabic and stroke intensity and word usage than the practice test tapes, and different subject matter will be used.
10. Paragraphs and punctuation will be indicated in the dictation. The only marks of punctuation used will be the comma, the period, the apostrophe, the hyphen, and the question mark.
11. The practice and test tapes will be dictated by Miss Alberta Frerichs, University of Washington.

SHORTHAND TEST INFORMATION SHEET

1. This sheet summarizes the information that will be needed for punching the IBM cards.
2. Section A is to be completed by the students soon after March 29.
3. Section B will be completed by the teacher between March 29 and April 2.
4. Section C will be completed by the students and verified by the teacher soon after the students have taken the Mid-Term All-City Typing Test.
5. Section D is to be completed by the students between May 17 and 20 and verified by the teachers between May 17 and 24.
6. Department Heads will check all material between May 24 and June 1.

DICTATION - STUDENT INFORMATION

1. If part of the dictation is missed, pick it up where you can and continue.
2. No part of the dictation will be repeated.
3. Notes must be transcribed the same day the dictation is taken.

TRANSCRIPTION - STUDENT INFORMATION

1. Use regular white typing paper.
2. Type your name on each sheet of paper you use for transcription.
3. Transcribe the notes in the order dictated. If you missed part of the dictation or cannot transcribe your notes, skip that part and continue where you can.
4. Transcripts are to be double spaced, on a 70-stroke line, with 5-space paragraph indentions.
5. No carbons are to be made.
6. A dictionary and reference manuals may be used.
7. Erase and correct all errors. If you erase too hard and make a hole in the paper, continue. DO NOT START OVER.
8. No help may be secured from a classmate or your teacher.
9. Transcription is to start when the teacher indicates that you are to begin.
10. Indicate on your TRANSCRIPTION SCORE SHEET the length of time it took you to transcribe. (This includes the time for proofreading and correcting errors.)
11. After you have written you name on each page of your shorthand notes, attach them and your transcript to your TRANSCRIPTION SCORE SHEET.

TEST PROCEDURES

1. All teachers of Forkner Shorthand II, Gregg Shorthand II, and Gregg Shorthand IV give the SAME test on the same day.
2. Tests are to be transcribed on the same day that the dictation is given.
3. Directions for administering the tests are exactly the same as those for administering the practice tests.
 - a. Previous to the day of the test, the students should understand and be able to apply all directions for taking the test and transcribing it.
 - b. Previous to the test, check to see that the dictating equipment is in proper working condition.
 - c. Have the materials, TRANSCRIPTION SCORE SHEETS, shorthand notebooks, dictionary, STUDENT TRANSCRIPTION INFORMATION SHEET, erasers, and pens so organized that on the day of the test, the students can quickly type their names on the sheets of paper they will be using and the dictation can begin immediately.
 - d. When all are ready, turn on the recorder and have the students take the dictation.
 - e. Do not repeat any part of the dictation.
 - f. As the students have had many opportunities to take dictation from the practice dictation tapes, taking the dictation from the tape will present no problem to them.

TEST PROCEDURES (Continued)

2. Transcription

- a. After the dictation is finished, all students are to begin transcribing at the same time to be indicated by the teacher.
- b. The transcription will be timed to the nearest half minute.
- c. Using a stop watch, the teacher will indicate on the board the number of minutes it took the first student to finish transcribing. Thereafter, the time will be recorded every half minute until all have finished. (A reliable student may do this.) For example: Assuming that it took the most rapid student 10 minutes to complete the transcription, the teacher would then write on the board: 10; in one-half minute, she would add $\frac{1}{2}$ and it would become $10\frac{1}{2}$; in another half minute, it would change to 11, etc.
- d. One student is not permitted to help another with the transcription.
- e. Be sure that the students record the length of time required for each transcription.

3. Scoring the papers

- a. For scoring directions see the pages "Using the Transcription Score Sheets."
- b. After the information has been recorded on the TRANSCRIPTION SCORE SHEET, have the students fill in Section D of their SHORTHAND TEST INFORMATION SHEET. (The other parts of this have been filled in previously.)
- c. Have each student attach to his SHORTHAND TEST INFORMATION SHEET the following:
 - (1) The Mid-Term All-City Typing Test Papers are already there.
 - (2) TRANSCRIPTION SCORE SHEETS for 60-, 80-, 100-, and 120- words per minute dictation with the shorthand notes and the transcripts.
- d. The teacher will then audit the papers, see that everything is in order, and give each class set to his department head.
- e. The department head will collect the papers for each shorthand class, check to see that everything is in order, and send all of the school's test materials, clearly labeled, to the Business Education Office, Administrative and Service Center.

TYPING TEST

1. All students in the shorthand classes being tested will take the All-City Straight Copy Typing Test at Mid-Term Spring Semester, 1965. They will also take the Number-Symbol Test but not report that part of it for this comparative study.
2. All students in shorthand classes will use the following Typing III Mid-Term Scales.
 - a. Straight Copy Scale

	A	B	C	D
0 -	55	47	39	28
1 -	59	50	42	30
2 -	63	54	45	32
3 -	67	58	49	34
 - b. Number-Symbol Copy Scale

	A	B	C	D
0 -	44	34	25	16
1 -	50	40	29	21
3. After the scores have been recorded in Section C on the student's SHORTHAND TEST INFORMATION SHEET, the typing test papers are to be attached to this sheet.

MATERIALS NEEDED

1. Test materials to be sent out from A and S Center
 - a. Dictation test tapes - four, one for each rate of dictation
 - b. TRANSCRIPTION SCORE SHEETS - four, one for each dictation rate, for each student in the classes taking the tests
 - c. SHORTHAND TEST INFORMATION SHEET - one for each student taking the test
 - d. TRANSCRIPTION TEST KEYS, one for each student for each rate of dictation, 60-, 80-, 100-, and 120-WPM
2. Those to be supplied by student and the school
 - a. Shorthand notebooks
 - b. Pens
 - c. Typing paper
 - d. Erasers
 - e. Dictionaries and reference manuals
 - f. Stop watch

SECTION A

NAME _____ SCHOOL _____

SEX: Boy ___ Girl ___ AGE _____ GRADE IN SCHOOL: 10___ 11___ 12___

IN WHICH OF THE FOLLOWING CLASSES ARE YOU NOW ENROLLED? Gregg 2___ Gregg 3___
Gregg 4___ Forkner 2___

DO YOU EXPECT TO USE YOUR SHORTHAND AS SOON AS YOU
CAN GET A JOB AFTER GRADUATION FROM HIGH SCHOOL? YES ___ No ___

DO YOU PLAN TO GO TO COLLEGE? No ___ Yes ___ Maybe ___ Next Fall ___ Later ___

SECTION B

CUMULATIVE GRADE POINT AVERAGE _____

(This cumulative grade point average is made up of grades earned in the 10th, 11th, and 12th grades in all subjects except Physical Education and any other subject for which partial credit is given. The grades for the fall semester of the 1964-1965, but not those for the mid-term of the present spring semester of 1965 are to be included.)

SECTION C

STRAIGHT COPY SCALE USED YOUR STRAIGHT COPY SCORE

Mid-Term All-City Typing Test
Spring Semester, 1965

	A	B	C	D
0 -	55	47	39	28
1 -	59	50	42	30
2 -	63	54	45	32
3 -	67	58	49	34

SPEED _____

ERRORS _____

GRADE _____

SECTION D

TRANSCRIPTION SCORE

ITEM SCORED	DICTATION RATE			
	60-WPM	80-WPM	100-WPM	120-WPM
POINTS DEDUCTED ON SHORTHAND TRANSCRIPTION				
Words Omitted				
Wrong word and extra words inserted				
TOTAL POINTS DEDUCTED ON SHORTHAND TRANSCRIPTION				
POINTS DEDUCTED ON SPELLING AND TYPING				
Words not spelled correctly, typographical errors, punctuation, capitalization				
TOTAL POINTS DEDUCTED IN BOTH SHORTHAND TRANSCRIPTION AND SPELLING AND TYPING				
TRANSCRIPTION TIME				
TRANSCRIPTION RATE - WORDS PER MINUTE				

TRANSCRIPTION SCORE SHEET

DICTATION RATE - WORDS PER MINUTE _____

TEACHER _____ STUDENT'S NAME _____

SCHOOL _____ DATE _____ PERIOD _____

GREGG 2 _____ GREGG 3 _____ GREGG 4 _____ FORKNER 2 _____

TRANSCRIPTION TIME

MINUTES - _____

(Total time, to the nearest half minute, it took you to transcribe the three-minute dictation at this rate.)

TRANSCRIPTION RATE

WORDS PER MINUTE - _____

_____ (Actual words in the dictation)

_____ (Actual number of words omitted)

_____ (Total words typed)

TRANSCRIPTION RATE = TOTAL WORDS TYPED divided by TRANSCRIPTION TIME, taken from the section above. Figure your words per minute to the nearest tenth in the space opposite this.

TRANSCRIPTION SCORE - _____ WORDS-PER-MINUTE DICTATION

ITEMS SCORES	POINTS DEDUCTED
<u>SHORTHAND TRANSCRIPTION ERRORS</u>	
Words omitted (✓)	
Wrong word and extra words inserted (X)	
TOTAL SHORTHAND TRANSCRIPTION ERRORS	
<u>SPELLING AND TYPING ERRORS</u>	
Words not spelled correctly, typographical errors, punctuation and capitalization errors (○)	
TOTAL POINTS DEDUCTED IN BOTH SHORTHAND TRANSCRIPTION AND SPELLING AND TYPING	

GENERAL INFORMATION

1. Have the students fill in the upper part of the sheet.
2. Be very sure that they indicate the DICTATION RATE for that day (60, 80, 100, or 120) at the top of the sheet.

TRANSCRIPTION TIME

1. Have the student record the length of time it took him to transcribe when he has finished with his transcription.
2. Transcription time is to include the time it takes him to proofread and make any corrections.
3. The student may make no corrections or changes after he has indicated his transcription time.
4. The student will indicate the transcription time on the day that he takes the dictation and does the transcription.

TRANSCRIPTION RATE

1. Have the student fill in the blank for the number of actual words in the dictation, using the following information.

In the 60-word dictation, there are 170 actual words.

In the 80-word dictation, there are 221 actual words.

In the 100-word dictation, there are 286 actual words.

In the 120-word dictation, there are 339 actual words.

2. Then have the student fill in the next blank indicating the actual number of words he omitted in the transcription. This will be the total number of checks (✓) he has on his transcription paper.
3. To get the total words he typed, the student subtracts the number of words he omitted from the number of words in that particular dictation.
4. To secure the TRANSCRIPTION RATE, the student divides the TOTAL WORDS TYPED by the TRANSCRIPTION TIME.
5. Have the students compute the transcription rate so the result will be correct to the nearest tenth.
6. For easy verification, have the student make his computation in the right-hand column under TRANSCRIPTION RATE on the TRANSCRIPTION SCORE SHEET.

TRANSCRIPTION SCORE

1. PROOFREADING THE COPY

- a. Supply each student with a key, correct transcript, of the dictation.
- b. Have each student check his own paper.
- c. If a teacher thinks it is desirable, the students may then exchange papers to be sure no errors have been overlooked.
- d. Have the student place the key, correct transcript, under his transcript so that the line appearing above the student transcript will always be the line which the teacher is reading. The student will pull the key copy up, one line at a time, as the proofreading progresses.
- e. The teacher will read the copy slowly, spelling some words, indicating punctuation, capitalization, and paragraphs.

2. TRANSCRIPTION ERRORS

- a. If a word is omitted, a check (✓) for each word omitted is placed at the point where the word or words are omitted.
- b. If a student transcribes only a few words of a certain dictation rate, it may be easier to find the words omitted by counting only those typed.
- c. If a word is incorrectly transcribed with the wrong word or if extra words are added, a neat (X) is placed over the word to indicate this type of error.

3. SPELLING AND TYPING ERRORS

- a. All errors in spelling and typing are indicated by circling the entire word in which the error occurs.
- b. If a correction is made, even though poorly done, it is not an error.
- c. If a punctuation error is made, the word preceding it is circled.
- d. Failure to indent a paragraph is a typing error.

4. RECORDING THE TRANSCRIPTION SCORE

- a. Have the students count the number of checks (✓) and in the blank indicate the number of words omitted.
- b. Have the students count the number of words which have an (X) through them and in the blank indicate the number of wrong words and words inserted.
- c. Have the students add the number of words omitted and the number of wrong words and extra words inserted to get the TOTAL ERRORS IN SHORTHAND TRANSCRIPTION.
- d. Have the students count the number of words which have been circled and in the proper blank indicate the number of spelling and typing errors.
- e. To find total points deducted, the students add the TOTAL SHORTHAND TRANSCRIPTION ERRORS and the SPELLING AND TYPING ERRORS.

5. Have the students write their name on each page of their shorthand notes and attach the notes and their transcripts to the TRANSCRIPTION SCORE SHEET.

TRANSCRIPTION KEY FOR 60-WPM DICTATION

	<u>Actual Word:</u>
Dear Miss Gill At times in spending prudently, we are inclined to	12
practice economies that in reality result in waste.	8
There is a time in the life of every automobile when the cost of	14
upkeep exceeds the value of the service rendered. Today new car prices	12
are lower, styling is more functional, and values are greater than ever	12
before in the history of the industry. Take advantage of this by trading	13
in your old car.	4
See the new Jet Ride. Our showroom is open evenings. Yours very	12
truly	1
Dear Mr. Johanson We appreciate very much your initial order for	11
100 typewriter desks, which we have entered for delivery on June 1.	12
We welcome you as a new customer and anticipate that this first	12
order is only the beginning of a long business relationship, which we	12
shall endeavor to make pleasant and profitable for both of us. You	12
can depend on our complete cooperation.	6
Please write to us whenever we might be able to help you boost your	14
sales. Sincerely yours	3

SAMPLE CORRECTION

Dear Miss Gill At times in spending prudently, we are inclined to
 practise economics that in reality result in waste.

There is a time in the life of each automobil when the upkeep
 exceeds the value of the services rendered. Today car prices are
 lower, styling more functional and values greater than ever before
 in the history of the industry. Take advantage of this by trading in
 your old car. See the new Jet Ride. Our showroom is open five
 evenings each week. Yours very truly

6 X
 5 ✓

TRANSCRIPTION KEY FOR 80-WPM DICTATION

Actual Words

Gentlemen Thank you for the order you placed with our salesman on 12
 May 7, 1965, for the steel file cabinets. Because of inventory clearance, 12
 we do not have the cabinets you ordered. We regret that our stock is 14
 currently depleted. 2

However, we have a similar model which should be satisfactory. You 11
 will notice on the enclosed picture that it is identical in size, finish, 13
 and price to the ones you ordered. Patterned after our best cabinet, it 13
 differs in styling. 3

Would you like us to send you two of these cabinets on approval, 13
 or would you prefer to wait until a shipment of the ones you ordered 14
 arrives? Sincerely yours 3

Dear Mr. Anderson Thank you for giving us this chance to acquaint 12
 you with our investment services. 5

Our goal is to provide you with a superior investment plan at low 13
 cost. We believe that the primary service we can provide is advising 12
 you when you should buy and sell securities. Our knowledge is based 12
 on the best information available in the current market. 9

We do hope that you will choose to place your assets selected 12
 for investment purposes with us. You may be assured that you will 12
 obtain the best minds, the most thorough research, and the goodwill of 12
 one of the outstanding investment-research organizations in the country. 10

Sincerely yours 2

TRANSCRIPTION KEY FOR 100-WPM DICTATIONACTUAL WORDS

Dear Mr. Davidson Thank you for your order of March 1, which, with 13
the exception of the paper, has been shipped to you. We are sorry that 14
we could not supply it at once. Your order was larger than we could 14
handle from our own stock, and we have sent it to the factory. 13

So that you will not be seriously inconvenienced and that your 11
manufacturing schedule will be met, we shall do everything possible to 11
see that you receive your order by April 1, 1965. We have urged the 14
factory to expedite delivery, pointing out that you must have the paper 12
for your business, that you are an old customer of ours, and that whatever 14
is vital to your business is vital to us. 9

As soon as the paper arrives from our factory, we shall make 12
immediate delivery to you. Yours very sincerely 7

Dear Mr. Barker Enclosed is the pamphlet that you requested in your 12
letter of May 1. We suggest that you study it carefully to obtain the 14
background you need. 3

In addition to providing those who desire training in the operation 11
of power machines the skills that they need to obtain employment, our 12
course has been prepared to provide up-to-date assistance to persons who 13
are currently employed. We know that you will welcome the opportunity 11
to work on machines along with the work that will be done in the 14
classrooms. 1

Plan to begin our course immediately. There is a large amount of 12
this work being done now, and you will be able to enjoy the advantage 14
while the demand for workers in this area of employment exceeds the 12
supply. 1

Should you have further questions, we shall welcome your letters. 10
Sincerely yours 2

Dear Mrs. Masterson Thank you for your letter of March 1. I
 appreciate your asking me for suggestions on how to explain the concepts
 of unions and guaranteed annual wages as developed in my book on the
 history of the labor movement in the United States.

As you know, trade and craft unions are the same. I therefore,
 emphasize that basically there are just two types of unions. There are
 trade and craft unions on the one hand and industrial unions on the other.
 Your students will be able easily to grasp this important concept when
 it is made this simple for them.

The significant point that I stress when discussing the guaranteed
 annual wage is that it has worked eminently well in some industries but
 that it is likely to be a complete failure in others. I illustrate this
 by citing specific industries and the reasons for the success or failure
 of the wage program in each.

If you have further questions, Mrs. Masterson, please do write
 again. Yours very truly

Dear Mr. Lee It is a real pleasure to answer your inquiry of May 1
 relative to the business ability of James G. Smith.

Mr. Smith has been employed in our main stenographic department for
 three years. During this time, he has given ample evidence of being a
 hard and willing worker and a completely responsible person. His work
 is accurate, neat, and dependable. He is held in high regard by all
 the members of our firm and has been of great help to us in the office.

He had had very little business experience when he joined our staff,
 but his persistence enabled him to meet our most exacting requirements.
 It is with deep regret that we learn of his intention to change his
 position. We realize, however, that this new opening offers opportunities
 in the field in which he intends to specialize.

I am only too glad to recommend Mr. Smith. I know that you will
 find him an exceedingly valuable man. Very truly yours

APPENDIX D

VARIABLES WHICH WERE CONSIDERED WHEN SELECTING
THE POPULATION OF THIS STUDY

SECTION A

NAME _____ SCHOOL _____

SEX: Boy ___ Girl ___ AGE: ___ GRADE IN SCHOOL: 11 ___ 12 ___

IN WHICH OF THE FOLLOWING CLASSES ARE YOU NOW ENROLLED: Gregg 2 ___ Gregg 3 ___
Gregg 4 ___ Forkner 2 ___
Period ___ Before lunch ___ After lunch ___

HAVE YOU EVER TAKEN SHORTHAND BEFORE? Yes ___ No ___ What shorthand system? _____

DID YOU EVER START IN A SHORTHAND CLASS AND DROP FOR SOME REASON? Yes ___ No ___

How long did you spend in the class? Weeks ___ Months ___

DID YOU BEGIN THIS COURSE AT THE BEGINNING OF THE YEAR WITH THE REST OF THE CLASS?

Yes ___ No ___ If you enrolled late, how late? Days ___ Weeks ___ Months ___

HAVE YOU TAKEN BUSINESS ENGLISH? Yes ___ No ___ Taking it at present ___ Grade ___

LANGUAGE ARTS GRADES: 10A ___ 10B ___ 11A ___ 11B ___ 12A ___ 12B ___

HOW LONG HAVE YOU ATTENDED SEATTLE PUBLIC SCHOOLS? Months ___ Years ___

HOW LONG HAVE YOU ATTENDED YOUR PRESENT SCHOOL? Months ___ Years ___

ARE YOU WORKING FOR A PROFICIENCY CARD? Yes ___ No ___

DO YOU PLAN TO USE YOUR SHORTHAND AS SOON AS YOU CAN GET A JOB AFTER GRADUATION FROM HIGH SCHOOL? Yes ___ No ___

DO YOU PLAN TO GET ADDITIONAL VOCATIONAL TRAINING? Yes ___ No ___

DO YOU PLAN TO GO TO COLLEGE? Yes ___ No ___ Maybe ___ Next Fall ___ Later ___

SECTION B

CUMULATIVE GRADE POINT AVERAGE

(This cumulative grade point average is made up of grades earned in the 10th, 11th, and 12th grades in all subjects except physical education and any other subject for which partial credit is given. The grades for the fall semester of the 1964-1965 school year, but not those for the mid-term of the spring quarter of 1965, are to be included.)

SECTION C

STRAIGHT-COPY SCALE USED

YOUR STRAIGHT-COPY SCORE

Mid-term
All-City Typing Test
Spring Semester, 1965

	A	B	C	D
0 -	55	47	39	28
1 -	59	50	42	30
2 -	63	54	45	32
3 -	67	58	49	34

SPEED _____

ZHRCS _____

GRADE _____

APPENDIX E
TRANSCRIPTS OF THE FOUR TESTS UPON WHICH
THIS STUDY IS BASED

TRANSCRIPTION KEY FOR 60-WORD DICTATION

	Actual Words	Cumulative Words
Yes, you are correct. Almost all people in the United States do	12	12
work for wages and salaries. It is true, too, that the greatest share	13	25
of our national income is received by these workers.	9	34
These people who work for wages and salaries get a much larger	12	46
share than do the stockholders who own the stock in our corporations.	12	58
They get more than do the group of people who receive payments of	13	71
interest and rent. Because these workers are by far the largest group,	12	83
the biggest part of the national income goes to them.	10	93
The national income is the total of money received each year from	12	105
all sources by the people of the United States. Its size depends on	13	118
more than one factor. How effective our production is can be listed as	13	131
one of these. Another important one is the ease with which our natural	13	144
resources may be used. Still one more is the amount of education of	13	157
our people.	2	159
Had you ever stopped to think that your knowledge and training	11	170
will one day affect the size of our national income?	10	180

TRANSCRIPTION KEY FOR 80-WORD DICTATION

	Actual Words	Cumulative Words
Do you remember the thrill you had the first time you drove an automobile? Would you like to experience that thrill again?	13	13
We honestly believe you will when you take the wheel of the beautiful new Road Chief. There is something about this great automobile that is different. Its fine performance gives it a dash all its own. Its ease and quietness set it apart from all of the rest of the new cars. Its luxurious silence and power appeal to all drivers. The styling and design are as modern as tomorrow. Such things as power steering and brakes let you enjoy every bit of the excitement the Road Chief offers the motoring public.	9	22
All of this means that you get more impressive power, more creative style, more spacious comfort, and more car for your money. The Road Chief is the automobile that makes thrift exciting. With the money you save when you purchase one, you can realize one of your dream ventures. You can take a trip abroad, build a swimming pool, finish the recreation room, buy a travel trailer, or get something else you and your wife desire.	12	34
We want you to discover that the Road Chief introduces something entirely new in the realm of motoring. We can tell you about it, but we cannot tell you half as much as you can quickly prove to yourself in five pleasant minutes behind the wheel. Make your appointment today.	10	44
	12	56
	15	71
	12	83
	13	96
	13	109
	5	114
	12	126
	12	138
	12	150
	13	163
	13	176
	13	189
	1	190
	11	201
	14	215
	15	230
	10	240

TRANSCRIPTION KEY FOR 100-WORD DICTATION

	Actual Words	Cumulative Words
It is a pleasure to tell you about bookkeeping in the Seattle	12	12
Public Schools. I am now a senior in high school and am taking my	14	26
fourth bookkeeping course. I have taken all of the subjects I need to	13	39
secure a Statement of Proficiency and all of those I needed to prepare	13	52
me competently for college entrance.	5	57
My teachers told me that a boy or a girl who wants to become an	15	72
accountant should have an alert mind. In addition, he certainly should	11	83
be able and willing to work hard. He should like figures and have a	14	97
very high regard for accuracy. He should be patient and determined.	11	108
He needs these qualities as he may have to spend hours searching for	13	121
one small item of important information. At some other time, he may	12	133
take many, many hours to find an error.	8	141
Time after time, our teachers have stressed one more basic fact.	11	152
An accountant must be trustworthy. He must be able to hold in his	13	165
confidence all of the business secrets which each of his clients	11	176
entrust to him. This means that he must enjoy people and respect them	13	189
as persons. He must be able to secure their active goodwill.	11	200
Is there an opportunity for women in the field of accounting?	11	211
There certainly is. Last week at a tea, we learned that women who are	14	225
prepared are met with open arms. They move ahead in either public or	13	238
private accounting. Both the chances for progress and the pay are good.	12	250
There are beginning jobs in the field which are open to students	12	262
just out of high school. However, one should plan to continue his	12	274
education beyond high school. The added knowledge will enable one to	11	285
make more rapid progress and play a greater part in the work of our	14	299
country.	1	300

TRANSCRIPTION KEY FOR 120-WORD DICTATION

	Actual Words	Cumulative Words
It is a short time until you complete your shorthand course,	11	11
graduate from high school, and are ready for a position as a secretary.	13	24
You may be well prepared to do the work of a secretary, but excellent	14	38
qualifications do not assure you a job. Finding the right job for you	13	51
may not be easy. Looking for a job is a big job in itself. It demands	16	67
careful planning, right methods, hard work, and determination.	8	75
The time is short. As the right job is so important to you, begin	14	89
your planning now. Be ahead of the large number of high school	12	101
graduates looking for a job next June.	7	108
While in the business English class, you prepared your personal	10	118
data sheet. It was so easy to read the way you wrote it. Anyone could	15	133
see each part at a glance. Your education, experience, and special	11	144
abilities stood out clearly. You made a list of your references,	11	155
including the names of your teachers and, when possible, those of	11	166
business men. You not only got the permission of these people to use	13	179
their names as references, but you made sure they know how well qualified	13	192
you are.	2	194
As you may not have the opportunity to type the data sheet when	13	207
you begin to look for a position, you should prepare several copies of	13	220
it now. On a good bond paper, type each copy without using a carbon.	14	234
This data sheet should show your excellence as a typist.	10	244
Place your beautifully typed data sheets in a folder where they	11	255
will be ready for instant use when you need them. Also place in the	14	269
folder the application letter you learned to write so well in your	12	281
business English class. Since you must type an original copy for each	12	293
company, you should decide soon where you wish to apply.	10	303
Make a list of the companies for which you would like to work.	13	316
Get all the information you can about each, including the name of the	13	329
interviewer. Use many ways to discover the best and most complete	11	340
information.	1	341
If you use these suggestions, you can act with confidence when you	12	353
apply to get the job you want.	7	360