

A COMPARISON AND ANALYSIS OF THE VOCABULARIES
OF FUNCTIONAL METHOD DICTATION AND SPEED DRILLS IN GREGG SHORTHAND

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OF FUNCTIONAL METHOD DICTATION AND SPEED DRILLS IN GREGG SHORTHAND

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Bachelor of Science

Central State College

Edmond, Oklahoma

1939

Submitted to the Department of Commercial Education

Oklahoma Agricultural and Mechanical College

In Partial Fulfillment of the Requirements

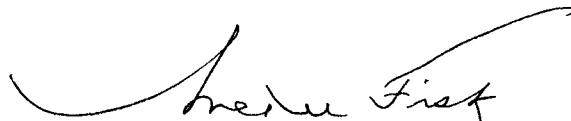
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MASTER OF SCIENCE


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CHAPTER I

INTRODUCTION

The increasing popularity of the Functional Method Manual after it was introduced in 1936 resulted in a great demand among teachers for other similar materials for more advanced work in shorthand. To meet this need, Leslie, Renshaw, and Zoubek working together, compiled and published by 1938 three additional textbooks to be used following the Functional Method Manual. According to Mr. Leslie, the books were compiled under great "pressure of work," and time was not taken to make an analysis of the vocabularies of the books, or to try them out in actual classroom teaching as was done with the Functional Method Manual.¹

Therefore, these materials must still be regarded as being in the experimental stage, and every effort should be made by teachers of shorthand to show the weaknesses and strong points of each of the textbooks.

In some subjects, such as bookkeeping, the teacher may inspect the major topics in the textbook and determine in a short time something of the content. But, because of the very nature of shorthand, it is not possible to make a topical analysis which reveals the extent and value of the vocabulary content. In shorthand it is only by a careful analysis of the vocabulary of the textbooks and other materials that the subject matter may be determined. The number of new words introduced and the utility value of these words determine to a great

1 Louis A. Leslie, Personal letter, February 13, 1940.

extent the placement and importance of a book in the shorthand program.

Dr. Gregg has long recognized the importance of vocabulary studies for improving instruction in shorthand. In 1916, and again in 1929, the Gregg Shorthand Manual was revised so that the more frequently used words are included in the early chapters of the book, and so that a better balanced vocabulary is provided.²

Others, too, have devoted much time and effort toward improving shorthand instruction through vocabulary studies.

Johnson compared the vocabularies of Gregg Speed Studies and the Gregg Shorthand Manual as to chapters in which the words appear.³

Lessenberry determined the number of times each suffix and prefix of Gregg Shorthand is used in writing Horn's list of 10,000 words most commonly used in writing, "for the purpose of determining the important ones to teach and the ones which should not be taught."⁴

Pille and Arnold used Horn's list of 10,000 words in analyzing the vocabulary of the Gregg Shorthand Manual.⁵

Hoadley applied all the principles in the Gregg Shorthand Manual to the Thousand Commonest Words as compiled by Ayers in an attempt

2 John Robert Gregg. Gregg Shorthand, Anniversary Edition. Gregg Publishing Company, New York, 1929. Preface, p. iv.

3 Mildred A. Johnson. "Comparison of Gregg Manual and Speed Studies." Journal of Business Education, VII, No. 3 (Feb. 1932). p. 15
Report of Master's Thesis, Comparative Analysis of Gregg Shorthand Manual and Speed Studies. New York University, 1931.

4 D. D. Lessenberry. "Non-essential Suffixes and Prefixes." Research Studies in Commercial Education, No. 3. University of Iowa, 1928. p. 94.

5 Elsa M. Pille and Percy Arnold, "Word Frequency of Manual Vocabulary Analyzed," American Shorthand Teacher, XIII, No. 5. Jan., 1933. p. 184.

to determine the most-used shorthand principles.⁶

Thus, various types of analyses have been made of the so-called Manual Method materials. However, in the case of Functional Method materials, so far as can be determined, only one study has been made--an analysis of the vocabulary of the Functional Method Manual.⁷

It is a well-known maxim in education that one must continually go from the known to the unknown, from the simple to the complex. Dr. Gregg has placed great emphasis upon graded materials in all his textbooks. The Functional Method Manual, too, provides great masses of graded materials. It seems that all agree that one should go from simpler shorthand materials to the more difficult. The shorthand vocabulary should gradually and continually grow greater. Therefore, the complexity of the vocabulary of a shorthand textbook should be a major factor in determining its placement in the course. Certainly, more difficult textbooks should not precede easier ones.

Functional Method Dictation was written to follow directly after the Functional Method Manual,⁸ but Speed Drills in Gregg Shorthand is recommended to be used at any time after the theory of shorthand has been completed.⁹ It would appear, therefore, that either may be

6 Ruth L. Hoadley. "Analysis of the Shorthand Principles Used in Writing the Thousand Commonest Words." Research Studies in Commercial Education, No. IV. University of Iowa, 1929. p. 45. Master's Thesis, Northwest Missouri State College, 1929.

7 Louis A. Leslie, Functional Method Teacher's Handbook. Gregg Publishing Company, New York, 1936. p. 251.

8 A Course of Study for Teaching Gregg Shorthand. Gregg Publishing Company, New York, 1939. p. vii.

9 Charles E. Zoubek. "Creek Jumping and Shorthand." Gregg News Letter, No. 161. (Oct., 1939). p. 54.

used following the Functional Method Manual. Too, the authors recommend that Speed Drills in Gregg Shorthand may either precede or follow a third book, Gregg Dictation and Transcription.¹⁰ There seems to be little agreement as to what is the proper sequence. It may be that the overlapping of the vocabularies is such that the books should not be used in the same course. To aid in settling these issues is the general purpose of this study.

Specifically, the purposes of this study are:

(1) To determine the thousand of frequency-of-use (according to the Horn list of 10,000 words most commonly used in writing) below which a great proportion of the words are found in the Functional Method Manual. It is unnecessary to tabulate the occurrences of words below this level in determining the power of subsequently used textbooks to build a shorthand vocabulary--assuming that the pupil masters the vocabulary of the Functional Method Manual.

(2) To determine the number of times each word above the level established in purpose (1) occurs in each of the two books--Functional Method Dictation and Speed Drills in Gregg Shorthand.

(3) To determine the number of words which do not occur in the Functional Method Manual and for which pupils must learn an outline in order to master the content of Functional Method Dictation and Speed Drills in Gregg Shorthand.

¹⁰ Louis A. Leslie and Charles E. Zoubek. Speed Drills in Gregg Shorthand Teacher's Handbook. Gregg Publishing Company, New York, 1938. p. v.

(4) To determine the placement in the Horn list of all words in the two textbooks above the level determined in purpose (1) as a measure of the utility value of the words.

(5) To compare the vocabularies of Functional Method Dictation and Speed Drills in Gregg Shorthand as to the number of different words contained in each, the number of times these words are repeated, and the frequency-of-use of these words for the purpose of determining the relative placement of the books in the shorthand course, the relative difficulty of the vocabularies of the books, and the overlapping of the vocabularies of the books.

DELIMITATIONS: It is observed that no attempt is made:

(1) To determine the difficulty of the materials of the textbooks except in so far as vocabulary content may affect difficulty; thus, phrases, sentence structure, length of word-lists, continuity of thought, and such other factors that affect difficulty, are not considered.

(2) To determine at what age or grade level pupils may be expected to be familiar with the vocabulary of the books.

(3) To determine to what extent pupils are familiar, or unfamiliar, with the vocabularies of the books.

(4) To analyze the phrase vocabularies of the books.

ASSUMPTION: It is assumed that the Horn list of 10,000 words most-commonly used in writing is a valid and reliable measure of the frequency-of-use of words used in business writing.

MATERIALS: The principal sources of data for this study are (1) A Basic Writing Vocabulary, 10,000 Words Most Commonly Used in Writing by Ernest Horn, (2) Functional Method Teacher's Handbook,

(3) Functional Method Dictation, and (4) Speed Drills in Gregg Short-hand.

A Basic Writing Vocabulary was compiled from 5,136,616 running words of personal and business writings from sixty-five different sources and from every state in the United States.

The business correspondence was taken from twenty-six different types of business, and the personal writings were taken from all types of personal letters. The placement of a word in the list depended upon the number of times it occurred in all this material with little variation caused by careful weighting.

About forty-eight per cent of the running words were from personal letters, about forty-four per cent from business and professional letters, and about eight per cent from such miscellaneous material as excuses and minutes of meetings.¹¹

All words and derivatives of words were recorded, including slang, colloquial, and supposedly obsolete words with the following exceptions:

- (1) All proper names of persons and places and names of months and days.
- (2) All words of less than four letters.
- (3) A number of very common words.

The placement of words falling within these exceptions was estimated from a smaller compilation of words previously completed. However, names of people and places do not appear in the list.¹²

11 Ernest Horn. "A Basic Writing Vocabulary." University of Iowa Monographs in Education. University of Iowa, 1926. p. 185.

12 Ibid., p. 21.

The very nature of the list, plus the extensive sampling from varied types of business and personal correspondence, insure its validity as a measure of the frequency-of-use of words used in writing (assuming that the vocabulary of business and personal writings of fifteen years ago bears a high relation to that of today).

It is difficult to determine statistically or otherwise the reliability of the list. Thorndike has compiled a list of 20,000 words found most frequently in general reading materials. His list is based on about 10,000,000 running words of materials. However, the first 10,000 words are based upon only 5,000,000 running words except that the last three thousand of this list have been revised according to the more extensive compilation. He calculated from the available credit numbers that a list based upon a count of an infinite number of words would displace only about 1,000 of the words in the 20,000. That is, there are about 1,000 words in his list which probably should be placed higher. Of course, the first 10,000 words are much more accurately placed because they occur so much more frequently than words in the upper thousands.¹³

Thorndike's list is generally regarded as being highly reliable, yet the first 7,000 words of this list are based on a sampling that is probably no more adequate or representative than that on which the Horn list is based; for, though the Thorndike list is compiled from all types of reading materials which are carefully weighted, the Horn list is compiled from all types of business and personal writings, and these, too, are carefully weighted. Therefore, so far as the sample

¹³ Edward L. Thorndike. The Teacher's Word Book. Teachers College, Columbia University, New York, 1932. p. 182.

is concerned, the Horn list is probably as reliable as the Thorndike list.

The writing vocabulary of a person is much smaller than his reading vocabulary, and for this reason the more commonly known words compose a great part of the personal and business letters of everyone. For this reason, it is probable that the Horn list did not have such an extensive vocabulary to attempt to measure; and therefore, it measures that vocabulary more accurately than is possible for a general reading list to be measured with the same size sampling.

However valid and reliable the Horn list may be, in examining the findings of this study, a few weaknesses of the list must be borne in mind: (1) Since only forty-four per cent of the material from which the list was compiled was business correspondence, it may be that some words peculiar to business writings should be ranked higher, while others peculiar to personal writings should not be included in the list at all; (2) The list is now more than fifteen years old--and vocabularies may change a great deal in that length of time, for instance, the words, depression, refrigerator, and radio are probably incorrectly rated (for the purposes of this study, however, the list as a whole is undoubtedly very reliable). (3) The list does not take into consideration homographs (those words which are spelled alike but have different meanings)--all such are tabulated as the same word. Hence, such words as present are not placed correctly in the list. (4) The omission of all words with four or less letters from the tabulations may have resulted in misplacing a number of these, since their placement is based upon a much smaller sample. However, Horn

shows that his list correlates highly with Thorndike's earlier list where these words are concerned.¹⁴

The Functional Method Teacher's Handbook contains a list of the words found in the Functional Method Manual together with a simple analysis of the list. This analysis simply gives the number of different words and the number of running words in the Functional Method Manual classified by thousands according to the Horn list.

Functional Method Dictation is one of the textbooks to be analyzed. It is written entirely in shorthand (as are all the functional method textbooks) and contains very brief word lists at the beginning of each lesson which review the principles of Gregg Shorthand. The book is divided into eighty-four assignments, each assignment containing on an average about 770 words. Little, or nothing, is known of the real vocabulary content of this textbook.

Speed Drills in Gregg Shorthand, like Functional Method Dictation, is an all-shorthand book. It contains brief previews of the more difficult outlines at the beginning of each lesson. There are eighty assignments in the book averaging about 1,030 running words each.

PROCEDURE: The following steps are taken in fulfilling the purposes of the study:

(1) The vocabulary analysis of the Functional Method Manual found in the Functional Method Teacher's Handbook is examined to determine a vocabulary level (according to the Horn list) below which a great proportion of all words occur in the Functional Method Manual.

¹⁴ Ernest Horn, Op. cit., p. 21.

To find the vocabulary building effect of any subsequently used text-book it is unnecessary to consider words below this level--assuming, of course, the pupil has mastered the vocabulary of the manual.

(2) All words above the vocabulary level established in the first step found in Functional Method Dictation and Speed Drills in Gregg Shorthand, together with the lesson number in which each appears, are typed on slips of paper; and these are alphabetized.

(3) The number of times each of the words occurs in each book is determined by counting the number of slips containing each word. This number is written on the slip bearing the lowest lesson number, and the remaining slips are removed from the alphabetic lists.

(4) The frequency-of-use as found in the Horn list of 10,000 most commonly used words, is written on each of the remaining slips, and all those below the level found in the first step of the procedure are removed from the lists.

(5) The lists of words above the level found in the first step appearing in the Functional Method Manual and the other two books are then typed in alphabetic order, and the number of times each word occurs in each of the books together with the number of the assignment in which each word first occurs and the frequency-of-use are tabulated on columnar paper.

(6) Data are compiled showing the number of words in each book in each thousand, and those not within the first ten thousand, above the level found in the first step of the procedure.

(7) Data are compiled showing the number of words occurring in each of the books which does not appear in either of the others and the frequency-of-use of these words.

(8) The two books (Functional Method Dictation and Speed Drills in Gregg Shorthand) are compared as to the number of words contained in each which are not in the Functional Method Manual, and the number of words in each above the level found in the first step of the procedure.

(9) Functional Method Dictation and Speed Drills in Gregg Shorthand are to be analyzed to determine how many new words are introduced in each lesson.

(10) Each step is carefully checked for reliability by re-tabulating, re-counting, and cross-balancing by addition where possible.

CHAPTER II

THE VOCABULARY OF THE FUNCTIONAL METHOD MANUAL

The Functional Method Manual is an all-shorthand textbook designed to be used in beginning shorthand classes. It contains eighty-three assignments averaging about 800 words each. In each assignment about 700 words are in connected matter, and word-lists constitute the other 100 words. The principles of writing Gregg Shorthand are introduced, in general, in the same sequence as in the Gregg Shorthand Manual. The first few assignments are composed of highly graded material, while the latter part of the book is composed of very difficult material containing great quantities of analogical beginnings and endings for shorthand outlines.

Before an analysis of the vocabulary of Functional Method Dictation and Speed Drills in Gregg Shorthand can be meaningful, it is necessary to understand the content of the materials which have preceded them in the shorthand course. Hence, a review of the analysis of the Functional Method Manual serves as a base from which to start and as a foundation on which to build.

A list of all the words found in the Functional Method Manual, together with an analysis of this list, has been prepared and included in the Functional Method Teacher's Handbook.

Of 6,406 different words occurring in the Functional Method Manual, 967 (or 15.1 per cent) are in the first thousand most-used words; 918 (or 14.3 per cent) are in the second thousand; 732 (or 12.2 per cent) are in the third thousand; 656 (or 10.1 per cent) are in the fourth thousand; 1,263 (or 19.8 per cent) are in the sixth to

the tenth thousands, inclusive; and 1,299 (or 20.4 per cent) are beyond the tenth thousand most-used words according to Horn's list of 10,000 most commonly used in writing. These data are presented in Table I.

TABLE I
VOCABULARY OF THE FUNCTIONAL METHOD MANUAL¹⁵

Thousand Frequency	No. of Different Words	Per Cent of Total	Running Words	Per Cent of Total
1	967	15.1	51,311	77.5
2	918	14.3	4,706	7.1
3	782	12.2	2,817	4.2
4	656	10.1	1,781	2.7
5	521	8.1	1,117	1.8
6-10	1,263	19.8	2,395	3.6
Beyond 10,000	1,299	20.4	2,083	3.1
Totals	6,406	100.0	66,210	100.0

Of 66,210 running words in the Functional Method Manual, 51,311 (or 77.5 per cent) are composed wholly of words in the first thousand most-used words; 88.8 per cent are composed of words in the first three thousand most-used words; and 11.2 per cent are composed of words above the third thousand most-used words. It is significant that, whereas, 20.4 per cent of the different words are above the tenth thousand, only 3.1 per cent of the running words are composed of

¹⁵ Louis A. Leslie, Functional Method Teacher's Handbook. Gregg Publishing Company, New York, 1936. p. 251.

these. The 1,299 different words above the tenth thousand compose only 2,083 running words in the book. Thus, these words occur less than twice each in the book. The 1,263 different words in the sixth to the tenth thousands, inclusive, compose 2,395 running words in the book. Therefore, these, too, occur less than twice each. These findings imply that if these words are considered essential to the pupil's shorthand vocabulary, they must be repeated in subsequent materials for fixation in the pupil's mind. If they are not essential, then it may be well to omit them from the textbooks. It is realized that some words and derivatives of words may be learned when they have been encountered only once, but on an average, outlines require repetition in varying situations for permanent fixation.

To the casual observer, it appears that not nearly all the words even in the first thousand most-used words appear in the textbook, for only 967 of the first one-thousand words are shown in the foregoing analysis. However, in compiling this analysis, no account is taken of the numerals which appear in abundance in the first three thousand most-used words of the Horn list. A careful check of the vocabulary list of the Functional Method Manual against the 5,000 Most-Used Shorthand Forms (which, by the way, does not contain 5,000 words--since numerals and abbreviations, as well as certain very personal and slang words, are not included in the list) shows that there are only seventeen words in the first thousand of this list which are not in the manual. A further analysis reveals that of these seventeen words, only four are not common derivatives of some other word appearing in the Functional Method Manual, or that some other derivative of the same root appears in the manual. (A common

derivative is here defined as a word which may be formed by adding to the root such endings as s, es, 's, s', ly, tion, t, d, ing, less, ful, and combinations of these.)

A similar analysis of the second thousand reveals that there are seventy-two words in this group which are not in the Functional Method Manual. Of these, only twenty-eight are not common derivatives (or derivatives of the same root as some other derivative in the book).

For the third thousand most-used words, a more thorough analysis is made. In the 5,000 Most-Used Shorthand Forms only 177 words are found which are not in the manual. An examination of the 10,000 most commonly used words reveals in addition to these the following words:

- (1) six numerals (fifth, fourteen, seventy, sixteenth, sixth, and twenty-five)
- (2) five abbreviations (Dec., Jan., lbs., Oct., and Nov.)
- (3) a few extremely personal words (folk, daddy, devil, grandma, and bless)
- (4) four contractions (aren't, hadn't, I'll, and I've)

None of these words is found in the vocabulary list of the Functional Method Manual. However, numerals, abbreviations, and contractions are of minor importance in the study of shorthand; for no new outlines need be learned for writing them, and the sound is just the same as if the word were written in full, except in the case of contractions.

Of the 177 words appearing in the 5,000 Most-Used Shorthand Forms, but not in the manual, 113 are common derivatives of other words appearing in the manual, or derivatives of the same root word

as some other derivative found in the manual. Therefore, there are only 64 words in the third thousand most-used words which are not presented in the textbook in one form or another. Data regarding the first three thousand most-used words are presented in Table II.

TABLE II

WORDS AND DERIVATIVES BELOW THE FOURTH THOUSAND MOST-USED WORDS NOT IN THE FUNCTIONAL METHOD MANUAL

Thousand Interval	No. of Words in Manual	No. of Words not in Manual	Words not Derived from Words in Manual
1	967	17	4
2	918	72	28
3	782	177	64
Totals	2,667	266	96

An examination of the fourth thousand shows that a total of 316 words appearing in the 5,000 Most-Used Shorthand Forms, do not appear in the Functional Method Manual. And an examination of the fifth thousand shows that a total of 434 words appearing in the 5,000 Most-Used Shorthand Forms do not appear in the Functional Method Manual.

From these data it may be concluded that at no level does the pupil have an opportunity to learn shorthand outlines for all the words below any point in the 10,000 most-used words. However, below the fourth thousand, there are only 96 words which the pupils have not encountered in some form. Now, these 96 words, and probably some of the derivatives are of great importance. Subsequent textbooks should certainly contain these words. However, well over ninety per cent of

all the words below the fourth thousand most-used words are included in the manual. Therefore, rather than compile the entire vocabulary of the textbooks used subsequently a list of the words below the fourth thousand most-used words and not found in the manual, is compiled; and this list is checked against the vocabularies of Functional Method Dictation and Speed Drills as they are compiled (see Chapter VI). In this manner, the degree to which textbooks which follow the manual supply these words can be more easily checked than by compiling all words in the textbooks.

The lists of words below the fourth thousand included in Appendix A may prove of great value to teachers who may desire to present these words to the pupils from the blackboard or in other types of drill, and to writers of supplementary shorthand materials.

SUMMARY AND CONCLUSIONS

(1) A large percentage (20.4 per cent) of the different words occurring in the Functional Method Manual are above the tenth thousand most-used words; and these constitute only 3.1 per cent of the running words of the textbook. This implies that a great many infrequently used words are included in the manual.

(2) Slightly more than one-half of the words in the fourth and fifth thousands are included in the manual; and only about one-fourth of the words in the sixth to the tenth thousands, inclusive, occur in the manual. These data imply that subsequently used textbooks should contain great numbers of different words in these groups, so that the pupil might learn the words which will be of most value to him as a stenographer.

(3) Above the sixth thousand, there are less than twice as many

running words as there are different words. Therefore, many of the words appear only once or twice in the manual. These words should be repeated in subsequently used textbooks that the pupil might master them more fully.

(4) Of the first three-thousand most-used words, all root words (or some derivatives of them) except 96 are included in the Functional Method Manual. Thus, it appears that the shorthand vocabulary level of the pupil when he has finished the manual is near the fourth thousand most-used words--assuming he has mastered its vocabulary. Therefore, subsequently used textbooks should be chiefly concerned with the vocabulary beyond the third thousand most-used words.

In the next chapter a similar analysis is made of the vocabulary of Functional Method Dictation.

CHAPTER III

THE VOCABULARY OF FUNCTIONAL METHOD DICTATION

In the preceding chapter the vocabulary of the Functional Method Manual is analyzed as to the proportion of different words and running words in each thousand interval of the Horn list of 10,000 words most commonly used in writing. In this chapter a similar analysis is made of the vocabulary of Functional Method Dictation.

More specifically, the purposes of this chapter are to show through an analysis of the vocabulary of Functional Method Dictation the number of different words in each thousand above the third thousand, the number of times these words occur in the textbook, and the number of running words in each thousand interval.

From the Functional Method Dictation Teacher's Handbook (which contains a key to all shorthand in Functional Method Dictation) all words above the third thousand most-used words (according to Horn's list) and those below the third thousand which do not appear in the Functional Method Manual, together with the number of the assignment in which each word first appears, are typed on slips of paper. These slips are alphabetized and the number of times each word occurs in the textbook is placed on the card (of the particular word) which bears the lowest assignment number. All other cards are then removed from the alphabetical file. The frequency-of-use (or thousand in which the word is ranked) of each word is then determined from the Horn list of 10,000 most-used words.

The slips are then sorted according to the thousands of frequency-of-use in which the words are found, and according to the number of

times the words occur in the textbook.

Both the number of different words and the number of running words found in the textbook at various levels of frequency-of-use are determined. The findings regarding the number of different words are presented first.

Of a total of 3,714 different words above the third thousand, 559 (or 15.0 per cent) are found in the fourth thousand most-used words, 469 (or 12.6 per cent) are found in the fifth thousand, 322 (or 7.6 per cent) are found in the sixth thousand, and still smaller percentages are found in the seventh, eighth, ninth, and tenth thousands. However, 1,494 (or 40.2 per cent of the total) different words are found that do not appear in the first 10,000 most-used words.

Of the 3,714 different words above the third thousand, 2,420 (or 65.1 per cent) occur only once in the entire textbook, 751 (or 20.2 per cent) occur twice, and 14.7 per cent of these words occur more than twice.

Of the 559 words in the fourth thousand most-used words, 48.7 per cent occur only once; 25.0 per cent occur twice; and 26.3 per cent occur more than twice.

Of the 469 words in the fifth thousand, 54.7 per cent occur once; 23.8 per cent occur twice; and 21.5 per cent occur more than twice.

Following this line of reasoning through Table III, it is noted that the percentage of words occurring only once increases as the frequency-of-use decreases. So that, of the 1,494 words above the tenth thousand, 75.7 per cent occur only once; 15.8 per cent occur twice; and only 8.5 per cent occur more than twice.

TABLE III
 REPETITION AND FREQUENCY-OF-USE OF DIFFERENT WORDS IN FUNCTIONAL METHOD DICTATION

Occur- rences	Thousand in Horn's list																	
	4		5		6		7		8		9		10		Beyond 10,000		Totals	
	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total	Words	Per Cent of Total
1	273	48.7	256	54.7	174	54.1	173	61.5	159	71.2	142	67.3	111	71.6	1,132	75.7	2,420	65.1
2	140	25.0	111	23.8	88	27.4	70	24.9	31	13.9	46	21.8	28	18.1	237	15.8	751	20.2
3	72	12.9	49	10.2	30	9.3	20	7.1	20	8.9	13	6.2	12	7.7	55	3.7	271	7.3
4	27	4.8	23	6.0	13	4.1	10	3.6	7	3.1	5	2.3	2	1.3	25	1.7	117	3.1
5	18	3.2	8	1.7	6	1.8	5	1.8	1	.5	3	1.4	2	1.3	12	.8	55	1.5
6	10	1.8	5	1.1	4	1.2	2	.7	2	.9	1	.5			4	.3	28	.8
7	5	.9	5	1.1	3	.9			1	.5					3	.2	17	.5
8	6	1.1	1	.2											3	.2	10	.3
9			2	.4													2	.0
10	1	.2	1	.2	1	.3			1	.5					3	.2	7	.2
Above 10	7	1.4	3	.6	3	.9	1	.4	1	.5	1	.5			20	1.4	36	1.0
Totals	559	100.0	469	100.0	322	100.0	281	100.0	223	100.0	211	100.0	155	100.0	1,494	100.0	3,714	100.0
Per Cent of Total	15.0		12.6		8.7		7.6		6.0		5.7		4.2		40.2		100.0	

The above table is read--there are 273 words in the fourth thousand that occur in Functional Method Dictation only once; 140 words in the fourth thousand occur twice; etc.

Of 65,126 running words appearing in shorthand in Functional Method Dictation, 6,576 (or slightly more than ten per cent) are above the third thousand most-used words. In Table IV an analysis of the running words above the third thousand is presented. Of the 6,576 running words above the third thousand, 1,208 (or 18.4 per cent) are above the tenth thousand. Thus, about 3.7 per cent of the total running words of the book are above the tenth thousand.

Of the 6,576 running words above the third thousand, 2,420 (or 36.9 per cent) occur only once; 22.8 per cent occur twice; and 40.3 per cent occur more than twice.

Of the 1,208 running words in the fourth thousand, 273 (or 22.6 per cent) occur only once; 280 (or 23.2 per cent) occur twice; and 54.2 per cent occur more than twice. As would be expected, in the higher intervals (or thousands) the percentage of words occurring only once, or twice, increases so that in the tenth thousand more than fifty per cent of the words occur only once, and more than 75 per cent occur less than three times.

TABLE IV
 RUNNING WORDS OF FUNCTIONAL METHOD DICTATION AS TO OCCURRENCES AND FREQUENCY-OF-USE

Occur- rences	Thousand in Horn's List																	
	4		5		6		7		8		9		10		Beyond 10,000		Totals	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1	273	22.6	256	27.4	174	28.2	173	36.8	159	44.7	142	43.3	111	50.2	1,132	46.3	2,420	36.9
2	280	23.2	222	23.7	176	28.5	140	29.8	62	17.4	92	28.0	56	25.4	474	19.4	1,502	22.8
3	216	17.9	147	15.7	90	14.6	60	12.8	60	16.8	39	11.9	36	16.3	165	6.8	813	12.4
4	108	8.9	112	12.0	52	8.4	40	8.5	28	7.9	28	6.1	8	3.6	100	4.1	468	7.0
5	90	7.5	40	4.3	30	4.9	25	5.3	5	1.4	15	4.6	10	4.5	60	2.5	275	4.2
6	60	5.0	30	3.2	24	3.9	12	2.6	12	3.4	6	1.8			24	1.0	168	2.5
7	35	2.9	35	3.7	21	3.4			7	2.0					21	.9	119	1.8
8	48	4.0	8	.8											24	1.0	80	1.2
9			18	1.9													18	.3
10	10	.8	10	1.1	10	1.6			10	2.8					30	1.2	70	1.1
Over 10	88	7.3	58	6.2	40	6.5	20	4.2	13	3.7	14	4.3			410	16.8	643	9.8
Totals	1,208	100.0	936	100.0	617	100.0	470	100.0	356	100.0	328	100.0	221	100.0	2,440	100.0	6,576	100.0
Per Cent of Total	18.4		14.2		9.4		7.2		5.4		5.0		3.4		37.0		100.0	

The above table is read--of 1,208 words in the fourth thousand, 273 (or 22.6 per cent of the total) running words are composed of words which occur only once; 280 running words are composed of words which occur twice; etc.

SUMMARY AND CONCLUSIONS

(1) A large percentage (40.2 per cent) of the different words above the third thousand are above the tenth thousand most-used words. Yet, scarcely more than half the fourth thousand most-used words are found in the textbook; and still fewer of the fifth, sixth, seventh, eighth, ninth, and tenth thousands. Only 155 words in the tenth thousand are included in Functional Method Dictation.

Thus it appears that the textbook does not attempt to complete the pupil's shorthand vocabulary in the lower thousands, but contains a great deal of difficult vocabulary.

(2) About ten per cent of the running words of the entire textbook are above the third thousand. Of these 37.0 per cent are above the tenth thousand. In other words, about 3.7 per cent of the total running words of the textbook are above the tenth thousand. In a letter of 108 words, there would be on an average, four words above the tenth thousand. Of course, many of these are proper nouns.

This implies that the pupil will continually run across infrequently used words in doing his homework from the textbook.

(3) A great proportion (65.1 per cent) of the words above the third thousand occur only once, and very few words (14.7 per cent) occur more than twice.

Therefore, if the student is to master the vocabulary of the textbook, the teacher must provide adequate drill and review over the vocabulary, for the textbook does not review automatically. (It is assumed that a pupil does not ordinarily master an outline having encountered it only once.)

CHAPTER IV

THE VOCABULARY OF SPEED DRILLS IN GREGG SHORTHAND

In the preceding chapter the vocabulary of Functional Method Dictation was analyzed as to the number of different words and running words within each thousand of the Horn list; and as to the number of times words within the different thousands occur in the textbook.

It is the purpose of this chapter to present a similar analysis of Speed Drills in Gregg Shorthand.

Identically the same procedure is followed in compiling an alphabetical list of the words above the third thousand most-used words that occur in Speed Drills in Gregg Shorthand as has already been presented in Chapter III concerning the vocabulary of Functional Method Dictation.

From the Speed Drills in Gregg Shorthand Teacher's Handbook, which contains a key to all shorthand outlines appearing in the textbook, all the words above the third thousand most-used words are selected, alphabetized, and the number of times each word occurs in the textbook is determined. The frequency-of-use is determined for each word, and the words are sorted according to the thousand interval in which they appear and the number of times the words occur in the textbook.

In Table V the following data are presented. Of 4,606 different words occurring in Speed Drills in Gregg Shorthand above the third thousand most-used words, 620 (or 13.4 per cent) are in the fourth thousand, 501 (or 10.9 per cent) are in the fifth thousand, 415 (or 9.0 per cent) are in the sixth thousand, and still smaller percentages are in the seventh, eighth, ninth, and tenth thousands; but a total of 1,997 (or 43.4 per cent) of the words are above the tenth thousand.

TABLE V
 REPETITION AND FREQUENCY-OF-USE OF DIFFERENT WORDS IN SPEED DRILLS IN GREGG SHORTHAND

Occur- rences	Thousand in Horn's List																	
	4		5		6		7		8		9		10		Beyond 10,000		Totals	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1	239	38.5	209	41.7	201	48.5	180	52.3	175	61.0	147	55.2	112	63.6	1,283	64.3	2,546	55.4
2	132	21.6	110	21.9	94	22.7	60	17.4	57	19.9	64	24.1	33	18.8	404	20.2	954	20.7
3	66	10.3	68	13.6	44	10.6	41	11.9	28	9.8	30	11.3	12	6.8	143	7.2	432	9.4
4	50	8.1	45	9.0	29	5.5	29	8.4	8	2.8	12	4.5	9	5.1	64	3.2	240	5.1
5	27	4.4	23	4.6	21	5.1	11	3.2	5	1.7	6	2.3	5	2.8	29	1.5	127	2.8
6	20	3.2	11	2.2	9	2.2	8	2.3	5	1.7	2	.7	2	1.1	17	.8	74	1.6
7	24	3.9	11	2.2	2	.5	4	1.1	3	1.0	1	.4	1	.6	11	.5	57	1.2
8	15	2.4	6	1.2	6	1.4	2	.6	1	.4					10	.5	40	.9
9	11	1.8	1	.2	6	1.4			1	.4			1	.6	5	.2	25	.5
10	5	.8	4	.8	3	.7	1	.3	1	.4					4	.2	18	.4
Over 10	31	5.0	13	2.6	6	1.4	8	2.3	3	.9	4	1.5	1	.6	27	1.3	93	2.0
Totals	620	100.0	501	100.0	415	100.0	344	100.0	287	100.0	266	100.0	176	100.0	1,997	100.0	4,606	100.0
Per Cent of Total	13.4		10.9		9.0		7.4		6.2		5.8		3.8		43.4		100.0	

The above table is read--there are 239 words in the fourth thousand that occur in Speed Drills in Gregg Shorthand only once; 132 words in the fourth thousand occur twice; etc.

Of the 4,606 different words, 2,546 (or 55.4 per cent) occur only once; 954 (or 20.7 per cent) occur twice; and 23.9 per cent occur more than twice. The largest number of times any word above the third thousand occurs is sixty. This word is a proper noun and is naturally placed in the group beyond the tenth thousand.

Of 620 different words in the fourth thousand, 38.5 per cent occur only once in Speed Drills in Gregg Shorthand; 21.6 per cent occur twice; and 39.9 per cent occur more than twice. Of 501 words in the fifth thousand, 41.7 per cent occur once; 21.9 per cent occur twice; and 35.4 per cent occur more than twice. As would be expected, the percentage of words occurring only once increases as the frequency-of-use decreases; so that, of the 1,997 words above the tenth thousand, 64.3 per cent occur only once; 20.2 per cent occur twice; and 15.5 per cent occur more than twice.

There are 85,539 running words in shorthand in Speed Drills in Gregg Shorthand. Of these, only 10,631 (or 12.4 per cent) are above the third thousand most-used words. Table VI shows the number of running words in each thousand grouped according to the number of times the words occur in the textbook, and the relation of these groups to the totals.

Of the 10,631 running words above the third thousand, 2,164 (or 20.4 per cent) are in the fourth thousand; 1,413 (or 13.3 per cent) are in the fifth thousand; and still smaller percentages are in the remaining groups except that 3,822 (or 36.0 per cent) of the words are above the tenth thousand.

Of the 10,631 running words above the third thousand, 2,546 (or 23.9 per cent) occur only once; 1,908 (or 17.9 per cent) occur twice;

TABLE VI
 RUNNING WORDS OF SPEED DRILLS IN GREGG SHORTHAND AS TO OCCURRENCES AND FREQUENCY-OF-USE

Occur- ences	Thousand in Herr's List																	
	4		5		6		7		8		9		10		Beyond 10,000		Totals	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1	239	11.1	209	14.8	201	20.7	180	21.4	175	32.3	147	26.4	112	35.4	1,283	33.6	2,546	23.9
2	264	12.2	220	15.6	188	19.4	120	14.2	114	21.0	128	23.0	66	20.9	808	21.0	1,908	17.9
3	198	9.2	204	14.4	132	13.6	128	14.6	84	15.5	90	16.1	36	11.4	429	11.4	1,296	12.2
4	200	9.2	180	12.7	92	9.5	116	13.7	32	5.9	48	8.6	36	11.4	256	6.7	960	9.0
5	135	6.2	115	8.1	105	10.8	55	6.5	25	4.6	30	5.3	25	7.9	145	3.8	635	6.0
6	120	5.5	66	4.7	54	5.6	48	5.7	30	5.5	12	2.2	12	3.8	102	2.7	444	4.2
7	168	7.8	77	5.5	14	1.4	28	3.3	21	3.9	7	1.2	7	2.2	77	2.0	399	3.8
8	120	5.5	48	3.4	48	4.9	16	1.9	8	1.5					80	2.1	320	3.0
9	99	4.6	9	.6	54	5.6			9	1.7			9	2.9	45	1.2	225	2.1
10	50	2.3	40	2.8	30	3.1	10	1.2	10	1.8					40	1.0	180	1.7
Over 10	571	26.4	245	17.4	54	5.6	148	17.5	34	6.3	96	17.2	13	4.1	557	14.5	1,718	16.2
Totals	2,164	100.0	1,413	100.0	972	100.0	844	100.0	542	100.0	558	100.0	316	100.0	3,822	100.0	10,631	100.0
Per Cent of Total	20.4		13.3		9.1		7.9		5.1		5.2		3.0		36.0		100.0	

The above table is read--of 2,164 running words in the fourth thousand, 239 (or 11.1 per cent) are composed of words which occur only once; 264 running words in the fourth thousand are composed of words which occur twice; etc.

and still smaller percentages occur in all other groups.

A further examination of Table VI reveals that 11.1 per cent of the total running words in the fourth thousand occur only once; 14.8 per cent of the running words in the fifth thousand occur only once; and the percentage of words occurring only once increases with the thousands until in the tenth thousand, 35.4 per cent occur only once. The percentage of words appearing twice gradually increases with the thousands, also, until the ninth thousand, then there is a gradual decline in the percentages in the tenth and beyond the tenth thousands.

The percentages of words occurring five or more times decreases with the thousands, so that, in the group appearing more than ten times, 26.4 per cent of the words in the fourth thousand occur more than ten times, and only 4.1 per cent of the words in the tenth thousand occur more than ten times.

SUMMARY AND CONCLUSIONS

(1) Nearly half (43.4 per cent) of the different words above the third thousand appearing in Speed Drills in Gregg Shorthand are above the tenth thousand. Almost two-thirds of the fourth thousand, but only one-half of the fifth thousand most-used words occur in the textbook. Smaller percentages of the remaining frequency groups occur.

These data imply that Speed Drills in Gregg Shorthand does not attempt to provide the pupil with all the words in any thousand below the tenth, but places a great deal of emphasis on words above the tenth. If the textbook is to be used early in the shorthand course, the vocabulary should be simplified to contain fewer words above the tenth thousand and more words in the lower levels.

(2) About one-eighth (12.4 per cent) of the total running words in the textbook are above the third thousand most-used words. Of these, 36.0 per cent are above the tenth thousand. Therefore, 4.5 per cent of the total running words of the entire book are above the tenth thousand.

Thus it appears that the pupil will constantly study these infrequently used words. In a paragraph of 200 words there would be (on an average) nine words above the tenth thousand.

(3) A great proportion (55.4 per cent) of the words above the third thousand occur only once, and only 23.9 per cent occur more than twice in the textbook.

This implies that if the pupil is to master the vocabulary of the textbook, the teacher must provide adequate drill and review materials from sources other than the textbook, inasmuch as, it provides an automatic review of only a small portion of the different words.

(4) Because larger percentages of the running words in the lower thousands occur six or more times than in the higher thousands, and because larger percentages of the running words in the higher occur from one to three times, it may be concluded that words in the higher thousands are not repeated as frequently as words in the lower levels.

CHAPTER V

COMPARISONS OF THE VOCABULARIES OF THE THREE BOOKS

In the preceding chapters analyses are presented of the vocabularies of the Functional Method Manual, Functional Method Dictation, and Speed Drills in Gregg Shorthand. No attempt was made in these chapters to show any relationships between the vocabularies of the different books.

The purpose of this chapter is to compare the vocabulary of the Functional Method Manual with that of Functional Method Dictation; the vocabulary of the Functional Method Manual with that of Speed Drills; and the vocabulary of Functional Method Dictation with that of Speed Drills. Each comparison is made to show the relative difficulty of the vocabularies of the textbooks, the amount of overlapping between the textbooks, and the relative vocabulary building power of the textbooks. The results may prove of great value in determining the proper placement and sequence of the textbooks in the shorthand course.

Many of the data used in this chapter have already been presented in previous chapters. However, much additional data are presented. These were compiled from the alphabetic list of words (see sample in Appendix C).

THE FUNCTIONAL METHOD MANUAL AND FUNCTIONAL METHOD DICTATION

The data presented in this section show the relative difficulty of the vocabularies of the Functional Method Manual and Functional Method Dictation, the amount of overlapping between the vocabularies, and the power of the books to build a shorthand vocabulary.

The following data are presented in Table VII. There are 3,714 different words above the third thousand contained in Functional

Method Dictation, and 3,701 in the Functional Method Manual. Of these, 559 (or 15.0 per cent of the total) in Functional Method Dictation are in the fourth thousand, and 633 (or 17.1 per cent) in the manual are in the fourth thousand. In the fifth thousand, there are 469 (or 12.6 per cent of the total) in Functional Method Dictation, and there are 520 (or 14.1 per cent of the total) in the manual. Still smaller percentages are in the remaining thousands, except that in the group above the tenth thousand, there are 1,494 (or 40.2 per cent of the total) in Functional Method Dictation, and 1,289 (or 34.8 per cent of the total) in the manual.

Larger proportions of the words of the manual are in all thousand intervals except the seventh thousand and the group above the tenth thousand. It appears, therefore, that the manual has a greater vocabulary building power below the tenth thousand than Functional Method Dictation, and that Functional Method Dictation has a greater vocabulary above the tenth thousand.

Of the 1,449 words common to both books, 387 (or 26.7 per cent) are in the fourth thousand; 275 (or 19.0 per cent) are in the fifth thousand; and the percentages decrease until there are only 3.5 per cent in the tenth thousand; but in the group above the tenth thousand, there are 299 (or 20.6 per cent) different words common to both books.

Thus, it may be concluded that a great proportion (about two-thirds) of the words common to both books are in the fourth, fifth, and beyond the tenth thousand intervals. Hence, there is comparatively little repetition of the words in the manual in Functional Method Dictation in the intervals between the fifth and tenth thousands.

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TABLE VII

DIFFERENT WORDS IN FUNCTIONAL METHOD MANUAL AND FUNCTIONAL METHOD
 DICTATION AS TO THE NUMBER OF WORDS IN EACH THOUSAND INTERVAL

Thou- sand Inter- val	Functional Dictation		Functional Manual*		Common to Both	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
4	559	15.0	633	17.1	387	26.7
5	469	12.6	521	14.1	275	19.0
6	322	8.7	360	9.7	164	11.3
7	281	7.6	272	7.3	121	8.4
8	223	6.0	235	6.4	84	5.8
9	211	5.7	226	6.1	68	4.7
10	155	4.2	165	4.5	51	3.5
Beyond 10,000	1,494	40.2	1,289	34.8	299	20.6
Totals	3,714	100.0	3,701	100.0	1,449	100.0

*Data in these columns vary slightly from those in Chapter II—probably because of different methods used in compiling the two sets of data.

In Table VIII is shown the percentage relationship of the total vocabulary of each of the two textbooks and the words common to these two books to the total number of different words in the two books (taken together). Thus, of 805 different words in the fourth thousand in the combined vocabularies of the two books, 559 (or 69.5 per cent) occur in Functional Method Dictation; and 633 (or 78.6 per cent) occur in the manual. That is, so far as the number of different words in the fourth thousand is concerned, the manual is 78.6 per cent as good as the combined vocabulary, and Functional Method Dictation has 69.5 per cent of all the words in the two books in this interval. It is observed that the manual contains higher percentages

in all intervals except the seventh thousand and the group above the tenth thousand. Of a total of 5,966 different words above the third thousand in both books combined, 3,714 (or 62.3 per cent) may be found in Functional Method Dictation and 3,701 (or 62.0 per cent) may be found in the manual. (These percentages would be about the same, naturally, since the two books contain approximately the same number of different words.) The foregoing data substantiate the conclusion already drawn--that the manual is superior to Functional Method Dictation in building a vocabulary below the tenth thousand.

TABLE VIII

PROPORTION OF TOTAL DIFFERENT WORDS IN FUNCTIONAL METHOD DICTATION AND THE FUNCTIONAL METHOD MANUAL WHICH APPEAR IN BOTH AND EITHER

Thou- sand Inter- val	Combined Vocabulary		Functional Dictation		Functional Manual		Common to Both Books	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Combined
4	805	13.5	559	69.5	633	78.6	387	48.1
5	715	12.0	469	65.5	521	73.0	275	38.5
6	518	8.7	322	62.2	360	69.5	164	31.7
7	432	7.2	281	65.0	272	63.0	121	28.0
8	374	6.3	223	59.6	235	62.8	84	22.4
9	369	6.2	211	56.2	226	61.2	68	18.4
10	269	4.5	155	57.6	165	61.4	51	19.0
Beyond 10,000	2484	41.6	1494	60.1	1289	51.9	299	12.0
Totals	5966	100.0	3714	62.3	3701	62.0	1449	24.3

Of the 806 different words in the fourth thousand in the combined vocabularies, 387 (or 48.1 per cent) occur in both books. In the fifth thousand, of 715 in the combined vocabularies, 275 (or 38.5 per cent) occur in both books. The percentages decrease as the frequency-of-use decreases, so that in the group beyond ten thousand only 12.0 per cent occur in both books. Of a total combined vocabulary of 5,966 different words above the third thousand in the two books, 1,449 (or 24.3 per cent) occur in both books. Thus, only about one-fourth of the total different words above the third thousand are common to the two books. This may mean that there is little overlapping of the vocabularies of the books above the third thousand most-used words.

The degree to which there is overlapping between the vocabularies of the two books is revealed in Table IX. Of the different words in the fourth thousand, 559 appear in Functional Method Dictation and 633 appear in the manual; 387 of these are common to the two books. That is, 69.4 per cent of the words in the fourth thousand in Functional Method Dictation occur also in the manual; and 61.0 per cent of the words in the fourth thousand in the manual appear also in Functional Method Dictation. It is observed that the percentages of overlapping decrease with the higher intervals so that in the group beyond the tenth thousand, only 8.0 per cent of the words in Functional Method Dictation occur in the manual; and only 23.2 per cent of the words in the manual occur in Functional Method Dictation. In all intervals, except the seventh thousand and the group above the tenth thousand, the percentage of overlapping is higher for Functional Method Dictation than for the manual (this is naturally true, since the manual contains a more extensive vocabulary in all but these intervals).

TABLE IX

OVERLAPPING OF THE VOCABULARIES OF FUNCTIONAL METHOD DICTATION AND
THE FUNCTIONAL METHOD MANUAL

Thou- sand	Functional Dictation		Functional Manual		Words Common to Both		
	Inter- val	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Functional Dictation
4	559	15.0	633	17.1	387	69.4	61.0
5	469	12.6	521	14.1	275	58.6	52.7
6	322	8.7	360	9.7	164	52.5	45.6
7	281	7.6	272	7.3	121	43.0	44.4
8	223	6.0	235	6.4	84	37.6	35.7
9	211	5.7	226	6.1	68	32.2	30.1
10	155	4.2	165	4.5	51	32.9	30.9
Beyond 10,000	1,494	40.2	1,289	34.8	299	20.0	23.2
Totals	3,714	100.0	3,701	100.0	1,449	39.0	39.2

Of the total words above the third thousand, 1,449 are common to both books. These constitute 39.0 per cent of the Functional Method Dictation vocabulary above the third thousand; and 39.2 per cent of the manual vocabulary above this level. Thus, only about two-fifths of the words above the third thousand in either book are contained in the other. However, in the fourth thousand, the proportion is about two-thirds; and beyond the tenth thousand, the proportion is about one-fifth. It appears, therefore, that in the intervals above the third thousand, Functional Method Dictation reviews only about two-fifths (39.2 per cent) of the vocabulary of the manual; however, in the

fourth, fifth, and sixth thousands more than half of the words of the manual are repeated in Functional Method Dictation.

Now, one of the purposes of Functional Method Dictation is to review the manual. Mr. Leslie says:

It has long been the practice to set aside a certain number of periods for a formal review of the principles of shorthand, usually just after the completion of the textbook. The technique of the Functional Method makes no specific allotment of time for formal review. The Functional Method is organized to take advantage, to the fullest extent, of the automatic review inherent in the study of a subject such as shorthand.¹⁶

But, since only two-fifths of the vocabulary above the third thousand of the manual is reviewed in Functional Method Dictation, it is concluded that the manual vocabulary is not reviewed, unless it happens that the words which are not repeated have already been completely mastered so that further repetition is unnecessary. However, it is in the sixth to the tenth thousands and in the group beyond the tenth thousand that smaller percentages of the different words in the manual are repeated in Functional Method Dictation; and it is in these same intervals that words occur less than twice each (on an average) in the Functional Method Manual. Thus, the conclusion that Functional Method Dictation does not adequately review the vocabulary of the manual is substantiated.

The vocabularies of the two textbooks as to the number of running words in each interval are compared in Table X. Of a total of 65,126 running words in Functional Method Dictation, 58,550 (or 90.0 per cent) are below the fourth thousand; 1,208 (or 1.9 per cent) are in the fourth thousand; 936 (or 1.4 per cent) are in the fifth thousand;

¹⁶ Louis A. Leslie. Functional Method Teacher's Handbook. Gregg Publishing Company, New York, 1936. p. 40.

1,992 (or 3.0 per cent) are in the sixth to the tenth thousands, inclusive; and 2,440 (or 3.7 per cent) are above the tenth thousand

Of a total of 66,210 running words in the Functional Method Manual, 53,834 (or 88.9 per cent) are below the fourth thousand; 1,781 (or 2.7 per cent) are in the fourth thousand; 1,117 (or 1.7 per cent) are in the fifth thousand; 2,395 (or 3.6 per cent) are in the sixth to the tenth thousands, inclusive; and 2,083 (or 3.1 per cent) are beyond the tenth thousand.

Thus, the manual contains a smaller proportion of running words below the fourth thousand than Functional Method Dictation, and it contains larger proportions in all other intervals except the group beyond the tenth thousand--here Functional Method Dictation contains a larger percentage of its words.

It may be concluded from these data that Functional Method Dictation contains fewer words per hundred running words above the third thousand than the manual; therefore, the vocabulary of Functional Method Dictation is not so difficult as that of the manual; however, this is partly counter balanced by the larger percentage contained in Functional Method Dictation above the tenth thousand.

However, due to the fact that the first half of the manual is composed of very simple material, it is implied that the vocabulary of the latter half is more difficult than that of Functional Method Dictation. Therefore, if more difficult materials should follow easier materials, it is probable that Functional Method Dictation should not follow the manual.

TABLE X

RUNNING WORDS IN FUNCTIONAL METHOD DICTATION
AND THE FUNCTIONAL METHOD MANUAL

Thou- sand Inter- val	Functional Method Dictation		Functional Method Manual	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1-3	58,550	90.0	58,834	88.9
4	1,208	1.9	1,781	2.7
5	936	1.4	1,117	1.7
6-10	1,992	3.0	2,395	3.6
Beyond 10,000	2,440	3.7	2,083	3.1
Totals	65,126	100.0	66,210	100.0

THE FUNCTIONAL METHOD MANUAL AND SPEED DRILLS IN GREGG SHORTHAND

Data are presented in this section to show the relative difficulty of the vocabularies of the Functional Method Manual and Speed Drills in Gregg Shorthand, the amount of overlapping between the vocabularies, and the power of the books to build a shorthand vocabulary.

From the data presented in Table XI, observe that there is a total of 4,606 different words above the third thousand in Speed Drills and 3,701 in the manual. Whereas, in the fourth thousand there are 620 (or 13.4 per cent of the total) in Speed Drills; there are 633 (or 17.1 per cent of the total) within the manual. In the fifth thousand, there are 501 (or 10.9 per cent) in Speed Drills and 521 (or 14.1 per cent) in the manual. In the sixth thousand there are 415 (or 9.0 per cent) in Speed Drills and 360 (or 9.7 per

cent) in the manual.

The manual contains a larger percentage of different words in all but the seventh and the group above the tenth thousand intervals. In the seventh thousand there is little difference; but beyond the tenth thousand are found 1,997 (or 43.4 per cent of the total) of the different words in Speed Drills, compared with 1,289 (or 34.8 per cent of the total) different words in the manual.

Thus, larger proportions of the words of the manual are in all thousand intervals except the seventh thousand and the group above the tenth thousand. It appears, therefore, that the manual places greater emphasis on words below the tenth thousand than Speed Drills, and that Speed Drills places greater emphasis on the words above the tenth thousand.

Of the 1,424 different words common to both books, 413 (or 29.1 per cent) are in the fourth thousand; 288 (or 20.2 per cent) are in the fifth; 190 (or 13.3 per cent) are in the sixth; still smaller percentages are in the remaining intervals, except that in the group above the tenth thousand there are 192 (or 13.5 per cent) of the different words common to both books. Thus, it may be concluded that a great proportion of the words common to both books are in the fourth, fifth, and beyond the tenth thousand intervals. Hence, there is comparatively little repetition of the words in the manual in Speed Drills in the sixth to the tenth thousands, inclusive.

The larger percentages in the fourth, fifth, and beyond the tenth thousand intervals is probably due to the fact that both books contain larger percentages of different words in these groups. However, in the fourth, fifth, sixth, seventh, and eighth thousands,

the percentages of the total words common to the two books are larger than the percentages of the total words in these groups to the totals of either textbook; while in the remaining intervals, the percentages of words common to the two books are smaller than the percentages of the total words in either of the two books. Thus, there is more overlapping in the lower thousands than at higher levels.

TABLE XI

DIFFERENT WORDS IN SPEED DRILLS IN GREGG SHORTHAND AND THE FUNCTIONAL METHOD MANUAL AS TO THE NUMBER OF WORDS IN EACH THOUSAND INTERVAL

Thou- sand	Speed Drills		Functional Manual		Common to Both	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
4	620	13.4	633	17.1	413	29.1
5	501	10.9	521	14.1	288	20.2
6	415	9.0	360	9.7	190	13.3
7	344	7.4	272	7.3	119	8.4
8	287	6.2	235	6.4	103	7.2
9	266	5.8	226	6.1	66	4.6
10	176	3.8	165	4.5	53	3.7
Beyond 10,000	1,997	43.4	1,289	34.8	192	13.5
Totals	4,606	100.0	3,701	100.0	1,424	100.0

The percentage relationship of the total vocabulary above the third thousand of each of the two textbooks, and the words common to these two books, to the total number of different words above the third thousand in the two books (taken together) is shown in Table XII. Of the 840 different words in the fourth thousand, 620 (or

73.9 per cent) occur in Speed Drills and 633 (or 75.4 per cent) occur in the manual. Of 734 different words in the fifth thousand, 501 (or 68.2 per cent) occur in Speed Drills and 521 (or 71.0 per cent) occur in the manual. In every thousand interval except the group above the tenth thousand, the manual contains a larger proportion of the words in the combined vocabulary than Speed Drills; however, in the group above the tenth thousand Speed Drills contains 1,997 (or 64.6 per cent) and the manual contains 1,289 (or 41.6 per cent) of the total different words above the tenth thousand in the two books.

Of a total of 6,883 different words in all intervals, Speed Drills contains 4,606 (or 66.9 per cent) and the manual contains only 3,701 (or 53.7 per cent).

Thus, the manual contains a broader vocabulary and a larger proportion of the combined vocabulary than Speed Drills in all intervals within the first ten thousand; but Speed Drills contains a greater proportion of the total different words above this level. Of the total words in all intervals, the manual contains a little more than half, while Speed Drills contains a little more than two-thirds. These data substantiate the conclusion that Speed Drills places greater emphasis on words above the tenth thousand, while the manual places greater emphasis on those groups below the tenth thousand.

The manual affords a more complete vocabulary at all levels below the tenth thousand, in spite of the fact that Speed Drills contains more running words and more different words. Thus, the manual affords a more efficient means of studying the words below the tenth thousand.

Of the 840 different words in the fourth thousand in the combined

vocabularies, 413 (or 49.3 per cent) are common to both books. In the fifth thousand, 39.2 per cent of the total are common to both books; in the sixth thousand, 32.5 per cent of the total are common to both; and still smaller percentages are common to both books in the seventh, eighth, ninth, tenth and beyond the tenth thousand intervals. Of 3,094 different words above the tenth thousand in the combined vocabulary, only 192 (or 6.2 per cent) are common to both books. Of the total vocabulary of the two books, only 20.6 per cent is common to both.

TABLE XII

PROPORTION OF DIFFERENT WORDS IN SPEED DRILLS IN GREGG SHORTHAND AND THE FUNCTIONAL METHOD MANUAL WHICH APPEAR IN BOTH AND EITHER

Thou- sand Inter- val	Combined Vocabulary		Speed Drills		Functional Manual		Common to Both Books	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Com- bined
4	840	12.2	620	73.9	633	75.4	413	49.3
5	734	10.7	501	68.2	521	71.0	288	39.2
6	585	8.5	415	71.0	360	61.5	190	32.5
7	497	7.2	344	69.2	272	54.7	119	23.9
8	419	6.1	287	68.5	235	56.1	103	24.6
9	426	6.2	266	62.5	226	53.0	66	15.5
10	288	4.2	176	61.1	165	57.3	53	18.4
Beyond 10,000	3,094	44.9	1,997	64.6	1,289	41.6	192	6.2
Totals	6,883	100.0	4,606	66.9	3,701	53.7	1,424	20.6

Thus, only about one-fifth of the total vocabulary of both books is common to both. This indicates that there is little overlapping; however, in the lower intervals there is about one-half of the words common to both books, and in the upper intervals, less than one fifth of the total words are common to both books.

Table XIII is presented to show more clearly the amount of overlapping of the vocabularies of the two books.

TABLE XIII

OVERLAPPING OF THE VOCABULARIES OF SPEED DRILLS IN GREGG SHORTHAND
AND THE FUNCTIONAL METHOD MANUAL

Thou- sand Inter- val	Speed Drills		Manual		Words Common to Both		
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Speed Drills	Per Cent of Manual
4	620	13.4	633	17.1	413	66.6	65.2
5	501	10.9	521	14.1	288	57.5	55.2
6	415	9.0	360	9.7	190	45.7	52.8
7	344	7.4	272	7.3	119	34.6	43.7
8	287	6.2	235	6.4	103	35.9	43.8
9	266	5.8	226	6.1	66	24.8	29.2
10	176	3.8	165	4.5	53	30.1	32.1
Beyond 10,000	1997	43.4	1,289	34.8	192	9.6	14.9
Totals	4606	100.0	3,701	100.0	1,424	30.9	38.4

Of the different words in the fourth thousand, 620 appear in Speed Drills, and 633 appear in the manual; 413 of these are common to the two books. That is, 66.6 per cent of the words in the fourth thousand in Speed Drills occur also in the manual; and 65.2 per cent

of the words in this interval in the manual appear also in Speed Drills. It is observed that the percentages of overlapping decrease with the higher intervals so that in the group beyond the tenth thousand, only 9.6 per cent of the words in Speed Drills occur in the manual; and 14.9 per cent of the words in the manual occur in Speed Drills. In all intervals above the fifth thousand, the percentage of overlapping is higher for Speed Drills than for the manual (this is naturally true since the manual contains a less extensive vocabulary in all intervals above this level).

Of the total words above the third thousand, 1,424 are common to both books. These constitute 38.4 per cent of the vocabulary of the manual. It appears, therefore, that in the intervals above the third thousand, Speed Drills reviews slightly less than two-fifths of the vocabulary of the manual. In the preceding section it was shown that Functional Method Dictation, also, reviews about two-fifths of the vocabulary of the manual. Therefore, it may be concluded that the two books afford about the same amount of review so far as the number of different words repeated are concerned.

Further comparing these data with those in the preceding section (see the discussion of Table IX) observe that Speed Drills has a greater degree of overlapping (repeats a larger proportion of the manual vocabulary) in all intervals except the group beyond the tenth thousand than Functional Method Dictation. Thus, it appears that Speed Drills affords a more thorough review of the words in all intervals within the first ten thousand, and that Functional Method Dictation provides a more thorough review of words above the tenth thousand. However, a slightly greater proportion of the manual

vocabulary in all intervals above the third thousand is repeated in Functional Method Dictation. It cannot be concluded whether or not one book is superior for review than the other. However, due to its more extensive vocabulary (and slightly smaller amount of overlapping) Speed Drills is superior for building a shorthand vocabulary in every interval.

As to the number of running words in each interval, the vocabularies of the two books are compared in Table XIV. Of a total of 85,539 running words in Speed Drills, 74,908 (or 87.5 per cent) are below the fourth thousand; 2,164 (or 2.5 per cent) are in the fourth thousand; 1,413 (or 1.7 per cent) are in the fifth thousand; 3,232 (or 3.8 per cent) are in the sixth to the tenth thousands, inclusive; and 3,822 (or 4.5 per cent) are beyond the tenth thousand.

In the Functional Method Manual, of a total of 66,210 running words, 58,834 (or 88.9 per cent) are below the fourth thousand; 1,781 (or 2.7 per cent) are in the fourth thousand; 1,117 (or 1.7 per cent) are in the fifth thousand; 2,395 (or 3.6 per cent) are in the sixth to the tenth thousands, inclusive; and 2,083 (or 3.1 per cent) are beyond the tenth thousand.

Thus, the manual contains larger proportions of its total running words below the fourth thousand and in the fourth thousand; while Speed Drills contains larger proportions of its total running words in all intervals above the fifth thousand.

Thus it may be concluded that Speed Drills contains more of the comparatively difficult words per hundred running words than the manual, and that the manual contains more easy words per hundred running words than Speed Drills. Therefore, so far as vocabulary

vocabulary is concerned, Speed Drills has the more difficult materials.

TABLE XIV

RUNNING WORDS IN SPEED DRILLS IN GREGG SHORTHAND
AND THE FUNCTIONAL METHOD MANUAL

Thou- sand	Speed Drills		Manual	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1-3	74,908	87.5	58,834	88.9
4	2,164	2.5	1,781	2.7
5	1,413	1.7	1,117	1.7
6-10	3,232	3.8	2,395	3.6
Beyond 10,000	3,822	4.5	2,083	3.1
Totals	85,539	100.0	66,210	100.0

FUNCTIONAL METHOD DICTATION AND SPEED DRILLS IN GREGG SHORTHAND

The purposes of this section are to show the relative difficulty of the vocabularies of Functional Method Dictation and Speed Drills in Gregg Shorthand, the amount of overlapping between the vocabularies, and the power of the books to build a shorthand vocabulary. These data may be interpreted to indicate the order in which the books should be used in the shorthand course, or whether or not they should be used in the same course.

The proportions of the total vocabularies of the two textbooks which appear in the various intervals are shown in Table XV. There is a total of 4,606 different words above the third thousand in Speed Drills, and 3,714 different words in Functional Method Dictation above above this level. In the fourth thousand, there are 620 (or 13.4

per cent of the total) different words in Speed Drills, and 559 (or 15.0 per cent of the total) in Functional Method Dictation. In the fifth thousand, there are 501 (or 10.9 per cent) in Speed Drills, and 469 (or 12.6 per cent) in Functional Method Dictation. In the sixth thousand, there are 415 (or 9.0 per cent) in Speed Drills, and 322 (or 8.7 per cent) in Functional Method Dictation. Continuing in this manner through Table XV, observe that in both books, the percentages grow smaller in the higher levels, except that in the group beyond the tenth thousand, there are 1,997 (or 43.4 per cent of the total) in Speed Drills, and 1,494 (or 40.2 per cent of the total) in Functional Method Dictation.

TABLE XV

DIFFERENT WORDS IN SPEED DRILLS IN GREGG SHORTHAND AND FUNCTIONAL METHOD DICTATION AS TO THE NUMBER OF WORDS IN EACH THOUSAND INTERVAL

Thou- sand	Speed Drills		Functional Dictation		Common to Both	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
4	620	13.4	559	15.0	416	23.9
5	501	10.9	469	12.6	292	16.8
6	415	9.0	322	8.7	205	11.8
7	344	7.4	281	7.6	152	8.7
8	287	6.2	223	6.0	124	7.1
9	266	5.8	211	5.7	105	6.0
10	176	3.8	155	4.2	72	4.1
Beyond 10,000	1,997	43.4	1,494	40.2	376	21.6
Totals	4,606	100.0	3,714	100.0	1,742	100.0

Functional Method Dictation has larger proportions of its vocabulary in the fourth, fifth, seventh, and tenth thousands; and Speed Drills, naturally, has larger proportions of its total vocabulary in the remaining intervals. There is not a great deal of difference between the proportions of the vocabularies at the various levels; but it appears that Speed Drills has slightly larger proportions in the higher intervals (taken as a whole) and Functional Method Dictation has slightly larger proportions in the lower intervals. Therefore, Speed Drills has a slightly more difficult vocabulary.

There are 1,742 different words which are common to the vocabularies of the two books. Of these, 416 (or 23.9 per cent) are in the fourth thousand; 292 (or 16.8 per cent) are in the fifth thousand; 205 (or 11.8 per cent) are in the sixth thousand; 152 (or 8.7 per cent) are in the seventh thousand. Still smaller percentages are in the eighth, ninth, and tenth thousands. In the group above the tenth thousand, there are 376 (or 21.6 per cent of the total).

Thus, a great proportion of the words common to both books is in the fourth, fifth, and above the tenth thousand intervals, taken together. Smaller proportions of the words in the intervals between these are common to the two books. Hence, either of the books repeats comparatively few words that occur in the other in the sixth, seventh, eighth, ninth, and tenth thousands.

The data presented in Table XVI provide further evidence of this. Of 763 different words in the fourth thousand in the combined vocabularies of the two books, 620 (or 81.2 per cent) appear in Speed Drills and 559 (or 73.2 per cent) appear in Functional Method Dictation. Of 678 different words in the fifth thousand in the combined

vocabularies, 501 (or 74.0 per cent) occur in Speed Drills, and 469 (or 69.1 per cent) occur in Functional Method Dictation. Continuing through Table XVI in this manner, it is observed that Speed Drills contains greater proportions of the combined vocabulary in every interval than Functional Method Dictation. Of the total different words above the third thousand in the combined vocabulary of the two books, 70.0 per cent are contained in Speed Drills, and 56.4 per cent are contained in Functional Method Dictation. These data show that Speed Drills is 70.0 per cent as good as the two books together so far as the size of the vocabulary is concerned, and Functional Method Dictation is 56.4 per cent as good as the combined materials.

TABLE XVI

PROPORTION OF DIFFERENT WORDS IN SPEED DRILLS IN GREGG SHORTHAND AND FUNCTIONAL METHOD DICTATION WHICH APPEAR IN BOTH AND EITHER

Thou- sand Inter- val	Combined Vocabulary		Speed Drills		Functional Dictation		Common to Both Books	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Com- bined	No. of Words	Per Cent of Com- bined
4	763	11.6	620	81.2	559	73.2	416	54.5
5	678	10.3	501	74.0	469	69.1	292	43.1
6	532	8.1	415	78.0	322	60.5	205	38.6
7	473	7.2	344	72.6	281	59.4	152	32.1
8	386	5.7	287	74.4	223	57.8	124	32.1
9	372	5.7	266	71.5	211	56.7	105	28.2
10	259	4.0	176	67.9	155	59.5	72	27.8
Beyond 10,000	3,115	47.4	1,997	64.3	1,494	48.0	376	12.1
Totals	6,578	100.0	4,606	70.0	3,714	56.4	1,742	26.5

Of the 763 different words in the fourth thousand in the combined vocabulary, 416 (or 54.5 per cent) are common to the vocabularies of both books. In the remaining intervals, the percentages grow smaller as the interval becomes higher, until in the group beyond the tenth thousand, only 12.1 per cent of the combined vocabulary are common to both books. Thus, very small proportions of the words at the higher levels are common to the two books.

It appears, therefore, that there is little review and little overlapping in the higher intervals, and about half of the combined vocabulary in the fourth thousand is common to the two books.

In Table XVII the percentages are so arranged as to indicate the overlapping of the vocabularies of the two textbooks. Of the different words in the fourth thousand, 620 are in Speed Drills, and 559 are in Functional Method Dictation; 416 of these are common to the two books. Thus, 67.1 per cent of the words in the fourth thousand in Speed Drills are also in Functional Method Dictation; and 74.4 per cent of the words in this interval in Functional Method Dictation are also in Speed Drills. As would be expected, the percentages grow smaller in the higher intervals so that in the group beyond the tenth thousand, only 18.8 per cent of the vocabulary of Speed Drills is also found in Functional Method Dictation, and 25.2 per cent of the vocabulary of Functional Method Dictation is found in Speed Drills. Of the total vocabularies above the third thousand, Functional Method Dictation contains 37.8 per cent of the words found in Speed Drills; and Speed Drills contains 44.5 per cent of the vocabulary of Functional Method Dictation. Thus, the proportion of repetition and overlapping is from two-thirds to three-fourths in the fourth thousand and gradually

decreases until in the group above the tenth thousand, it is about one-fifth to one-fourth. Therefore, there is, comparatively speaking, a great deal of overlapping in the lower intervals and little overlapping in the higher intervals.

TABLE XVII

OVERLAPPING OF THE VOCABULARIES OF SPEED DRILLS IN GREGG SHORTHAND
AND FUNCTIONAL METHOD DICTATION

Thou- sand Inter- val	Speed Drills		Functional Dictation		Words Common to Both		
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total	No. of Words	Per Cent of Speed Drills	Per Cent of Functional Dictation
4	620	13.4	559	15.0	416	67.1	74.4
5	501	10.9	469	12.6	292	58.4	62.2
6	415	9.0	322	8.7	205	49.4	63.7
7	344	7.4	281	7.6	152	44.1	54.0
8	287	6.2	223	6.0	124	43.2	55.5
9	266	5.8	211	5.7	105	39.4	49.8
10	176	3.8	155	4.2	72	40.9	28.2
Beyond 10,000	1,997	43.4	1,494	40.2	376	18.8	25.2
Totals	4,606	100.0	3,714	100.0	1,742	37.8	44.5

Table X shows the percentage and number of running words found in each interval in each book. These data may be interpreted as follows: in every 1,000 running words of average material found in Functional Method Dictation, there are 900 words within the first three thousand; 19 words in the fourth thousand; and 14 in the fifth thousand; 9 in the sixth; 7 in the seventh; 6 in the eighth; 5 in the ninth;

3 in the tenth; and 37 above the tenth thousand. In every 1,000 running in Speed Drills, there are 875 words within the first three thousand most-used words; 25 in the fourth thousand; 17 in the fifth; 11 in the sixth; etc.; and 45 in the group above the tenth thousand.

These data show that greater proportions of the vocabulary of Speed Drills are in all intervals above the third thousand than of the vocabulary of Functional Method Dictation. A greater proportion of the words below the fourth thousand is found in Functional Method Dictation. Therefore, the vocabulary and the materials of Speed Drills are more advanced, and for this reason Functional Method Dictation should not follow Speed Drills in the shorthand course.

TABLE XVIII
RUNNING WORDS IN FUNCTIONAL METHOD DICTATION
AND SPEED DRILLS IN GREGG SHORTHAND

Thou- sand	Speed Drills		Functional Dictation	
	No. of Words	Per Cent of Total	No. of Words	Per Cent of Total
1-3	74,908	87.5	58,550	90.0
4	2,164	2.5	1,208	1.9
5	1,413	1.7	936	1.4
6	972	1.1	617	.9
7	844	1.0	470	.7
8	542	.6	356	.6
9	558	.7	328	.5
10	316	.4	221	.3
Beyond 10,000	3,822	4.5	2,440	3.7
Totals	85,539	100.0	65,126	100.0

SUMMARY AND CONCLUSIONS

(1) Larger proportions of the different words of the manual are in all intervals above the third thousand, except the seventh and the group above the tenth thousand. It appears, therefore, that the manual has a greater vocabulary building power below the tenth thousand than Functional Method Dictation, and that Functional Method Dictation has a greater vocabulary above the tenth thousand.

(2) About two-fifths of the vocabulary above the third thousand of either the manual or Functional Method Dictation may be found in the other book. Thus, three-fifths of the words in either book are not contained in the other. Therefore, so far as vocabulary building is concerned, the two books may be used advantageously in the same course.

Functional Method Dictation does not review more than two-fifths of the vocabulary above the third thousand in the manual, and so for review purposes, it cannot be depended upon. Thus, the teacher must provide other materials for reviewing the manual vocabulary above the third thousand.

(3) The manual contains a smaller proportion of running words below the fourth thousand than Functional Method Dictation, and it contains larger proportions of its total vocabulary in all other intervals except the group beyond the tenth thousand.

It appears, therefore, that the materials of Functional Method Dictation are not so difficult as the materials of the manual. (This is true in spite of the fact that the vocabulary of the first half of the manual is very simple.)

For this reason, it is probable that Functional Method Dictation should not be used following the manual, assuming that more difficult materials should follow easier materials.

(4) Larger proportions of the different words above the third thousand of the manual are in all intervals, except the seventh and the group above the tenth thousand, than in Speed Drills. A larger proportion of the words above the third thousand in Speed Drills is above the tenth thousand than in the manual. It appears, therefore, that the manual places greater emphasis on words below the tenth thousand, while Speed Drills places greater emphasis on words above the tenth thousand.

(5) Speed Drills reviews slightly less than two-fifths of the vocabulary of the manual; and nearly seventy per cent of the words above the third thousand of Speed Drills do not occur in the manual.

Therefore, so far as vocabulary building is concerned, the two books may be used advantageously in the same course, for the overlapping is not great. For review purposes, Speed Drills reviews less than two-fifths of the manual vocabulary above the third thousand.

(6) The manual contains larger proportions of its total running words below the fourth thousand and in the fourth thousand; while Speed Drills contains larger proportions of its total running words in all intervals above the fifth thousand. Thus, it may be concluded that the materials of Speed Drills (so far as vocabulary is concerned) are more difficult than those of the manual.

Therefore, Speed Drills may be used following the manual advantageously, so far as difficulty of materials is concerned.

(7) Functional Method Dictation has larger proportions of its

vocabulary in the fourth, fifth, seventh, and tenth thousands; and Speed Drills has larger proportions of its total vocabulary above the third thousand in the remaining intervals. Therefore, the vocabulary of Speed Drills is more advanced than that of Functional Method Dictation.

(8) Only 37.8 per cent of the vocabulary of Speed Drills is found in Functional Method Dictation, and 44.5 per cent of the vocabulary of Functional Method Dictation is found in Speed Drills. Therefore, the overlapping of vocabularies is not such as would prevent the books being used in the same course advantageously, so far as vocabulary building is concerned.

However, neither book may be expected to review the vocabulary of the other book.

(9) Greater proportions of the total running words of Speed Drills are in all intervals above the third thousand, while a greater proportion of the running words of Functional Method Dictation is below the third thousand. Therefore, the materials of Speed Drills are more difficult--containing more words above the third thousand per hundred running words than Functional Method Dictation.

Thus, if Functional Method Dictation and Speed Drills are used in the same course, they should be used in the order named--assuming that more difficult materials should not precede easier materials.

(10) Because both Speed Drills and Functional Method Dictation review about two-fifth of the manual vocabulary, and because Functional Method Dictation is the smaller book (having fewer running words), and because Functional Method Dictation has the simpler vocabulary, it is concluded that for reviewing the manual Functional Method

Dictation is superior.

(11) Of the three books, Speed Drills has the largest and most advanced vocabulary and the most difficult materials; the manual has a larger vocabulary and more difficult materials than Functional Method Dictation. Functional Method Dictation has the least vocabulary and the least difficult materials.

However, many may still wish to use Functional Method Dictation following the manual--it may be desirable to use this easy book and cover the materials rapidly following the more difficult materials of the manual. In the next chapter it is assumed that all three books are used in the same course--the manual, Functional Method Dictation, and Speed Drills, in the order named.

CHAPTER VI

COMPOSITE VOCABULARY OF THE FUNCTIONAL METHOD MANUAL,
FUNCTIONAL METHOD DICTATION, AND SPEED DRILLS IN GREGG SHORTHAND

In Chapter V it is shown that if the two books are used in the same course, Functional Method Dictation should precede Speed Drills in Gregg Shorthand. In this chapter it is assumed that both books are used in the same course—Functional Method Dictation following the Functional Method Manual, and Speed Drills following Functional Method Dictation.

To show how the textbooks fit into the shorthand course and the extent to which they build a shorthand vocabulary are the general purposes of this chapter.

The words below the fourth thousand appearing in the 5,000 Most-Used Shorthand Forms, and not appearing in the manual, are shown in Table XIX. (These have already been referred to in Chapter II.) Of the 17 words in the first thousand which do not appear in the manual, 10 appear in Functional Method Dictation. Thus there are seven words which do not appear in the manual and Functional Method Dictation. Of these seven, five appear in Speed Drills, so that there are only two words in the first thousand which do not occur in one of the three books.

Of the 72 words in the second thousand which do not appear in the manual, 46 occur in Functional Method Dictation. Thus, there are 26 words which do not occur in either of these books in the second thousand. Of these, 13 appear in Speed Drills, so that there are thirteen words in the second thousand which do not occur in any of the materials.

TABLE XIX

WORDS IN THE FIRST 3,000 MOST-USED SHORTHAND FORMS
NOT IN THE FUNCTIONAL METHOD MANUAL

Thou- sand	Not in Manual	In Functional Dictation	Balance in Neither	In Speed Drills	Balance not Found	Not De- rived*
1	17	10	7	5	2	1
2	72	46	26	13	13	5
3	177	107	70	36	34	15
Totals	266	163	103	54	49	21

*Words not derived from the same root as any other word in any of the materials.

Of the 177 words in the third thousand which do not occur in the manual, 107 appear in Functional Method Dictation; and of the remainder, 36 occur in Speed Drills, so that there are only 34 words in the third thousand which do not appear in the combined materials.

Hence, there is a total of 49 words in the first three thousand which do not occur in the functional method materials. Of these 21 are not derivatives of some other word in the manual, or words which are derived from the same root word as some other derivatives in the manual.

In Appendix A are listed all the words in the first three thousand which do not occur in the manual, and those which appear in Functional Method Dictation and Speed Drills are marked so that the words which do not occur in any of the materials may be determined easily. Similar lists may be compiled for the other levels from the alphabetic lists of words in all the materials (See Appendix C for a sample page).

In Table XX, data are presented showing that the total vocabulary of 8,339 different words above the third thousand level within the three textbooks is composed of 3,107 (or 44.5 per cent) words introduced in the manual, 2,265 (or 27.2 per cent) introduced in Functional Method Dictation, and 2,373 (or 28.3 per cent) introduced in Speed Drills. (Of course, it is assumed that the manual, Functional Method Dictation, and Speed Drills are used in the course in the order mentioned here.)

When only the fourth thousand is considered, of a total of 897 different words, 633 (or 70.5 per cent) are introduced in the manual; 172 (or 19.2 per cent) are introduced in Functional Method Dictation; and 92 (or 10.3 per cent) are introduced in Speed Drills. In every interval, more words are introduced in the manual than in Functional Method Dictation; and in all except the group beyond 10,000, Functional Method Dictation introduces more new words than Speed Drills. However, in the group beyond 10,000, Speed Drills introduces more new words than either of the other books.

Thus, in the fourth, fifth, and sixth thousands, the manual introduces more new words than the other two books combined; while in the remaining intervals, the manual introduces more new words than either of the other books (except in the group above the tenth thousand). Of course, the manual also introduces almost all the words below the fourth thousand.

When the first three thousand words are added to the total number above the third thousand introduced in the manual, there is a total of 6,701 different words introduced in the manual. Thus, almost three times as many words are introduced in the manual as in either of the

other books. Therefore, it appears that Functional Method Dictation and Speed Drills introduce comparatively few new words and serve more as a review of the vocabulary of the manual. How well they review the first three thousand words is indicated by the great proportion of running words below the fourth thousand in each book. How well these books review the vocabulary above the third thousand which the pupil studies in the manual, is shown in the following paragraphs.

TABLE XX

THE ORDER OF INTRODUCTION OF NEW WORDS IN THE COMPOSITE VOCABULARY
OF FUNCTIONAL METHOD MATERIALS

Thou- sand Inter- val	Composite		Manual		Functional Dictation		Speed Drills	
	No. of Words	Per Cent of Com- posite	No. of Words*	Per Cent of Com- posite	No. of Words*	Per Cent of Com- posite	No. of Words*	Per Cent of Com- posite
4	897	100.0	633	70.5	172	19.2	92	10.3
5	816	100.0	521	63.8	194	23.8	101	12.4
6	664	100.0	360	54.2	158	23.8	146	22.0
7	579	100.0	272	47.0	160	27.6	147	25.4
8	501	100.0	235	46.9	139	27.8	127	25.3
9	512	100.0	226	44.0	143	28.0	143	28.0
10	363	100.0	165	45.5	104	28.7	94	25.8
Beyond 10,000	4,007	100.0	1,289	32.2	1,195	29.8	1,523	38.0
Totals	8,339	100.0	3,701	44.5	2,265	27.2	2,373	28.3

*The "No. of Words" column shows the number of new words introduced by the particular book.

The number and percentage of words occurring in the manual which also occur in Functional Method Dictation, and the number and percentage

of words in both these which occur also in Speed Drills, are shown in Table XXI.

TABLE XXI
REPETITION OF WORDS IN THE COMPOSITE VOCABULARY

Thou- sand Inter- val	Manual Vocabu- lary	Words Repeated in		Combined Vocabulary of Manual & Functional Dictation	Words Repeated in	
		Functional Dictation	Dictation		Speed Drills	Speed Drills
		No. of Words	Per Cent of Manual	No. of Words	No. of Words	Per Cent of Combined
4	633	387	62.	805	528	66.
5	521	275	53.	715	400	56.
6	360	164	46.	518	269	52.
7	272	121	45.	432	197	45.
8	235	84	28.	374	160	43.
9	226	68	33.	369	123	33.
10	165	51	32.	269	82	30.
Beyond 10,000	1,289	299	23.	2,484	474	19.
Totals	3,701	1,449	39.	5,966	2,233	37.

These data indicate the extent to which the vocabulary of Functional Method Dictation reviews the vocabulary of the manual, and the extent to which the vocabularies overlap one another. In the last two columns, data are presented showing the number and percentage of words which occur in Speed Drills and which also occur in the combined vocabulary of the other two books. These data show the extent to which the vocabulary of Speed Drills reviews the vocabularies of the other two books, and the overlapping between the vocabularies.

Functional Method Dictation repeats a total of 1,449 (or 39 per cent) of the different words found in the manual. Speed Drills repeats a total of 2,233 (or 37 per cent) of the different words occurring in both, or either, of the other books. As would be expected, at the higher levels, there is a great deal of repetition while at the lower levels, there is not so much repetition of the words of one textbook in the following textbook. For instance, in the fourth thousand, 32 per cent of the words in the manual are repeated in Functional Method Dictation; and 30 per cent of the words found in the combined vocabularies of both Functional Method Dictation and the Functional Method Manual are repeated in Speed Drills.

Thus, Speed Drills reviews the combined vocabulary of the other books almost as well as Functional Method Dictation reviews the vocabulary of the manual. However, in each case less than one-third of the materials of the previously used book, or books, is reviewed.

The following data are presented in Table XXII. Of a total of 897 different words in the fourth thousand appearing in the three textbooks, 122 (or 13.6 per cent) appear in the manual but in neither of the other books; 57 (or 6.3 per cent) appear in Functional Method Dictation but in neither of the other books; and 92 (or 10.3 per cent) appear in Speed Drills but in neither of the other books; 337 (or 37.6 per cent) of the different words in the fourth thousand are common to two of the three books; and 289 (or 32.2 per cent) appear in or are common to, all three books. The number of words and percentage appearing in all three books and in two books decreases as the frequency-of-use of the words decreases; thus in the group above the tenth thousand, of 4,007 different words in the three books, only

TABLE XXII

DIFFERENT WORDS OCCURRING IN ONE, TWO, AND THREE BOOKS

Thou- sand Inter- val	Composite Vocabulary		Manual Only		Functional Dictation Only		Speed Drills Only		Words in Any Two Books		Words Common to All Three Books	
	No. of Words	Per Cent of Self	No. of Words	Per Cent of Com- posite	No. of Words	Per Cent of Com- posite	No. of Words	Per Cent of Com- posite	No. of Words	Per Cent of Com- posite	No. of Words	Per Cent of Com- posite
4	897	100.0	122	13.6	57	6.3	92	10.3	337	37.6	289	32.2
5	816	100.0	130	15.9	82	10.0	101	12.4	331	40.6	172	21.1
6	664	100.0	110	16.6	79	11.9	146	22.0	225	33.9	104	15.7
7	579	100.0	90	15.5	82	14.2	147	25.4	202	34.9	58	10.0
8	501	100.0	82	16.4	82	16.4	127	25.4	176	35.1	34	6.8
9	512	100.0	119	23.2	86	16.8	143	27.9	137	26.8	27	5.3
10	363	100.0	80	22.0	75	20.7	94	25.9	95	26.2	19	5.2
Beyond 10,000	4,007	100.0	829	20.7	913	22.8	1,523	38.0	711	17.8	31	.7
Totals	8,339	100.0	1,562	18.7	1,456	17.6	2,373	28.4	2,214	26.5	734	8.8

The above table is read--of a total of 897 different words in the fourth thousand in all three books, 122 (or 13.6 per cent) appear in the manual, but in neither of the other books, etc.

711 (or 17.8 per cent) are common to two of the books and only 31 (or .7 per cent) are common to all three books. Of a total of 8,339 different words above the third thousand appearing in the three textbooks, 2,214 (or 26.5 per cent) appear in two of the books, and 734 (or 8.8 per cent) are common to all three books.

It appears, therefore, that there is very little review or overlapping in the higher levels. However, either of the subsequent textbooks does not introduce more than half as many new words (altogether) as the manual.

To show the number and percentage of running words in each book in the various intervals, Table XXIII is presented. Of a total of 216,875 running words in the three textbooks, 66,210 (or 30.6 per cent) are in the manual, 66,126 (or 30.0 per cent) are in Functional Method Dictation, and 85,539 (or 39.4 per cent) are in Speed Drills.

Of the 216,210 running words in the three textbooks, 192,292 (or 88.6 per cent) are below the fourth thousand most-used words, 5,153 (or 2.4 per cent) are in the fourth thousand, 3,466 (or 1.6 per cent) are in the fifth thousand, 7,619 (or 3.5 per cent) are in the sixth to the tenth thousands, and 8,345 (or 3.9 per cent) are beyond the tenth thousand. Thus, there are more words beyond the tenth thousand than in the sixth, seventh, eighth, ninth, and tenth thousands combined.

The Functional Method Manual and Speed Drills contain larger proportions of words in the fourth, fifth, and sixth to the tenth thousands than Functional Method Dictation. Functional Method Dictation contains a larger proportion of words below the

the fourth thousand than either of the other books. The manual contains a smaller proportion of words above the tenth thousand than either of the other books.

TABLE XXIII
RUNNING WORDS IN THE COMBINED MATERIALS

Thou- sand Inter- val	Manual		Functional Dictation		Speed Drills		Combined Materials	
	No. Words	Per Cent of Total	No. Words	Per Cent of Total	No. Words	Per Cent of Total	No. Words	Per Cent of Total
1-3	58,834	88.9	58,550	90.0	74,908	87.5	192,292	88.6
4	1,781	2.7	1,208	1.9	2,164	2.5	5,153	2.4
5	1,117	1.7	936	1.4	1,413	1.7	3,466	1.6
6-10	2,395	3.6	1,992	3.0	3,232	3.8	7,619	3.5
Beyond 10,000	2,083	3.1	2,440	3.7	3,822	4.5	8,345	3.9
Totals	66,210	100.0	65,126	100.0	85,539	100.0	216,875	100.0
Per Cent	30.6		30.0		39.4		100.0	

The number of new words presented in Functional Method Dictation and Speed Drills in each interval has already been discussed in connection with Table XX. To show how the words are distributed among various portions of the two textbooks, Table XXIV is presented.

Of a total of 2,265 words above the third thousand contained in Functional Method Dictation which are not in the manual, 233 (or 10.3 per cent) first appear in the first ten assignments, 319 (or 14.1 per cent) first appear in the second group of ten assignments, etc. The percentage figures indicate that the new words are distributed

throughout the textbook fairly evenly. There is more variation in the portions of Speed Drills than in Functional Method Dictation. The lowest proportion of new words introduced in any group of ten assignments is 10.1 per cent, and the highest is 14.1 per cent in Functional Method Dictation; and in Speed Drills, the lowest proportion is 9.1 per cent, and the highest is 16.0 per cent. Thus, in Speed Drills one section of ten assignments introduces nearly twice as many new words as the section having the lowest proportion of new words.

TABLE XXIV
DISTRIBUTION OF NEW WORDS WITHIN THE TEXTBOOKS

Assign- ment Nos.	Functional Dictation		Speed Drills	
	New Words Introduced	Per Cent of Total	New Words Introduced	Per Cent of Total
1-10	233	10.3	318	13.4
11-20	319	14.1	379	16.0
21-30	270	11.9	319	13.5
31-40	257	11.3	287	12.1
41-50	310	13.7	323	13.6
51-60	254	11.2	219	9.2
61-70	229	10.1	311	13.1
71-80	234	10.3	217	9.1
81-84	159	7.0	---	---
Totals	2,265	100.0	2,373	100.0

An examination of the list of assignments included in Appendix B shows that the least number of new words introduced in any one

assignment in Functional Method Dictation is seven and the largest number in any assignment is 55, while the average number of words introduced in the assignments is 27. In Speed Drills the least number introduced in any assignment is 12, and the largest number is 54, while the average number for each assignment is 30. Thus, there is a great deal of variation in the number of new words introduced in the various assignments in both books.

SUMMARY AND CONCLUSIONS

Assuming the manual, Functional Method Dictation, and Speed Drills to be used in the same course in the order named, the following conclusions are warranted by the data presented.

(1) Of the 266 words in the first three thousand which do not occur in the Functional Method Manual, all but 49 occur in either Functional Method Dictation or Speed Drills; and all of these but 21 may be derived from some root appearing in the combined materials.

Thus, the vocabulary of the materials below the fourth thousand is about 99.5 per cent complete.

(2) Of the total different words above the third thousand in the three textbooks (Functional Method Manual, Functional Method Dictation, and Speed Drills in Gregg Shorthand) 44.5 per cent are introduced in the manual, 27.2 per cent in Functional Method Dictation, and 28.3 per cent in Speed Drills. Furthermore, each of the books adds a great number of words to the total vocabulary in each of the first ten thousands as well as the group above the tenth thousand most-used words.

Therefore, each book has some value in the shorthand program as far as building a shorthand vocabulary is concerned. But, the

vocabulary burden of the manual is much greater even above the third thousand most-used words.

(3) Of a total of 11,339 different words in the combined materials (including the first 3,000) the manual introduces about three-fifths, and each of the other books about one fifth. Thus, the vocabulary burden of the manual is about three times that of either of the other books.

(4) Whereas, in the manual there are only 633 different words in the fourth thousand most-used words, there are 897 in the combined vocabularies of the three books; in the fifth thousand the vocabulary is increased from 521 words in the manual to 816 in the combined vocabularies; in the sixth thousand there is a total of 664 different words in the combined vocabularies.

This implies that the vocabulary level of the pupil is raised from the 3,000 level (as determined in Chapter II) to somewhere between the fifth and sixth thousands. In order to do this the pupil has studied a total of 4,638 new words in Functional Method Dictation and Speed Drills.

(5) Of the 3,701 different words in the manual, 1,449 (or 39 per cent) are repeated, or reviewed, in Functional Method Dictation. Of 5,966 different words contained in the manual and Functional Method Dictation, 2,233 (or 37 per cent) are reviewed in Speed Drills. In the higher intervals about two-thirds of the vocabularies of previous materials are reviewed in the next textbook, while beyond the tenth thousand only about one-fifth of the vocabulary is reviewed by the following textbook.

Therefore, one cannot depend upon the subsequently used textbook

to review the vocabulary already mastered.

(6) Of a total vocabulary of 8,339 in the three textbooks, 2,214 (or 26.5 per cent) of the different words are common to two books, and 734 (or 8.8 per cent) are common to all three books. Thus, only about 35 per cent of the entire vocabulary above the third thousand may be found in two or more books.

(7) Of a total of 216,875 running words in the three textbooks, 192,292 (or 88.6 per cent) are below the fourth thousand most-used words. Therefore, only 11.4 per cent of the running words are composed of words above the third thousand. Of these, 2.4 per cent are in the fourth thousand, 1.6 per cent are in the fifth thousand, 3.5 per cent are in the sixth to the tenth thousands, and 3.9 per cent are beyond the tenth thousand.

Thus, it appears that words above the third thousand are comparatively rare in the materials and that if it is desirable for the pupil to master all the words in the fourth, fifth, and sixth thousands (for example) there must be a careful plan set up in the textbook, whereby the words are repeated at psychological intervals, and whereby all words in these frequency groups may be introduced. A textbook must be planned deliberately, and composed with these objectives in view.

(8) A larger proportion of the running words of the Functional Method Manual and Speed Drills in Gregg Shorthand are ranked in the fourth, fifth, and sixth to the tenth thousands than in Functional Method Dictation. In Functional Method Dictation a larger proportion of the words are below the fourth thousand than in either of the other books. A smaller proportion of the words in the manual is above the

tenth thousand than of either of the other books.

It is probable, therefore, that the vocabulary of Functional Method Dictation is not so difficult as that of the Functional Method Manual; furthermore, because the first half of the manual is highly graded and contains relatively few infrequently used words, it is probable that the last half of the manual is considerably more difficult, so far as vocabulary is concerned, than Functional Method Dictation.

(9) The new words introduced in Functional Method Dictation and Speed Drills are introduced fairly evenly throughout the textbooks. The average number of new words per lesson in Functional Method Dictation is 27; and in Speed Drills, 30.

Thus, the vocabulary burden of sections of the two books is fairly uniform. (However, there is a great deal of variation in the vocabulary burden of the individual assignments, ranging from seven to fifty-five words.)

CHAPTER VII

SUMMARY AND CONCLUSIONS

From the data presented, the following conclusions are warranted:

(1) A large percentage (20.4 per cent) of the different words occurring in the Functional Method Manual are above the tenth thousand. These words compose only 3.1 per cent of the running words in the textbook. Therefore, words above the tenth thousand are repeated relatively few times when compared with words below this level. Yet, they compose a great portion of the shorthand vocabulary burden of the book.

(2) Between the third and tenth thousands, less than one-half the words found in the Horn list of 10,000 most-used words are included in the Functional Method Manual; therefore, subsequently used textbooks should contain great quantities of words in these intervals (assuming that pupils should know shorthand outlines for all the more frequently used words, and that the more frequently used words are more important than other words.

(3) The shorthand vocabulary level of a pupil who has mastered the vocabulary of the Functional Method Manual is about the third thousand most-used words; for, more than ninety per cent of the first three thousand most-used words are included in the manual, and these compose 88.9 per cent of the running words of the textbook.

(4) Words ranking beyond the fifth thousand most-used words occur less than twice each in the Functional Method Manual; for there are less than twice as many running words composed of these words than there are different words; therefore, if it is desirable that these

words be studied in more than one situation, many of them must be repeated in subsequently used textbooks.

(5) Because so large a percentage (40.2 per cent) of the different words above the third thousand in Functional Method Dictation, are above the tenth thousand, it is probable that a large share of the increase in the pupil's vocabulary while studying this book must be composed of these words.

(6) Because 3.7 per cent of the running words of Functional Method Dictation are above the tenth thousand, it may be concluded that the average assignment of 770 running words will contain more than twenty-five words above the tenth thousand; therefore, the pupil continually studies these infrequently used words.

(7) Because a great proportion (65.1 per cent) of the words above the third thousand occur only once in Functional Method Dictation, and because so small a proportion (14.7 per cent) occur more than twice, it may be concluded that subsequently used textbooks and materials should review these words, if it is desirable that they be studied in more than one situation.

(8) Because so large proportion (43.4 per cent) of the different words above the third thousand appearing in Speed Drills in Gregg Shorthand are above the tenth thousand, and because only about one-half of the words in the fifth thousand, and smaller proportions of the words in the remaining intervals beyond the fifth thousand occur in Speed Drills; it may be concluded that this textbook does not attempt to complete the pupil's vocabulary in the intervals between the fifth and tenth thousands, and therefore, there is need for other materials to do this.

(9) Because 4.5 per cent of the running words in Speed Drills in Gregg Shorthand are above the tenth thousand, it may be concluded that an average lesson of 1,030 words contains about forty-five words above the tenth thousand. Therefore, the pupil continually studies these relatively infrequently used words.

(10) A great proportion (55.4 per cent) of the different words above the third thousand in Speed Drills in Gregg Shorthand occur only once, and only 23.9 per cent occur more than twice; therefore, unless these words are already familiar to the pupil, or unless they are repeated in subsequently used materials, the pupil has no chance to master the words except in one situation.

(11) Larger proportions of the different words of the manual are in all thousands above the third thousand (except the seventh thousand and the group above the tenth thousand) than in Functional Method Dictation. It appears, therefore, that the manual has a greater vocabulary building power below the tenth thousand and that Functional Method Dictation has a greater vocabulary above the tenth thousand.

(12) About two-fifths of the vocabulary above the third thousand of either the manual or Functional Method Dictation may be found in the other. Thus, three-fifths of the words in either book are not contained in the other. Therefore, so far as vocabulary building is concerned, the two books may be used advantageously in the same course.

However, Functional Method Dictation does not review more than two-fifths of the vocabulary above the third thousand in the manual, so for review purposes, it cannot be depended upon. Thus, the teacher

must provide other materials for reviewing the manual vocabulary above the third thousand most-used words--if a review is deemed advisable.

(13) The manual contains a smaller proportion of running words below the fourth thousand than Functional Method Dictation, and it contains larger proportions in all other intervals except the group beyond the tenth thousand--here Functional Method Dictation contains a larger percentage of its words. Thus, it appears that the materials of Functional Method Dictation are not so difficult (since it contains a smaller proportion of words above the third thousand) as the materials of the manual. (This is true in spite of the fact that the vocabulary of the first half of the manual is very simple; for this reason, it is probable that the last half of the manual contains a much more difficult vocabulary than Functional Method Dictation.) Therefore, it may be that Functional Method Dictation should not be used following the manual, assuming that more difficult materials should follow easier materials.

(14) Larger proportions of the different words above the third thousand of the manual are in all intervals except the seventh and the group above the tenth thousand; while a larger proportion of the vocabulary of Speed Drills is above the tenth thousand than in the manual. It appears, therefore, that the manual places greater emphasis on words within the first ten thousand, while Speed Drills places greater emphasis on words above the tenth thousand.

(15) Speed Drills reviews slightly less than two-fifths of the vocabulary of the manual; and nearly seventy per cent of the words above the third thousand of Speed Drills do not occur in the manual.

Therefore, so far as vocabulary building is concerned, the two books may be used advantageously in the same course, for the overlapping is not great. For review purposes, however, Speed Drills reviews less than two-fifths of the manual vocabulary above the third thousand.

(16) The manual contains larger proportions of its total running words below the fourth thousand and in the fourth thousand; while Speed Drills contains larger proportions of its total running words in all intervals above the fifth thousand. Thus, it may be concluded that the materials of Speed Drills (so far as vocabulary is concerned) are more difficult than those of the manual. Therefore, Speed Drills may be used following the manual advantageously, so far as difficulty of vocabulary is concerned.

(17) Functional Method Dictation has larger proportions of its vocabulary in the fourth, fifth, seventh, and tenth thousands; and Speed Drills has larger proportions of its total vocabulary above the third thousand in the remaining intervals. Therefore, the vocabulary of Speed Drills is more advanced than that of Functional Method Dictation.

(18) Only 37.8 per cent of the vocabulary of Speed Drills is found in Functional Method Dictation, and 44.5 per cent of the vocabulary of Functional Method Dictation is found in Speed Drills. Therefore, the overlapping of vocabularies is not such as would prevent the books being used in the same course advantageously, so far as vocabulary is concerned. However, neither book may be expected to review the vocabulary of the other.

(19) Greater proportions of the total running words of Speed Drills are in all intervals above the third thousand, while a greater

proportion of the running words of Functional Method Dictation is below the third thousand. Therefore, the materials of Speed Drills are more difficult--containing more words above the third thousand per hundred running words. Thus, if Functional Method Dictation and Speed Drills are used in the same course, they should be used in the order named--assuming that more difficult materials should not precede easier materials.

(20) Because both Speed Drills and Functional Method Dictation review about two-fifths of the manual vocabulary, and because Functional Method Dictation is the smaller book (having fewer running words), and because Functional Method Dictation has the simpler vocabulary, it is concluded that for reviewing the manual, this book is superior to Speed Drills.

(21) If Functional Method Dictation follows directly after the manual, the pupil's vocabulary is increased 61.2 per cent; and if Speed Drills follows directly after the manual, the pupil's vocabulary is increased 85.5 per cent (assuming in both instances that the pupil masters all words in the textbooks studied); therefore, if both Functional Method Dictation and Speed Drills are used following the manual, the former should be placed first, for it requires the learning of fewer new outlines--assuming that the book requiring the mastering of the smaller number of outlines is the easier book and that easier materials should precede more difficult materials.

(22) Of the three books, Speed Drills has the largest and most advanced vocabulary and the most difficult materials; the manual has a larger vocabulary and more difficult materials than Functional Method Dictation. Functional Method Dictation has the least vocabulary and the least difficult materials.

(23) Assuming the Functional Method Manual, Functional Method Dictation, and Speed Drills in Gregg Shorthand to be used in the same shorthand course in the order named, 44.5 per cent of the different words are introduced in the manual; 27.2 per cent in Functional Method Dictation, and 28.3 per cent in Speed Drills; therefore, it may be concluded that more words are introduced by Speed Drills when it follows both the other books than by Functional Method Dictation when it follows only the manual.

(24) Because the total vocabulary of the three textbooks (taken collectively) in the fifth thousand is more complete than the vocabulary of the Functional Method Manual is in the third thousand, it may be concluded that the shorthand vocabulary level of the pupil is raised at least two thousands through a study of Functional Method Dictation and Speed Drills.

(25) Functional Method Dictation contains 39 per cent of the words appearing in the manual, and Speed Drills contains 37 per cent of the words appearing in both the manual and Functional Method Dictation together; therefore, Speed Drills provides almost as complete a review of both the other books together, as Functional Method Dictation provides of the manual.

(26) Because only 35 per cent of the entire vocabulary of the three textbooks is common to two or more of them, it is concluded that many of the words occurring only once in any of the books do not occur in any other of them; therefore, there are many words which occur only once in the combined materials.

(27) While more than two-thirds of the different words of the three books (taken together) are above the third thousand, these

compose only 11.4 per cent of the running words of the materials. Therefore, it is concluded that the total materials provide great quantities of review materials over the first three thousand, and comparatively little review over less frequently used words.

(28) The materials in Functional Method Dictation and Speed Drills provide a vocabulary which continually grows at a fairly even rate; for all equal sections of the textbooks provide similar quantities of new words.

(29) A larger proportion of the running words of the Functional Method Manual and Speed Drills are ranked in the fourth, fifth, and sixth to the tenth thousands than in Functional Method Dictation. In Functional Method Dictation, a larger proportion of the words are below the fourth thousand than in either of the other books. Therefore, of the three books, Functional Method Dictation is the least difficult, and Speed Drills is the most difficult.

(30) After completing the materials of the three textbooks, the pupil's vocabulary is about 99 per cent complete below the fourth thousand most-used words; for all but 49 words in the 5,000 Most-Used Shorthand Forms below the fourth thousand appear in one or another of the textbooks, and all of these but 21 may be derived from some root appearing in the combined materials.

(31) The materials of the three textbooks are similar in that each book contains a large proportion of different words above the tenth thousand; in that each contains a large percentage of running words below the third thousand; and in that none attempt to complete the vocabulary of the pupil at any level of frequency-of-use. (This conclusion is based upon the preceding conclusions.)

IMPLICATIONS

The findings and conclusions of this study have valuable implications for the teacher, the pupil, and the publisher of the textbooks.

Because there are so many words in all intervals (and especially those above the third thousand most-used words) which do not appear in the textbooks, there is an implication (if words between the third and tenth thousands are important) that the teacher cannot depend solely upon the textbooks to provide the vocabulary for the pupil.

Furthermore, if it is desirable to include in a textbook a maximum of the more frequently used words with a minimum of less frequently used words, the materials must be selected, composed, and graded to contain exactly the words desired. For instance, if it is desired to provide a shorthand vocabulary of 7,000 words, then the materials must be crammed with words in the fourth, fifth, sixth, and seventh thousands most-used words, and words above the seventh thousand should be shunned to provide the most effective 7,000-word shorthand vocabulary.

Because the shorthand vocabulary level of the pupil after completing these materials is not beyond the fifth or sixth thousands, the need for the principles of constructing new outlines must be stressed in teaching. The shorter the course and the less material covered the more essential is this procedure. For, in a one-year course ending with Functional Method Dictation, the pupil's shorthand vocabulary is not beyond the fifth thousand level.

Because there are so many words which occur in the materials only once, and so few which occur more than twice, the textbooks cannot be depended upon to provide automatic review of the vocabulary.

Because there are so many words above the tenth thousand, there is the implication that the stenographer needs not only the more frequently used words in his shorthand vocabulary, but a smattering of words above the tenth thousand most-used words.

RECOMMENDATIONS

Based upon the findings, conclusions, and implications of this study, the following recommendations are made:

(1) If the Functional Method Manual, Functional Method Dictation, and Speed Drills in Gregg Shorthand are used in the same course, they should be used in the order named. Furthermore, these books may be used advantageously in the same course so far as vocabulary building is concerned, for the overlapping of vocabularies is not great.

(2) Teachers should not depend upon the textbooks to furnish the total vocabulary. The materials may be advantageously supplemented by previews to new-matter dictation from varied sources insuring a large vocabulary, and by use of other textbooks, such as, the 5,000 Most-Used Shorthand Forms.

(3) Supplementary materials containing the words in the lower intervals of the 10,000 most-used words which are not included in the shorthand textbooks should be prepared.

(4) Research to establish the shorthand vocabulary needed by stenographers in various types of positions is fundamental, and until such levels are established analyses of this type cannot result in the maximum good.

(5) Research to establish the vocabulary level of prospective pupils of shorthand is a fundamental step which must be made before textbooks can be compiled for maximum efficiency in teaching shorthand.

(6) Other studies similar to this one should be made of other shorthand materials, and these should be compared with the materials of this study. For instance, an analysis of the vocabulary of Dictation for Transcription by Renshaw and Leslie would add a great deal of value to this study.

BIBLIOGRAPHY

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A Course of Study for Teaching Gregg Shorthand. Gregg Publishing Company, New York, 1939.

A brief but specific outline of materials to be used from day to day in the study of shorthand when the Gregg Shorthand Manual is used as the basic textbook.

Gregg, John Robert. Gregg Shorthand, Anniversary Edition. Gregg Publishing Company, New York, 1929. (Preface)

Contains a brief analysis of the vocabulary of the Gregg Shorthand Manual based on Horn's list of 10,000 most commonly used words in writing.

Hoadley, Ruth L. "Analysis of the Shorthand Principles Used in Writing the Thousand Commonest Words." Research Studies in Commercial Education, No. IV. p. 45. University of Iowa, 1929. Master's Thesis, Northwest Missouri State College, 1929.

An attempt to determine the most used shorthand principles in Gregg Shorthand through an analysis of the thousand commonest words as compiled by Ayers.

Horn, Ernest. "A Basic Writing Vocabulary." University of Iowa Monographs in Education. University of Iowa, 1926.

An alphabetic list of 10,000 words which were found to occur most frequently in 5,000,000 running words of business and personal correspondence.

Johnson, Mildred A. "Comparison of Gregg Manual and Speed Studies." Journal of Business Education, VII, No. 3, (Feb., 1932) p. 15. Report of Master's Thesis, Comparative Analysis of Gregg Shorthand Manual and Speed Studies. New York University, 1931.

The vocabularies of Speed Studies and the manual are compared as to the number of words contained in each in each chapter not found in the corresponding chapter in the other.

Leslie, Louis A. Functional Method Teacher's Handbook. Gregg Publishing Company, New York, 1936.

Contains suggestions for teaching shorthand, underlying philosophy behind the Functional Method, and an outline of materials, and a key to the shorthand in the Functional Method Manual, together with an analysis of its vocabulary as to the placement of its words in the Horn list of 10,000 most-used words.

Leslie, Louis A. and Zoubek, Charles E. Speed Drills in Gregg Shorthand Teacher's Handbook. Gregg Publishing Company, New York, 1938.

Suggestions for using the textbook and a key to the shorthand in Speed Drills in Gregg Shorthand.

Lessenberry, D. D. "Non-essential Suffixes and Prefixes," Research Studies in Commercial Education, No. 3. University of Iowa, 1928.

To determine the important and unimportant prefixes and suffixes, an analysis was made of the words in Horn's 10,000 most-commonly used words in writing as to the principles of Gregg Shorthand used in writing them.

Pille, Elsa M. and Arnold, Percy. "Word Frequency of Manual Vocabulary Analyzed." American Shorthand Teacher, XIII, No. 5, p. 184. (Jan., 1933).

The vocabulary of the Gregg Shorthand Manual is analyzed through the use of the Horn list of 10,000 most-used words in writing.

Thorndike, Edward L. The Teacher's Word Book. Teachers College, Columbia University, New York, 1932.

An alphabetic list of 20,000 words ranked by thousands found to occur most frequently in 10,000,000 running words of general reading materials.

Zoubek, Charles E. "Creek Jumping and Shorthand." The Gregg News Letter, No. 161. p. 54. (Oct., 1939).

A brief article on methods and materials for the teaching of Gregg Shorthand.

APPENDIX

APPENDIX A

WORDS LISTED IN THE FIRST THOUSAND OF 5,000 MOST-USED SHORTHAND FORMS
WHICH ARE NOT LISTED IN THE FUNCTIONAL METHOD MANUAL

Words preceded by the asterisk (*) appear in Functional Method Dicta-
tion.

Words preceded by the hyphen (-) appear in Speed Drills.

Words preceded by the number sign (#) are not derived from roots
in the manual.

Words underscored do not appear in any of the three books.

*advised	*dearest	*regards	*using
-cars	-hoping	<u>replying</u>	#-walk
-coming	# <u>kid</u>	*teaching	
#*correspondence	*lovely	-thanking	
#*couple	*really	*understanding	

APPENDIX A (continued)

WORDS LISTED IN THE SECOND THOUSAND OF 5,000 MOST-USED SHORTHAND FORMS
WHICH ARE NOT LISTED IN THE FUNCTIONAL METHOD MANUAL

Words preceded by the asterisk(*) appear in Functional Method Dictation.

Words preceded by the hyphen (-) appear in Speed Drills but not in Functional Method Dictation.

Words preceded by the number sign (#) are not derived from roots in the manual.

Words underscored do not appear in any of the three books.

<u>attaching</u>	*examinations	*loving	*recommendation
*afterwards	*expecting	<u>lovingly</u>	*refused
#*band	*expenses	*meets	#-ride
*banquet	*extended	#*mud	*riding
#*bet	*figures	# <u>nap</u>	<u>seconded</u>
*billing	*fly	#*outfit	#-senior
#*breakfast	<u>forwarding</u>	*owe	# <u>skirt</u>
# <u>bunch</u>	<u>furnishing</u>	*persons	<u>staying</u>
#*candy	#*gas	#*phone	-thinks
-cent	#*gentleman	#*pie	#-uncle
#-chairman	*gotten	#-pipe	*valued
*connected	*grades	*plate	#*wild
# <u>crazy</u>	*graduate	#*plus	*wind
*deducted	#*hog	*poem	-wished
*deep	#-invitation	*pounds	*yards
*definitely	<u>kindest</u>	# <u>pray</u>	
-delightful	# <u>lading</u>	#*prepaid	
#-double	*lessons	-proposed	
*duly	#-lonesome	*reasons	

APPENDIX A (continued)

WORDS LISTED IN THE THIRD THOUSAND OF 5,000 MOST-USED SHORTHAND FORMS
WHICH ARE NOT LISTED IN THE FUNCTIONAL METHOD MANUAL

Words preceded by the asterisk (*) appear in Functional Method Dictation.

Words preceded by the hyphen (-) appear in Speed Drills but not in Functional Method Dictation.

Words preceded by the number sign (#) are not derived from roots in the manual.

Words underscored do not appear in any of the three books.

*acting	#*belt	#*comparison	-extending
*activities	*blanks	<u>compliment</u>	*figured
-advises	#*blood	# <u>compliance</u>	#-fond
#*affectionate	-borrow	<u>complying</u>	#*foolish
<u>affectionately</u>	#*bottle	*congratulations	*formal
*allowing	*breaking	*connections	-fund
#*ambition	*brothers	*correctly	# <u>funeral</u>
*applications	#*butter	#*correspondent	*furthermore
*applying	<u>calendar</u>	#*criticism	#-generous
*approve	<u>cancellation</u>	*demonstration	*goodness
-arms	*charging	*depends	#*graduation
#-asleep	#-chemistry	*desirous	#*guilty
#-ascertain	<u>chickens</u>	*development	#*handsome
*authorized	#*Christian	*directors	*hang
# <u>awhile</u>	#-climate	-discussed	<u>heaps</u>
*banks	<u>clubs</u>	-dreams	#-height
<u>base</u>	#-collar	*drink	#-hen
*basket	# <u>commencement</u>	#*earnest	#-homesick
#-bat	-comment	*ends	*honesty
#*bath	*compared	*equally	#*honey
# <u>bee</u>			

APPENDIX A (concluded)

*illness	#*nose	-providing	#*spite
*inconvenienced	*notified	# <u>pump</u>	*sport
*inquiring	#-nurse	# <u>queer</u>	#*struck
#*joke	# <u>nut</u>	*quotations	<u>suffer</u>
*justify	*occasionally	*rag	-suffering
#*lap	# <u>odd</u>	*recommended	#-tan
*largest	#-one-half	# <u>religious</u>	#*tip
#-lazy	*one's	-requests	#*transit
*legal	*operated	-rings	*treasurer
*likes	*operating	#*rip	*unfortunately
<u>lively</u>	-opposite	# <u>rub</u>	*upper
#*lodge	#*orchestra	*runs	*volumes
# <u>lord</u>	#*oven	*scale	*voted
*management	<u>pan</u>	*seed	# <u>waist</u>
# <u>maid</u>	*pencil	<u>sends</u>	*washed
#*military	*plants	#*sermon	*washing
# <u>missionary</u>	#*poet	#*session	<u>wed</u>
*misunderstanding	<u>positively</u>	#-severe	<u>wholly</u>
*mother's	-prayer	*sewing	*writes
*mountain	-preferred	*sickness	-year's
#-movies	<u>previously</u>	*sides	*younger
#-navy	#-primary	*silent	
*nearest	*principles	#*silly	
# <u>niece</u>	#*professor	*sketch	
#-northern	*promises	<u>sleepy</u>	

APPENDIX B

NEW WORDS INTRODUCED IN FUNCTIONAL METHOD DICTATION BY ASSIGNMENTS
WHEN IT IS USED FOLLOWING THE FUNCTIONAL METHOD MANUAL

Assign- ment No.	No. New Words	Assign- ment No.	No. New Words	Assign- ment No.	No. New Words	Assign- ment No.	No. New Words
1	13	22	35	43	26	64	22
2	7	23	31	44	31	65	16
3	19	24	33	45	34	66	31
4	27	25	15	46	40	67	29
5	21	26	12	47	33	68	22
6	33	27	32	48	23	69	16
7	24	28	25	49	24	70	24
8	33	29	23	50	23	71	21
9	26	30	20	51	18	72	18
10	30	31	30	52	21	73	31
11	36	32	34	53	21	74	19
12	35	33	25	54	21	75	36
13	30	34	32	55	22	76	14
14	35	35	16	56	38	77	13
15	31	36	21	57	32	78	31
16	30	37	20	58	23	79	22
17	35	38	34	59	25	80	29
18	34	39	25	60	33	81	61
19	26	40	20	61	29	82	29
20	27	41	36	62	21	83	24
21	44	42	40	63	19	84	55

APPENDIX B (concluded)

NEW WORDS INTRODUCED IN SPEED DRILLS IN GREGG SHORTHAND BY ASSIGNMENTS
WHEN IT IS USED FOLLOWING FUNCTIONAL METHOD DICTATION

Assign- ment No.	No. New Words	Assign- ment No.	No. New Words	Assign- ment No.	No. New Words	Assign- ment No.	No. New Words
1	37	21	42	41	41	61	38
2	54	22	30	42	34	62	30
3	42	23	48	43	34	63	44
4	28	24	27	44	50	64	23
5	35	25	26	45	44	65	24
6	31	26	21	46	32	66	39
7	17	27	39	47	22	67	25
8	23	28	20	48	27	68	28
9	23	29	36	49	20	69	20
10	28	30	30	50	19	70	40
11	57	31	30	51	31	71	20
12	38	32	34	52	41	72	31
13	40	33	29	53	23	73	25
14	40	34	25	54	13	74	17
15	37	35	28	55	15	75	20
16	45	36	30	56	18	76	25
17	21	37	26	57	26	77	16
18	37	38	29	58	12	78	19
19	41	39	28	59	20	79	27
20	23	40	28	60	20	80	17

APPENDIX C

SAMPLE PAGE OF
ALPHABETICAL LIST OF ALL WORDS IN THE THREE TEXTBOOKS

Thou- sand	The Word	Times in Dictation		Speed Drills		
		Manual Assign- ment No.*	No. of Times	Assign- ment No.*	No. of Times	
6	abandoned		14	1	68	1
x	abdomen		46	1		
x	abhorrent				68	2
x	able-bodied				8	1
9	abilities		42	2		
9	abominable				13	3
x	Abraham	1				
x	abreast				67	1
8	absorb	1			46	1
x	absorbent	1				
9	absorbing		78	1		
4	abstract	6	84	1	61	1
x	abstracts	1				
5	absurd	2	58	1		
9	absurdity				47	2
8	abundance				70	1
7	abundant				76	1
x	abundantly		80	1		
5	abuse	1			27	3

*The number of the assignment in the textbook in which the word first appears.

†The x in the "Thousand" column means that the word does not appear in the first 10,000 most-used words of the Horn list.

Pages 91-258 out
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