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A WORD FREQUENCY ANALYSIS OF BUSINESS COMMUNICATIONS AND SHORTHAND TEXTBOOK MATERIALS

The University of Oklahoma PH.D. 1982

THE UNIVERSITY OF OKLAHOMA

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A WORD FREQUENCY ANALYSIS OF BUSINESS COMMUNICATIONS AND SHORTHAND TEXTBOOK MATERIALS

A DISSERTATION

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BY

NANCY ELLEN CARMAN BROOKS

Norman, Oklahoma

1982

A WORD FREQUENCY ANALYSIS OF BUSINESS COMMUNICATIONS

AND SHORTHAND TEXTBOOK MATERIALS

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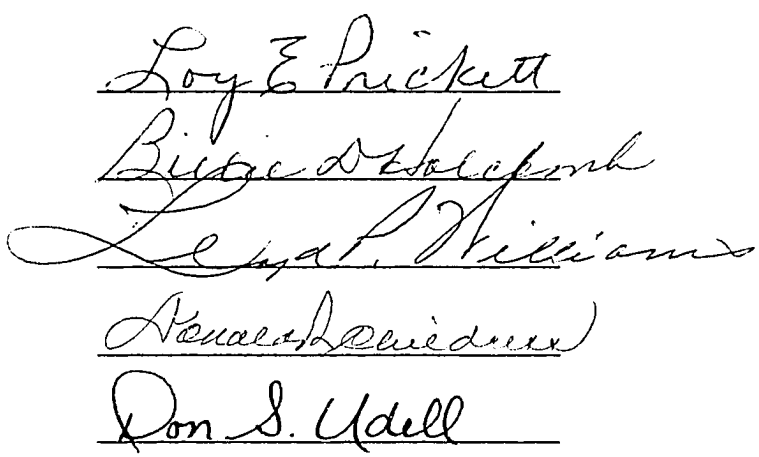

DISSERTATION COMMITTEE

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CHAPTER I

THE PROBLEM

Introduction

General agreement exists among business educators that materials used in the training of office workers should be realistic and as similar as possible to materials used in business. According to West:

> The vocabulary used in the instructional materials for typing and stenographic skills should prepare the individual for the words he will encounter later, either occupationally or in personal use. A necessary corollary is the use of test materials that will most validly assess the trainee's readiness for employment or the adequacy of his personal skills. The pertinent underlying concept or principle is that of maximum positive transfer (from school training to later life performance), an outcome that requires as close as possible a match between the materials of the training and those of later life.[1]

Vocabulary used in instructional materials in shorthand should be typical of the vocabulary found most frequently in business, as indicated by Reese and Smith:

> The paramount objective of shorthand learning/instruction is preparation for office occupations. It follows, therefore, that the vocabulary used in shorthand learning materials should parallel the language utilized in communications that originate in offices.[2]

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[1]Leonard J. West, "The Vocabulary of Instructional Materials for Typing and Stenographic Training--Research Findings and Implications," Delta Pi Epsilon Journal 10 (May 1968):13.

[2]Don Reese and E. Ray Smith, "Models for Analyzing Shorthand Learning Materials," Shorthand--A Textbook Analysis (Cincinnati, Ohio: South-Western Publishing Company, Monograph 129, 1976), p. 15.

Research studies of business vocabulary have shown that relatively small numbers of words constitute relatively large percentages of total words used. Results of word frequency studies of business communications conducted by Silverthorn,[1] Perry,[2] and Mellinger,[3] which are discussed in detail in the next chapter, indicated that 500 words accounted for over 70 percent of the total words used; that 1,000 words accounted for over 80 percent of the total words used; and that 5,000 words accounted for over 95 percent of the total words used. Both Mellinger[4] and Perry[5] recommended that teachers train shorthand students to thoroughly master the recording and transcription of the first 500 to 1,000 high frequency words. Research has indicated that emphasizing high frequency words in teaching shorthand is beneficial. In an experiment using first-year Gregg Shorthand, Hooven found that the intensive practice of shorthand outlines for 500 high frequency words strengthened second-semester Gregg students' abilities to record the 500 outlines in word-list and contextual form, increased their skills in constructing unfamiliar outlines from word lists, and favorably affected transcribing performance.[6]

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[1]James Edwin Silverthorn, "The Basic Vocabulary of Written Business Communications" (Ed.D. dissertation, Indiana University, 1955).

[2]Devern J. Perry, "An Analytical Comparison of the Relative Word-Combination Frequencies of Business Correspondence with Phrase Frequencies of Selected Shorthand Textbooks" (Ed.D. dissertation, University of North Dakota, 1968).

[3]Morris Mellinger, Basic Vocabulary for Written Business Office Communications (Chicago: Chicago State College, 1970).

[4]Ibid., p. 3.

[5]Perry, "Word-Combination Frequencies of Business Correspondence," p. 109.

[6]Jean Alderfer Hooven, "The Effects of Intensive Practice of a Target Vocabulary in First-Year Gregg Shorthand" (Ed.D. dissertation, Temple University, 1978), p. 175.

Research has also shown that vocabulary level, as measured by frequency of use of the words, is related to difficulty of dictation material. In her study of factors that contribute to the difficulty of shorthand dictation material, Hillestad found that vocabulary level was more important than syllabic intensity in determining difficulty of dictation material.[1] Uthe found that the percentage of errors made by shorthand students increased as vocabulary level increased[2] and that little or no relationship existed between syllabic intensity and difficulty of shorthand dictation material.[3] In an informal study, Crandall found that a positive relationship existed between word frequency and transcription errors and that transcription errors were more directly related to infrequently used words than to frequently used words.[4]

Because the vocabulary of materials used in the training of office workers should resemble as closely as possible the vocabulary of materials encountered in an office, this study determined the extent to which the second-semester college textbook for Gregg Shorthand, Series 90, reflected vocabulary used in business communications collected for this study.

Statement of Problem

The problem of this study was an analysis and comparison of word frequencies of business communications with word frequencies of the

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[1]Mildred C. Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials" (Ph.D. dissertation, University of Minnesota, 1960), p. 115.

[2]Elaine F. Uthe, "An Evaluation of the Difficulty Level of Shorthand Dictation Materials" (Ph.D. dissertation, University of Minnesota, 1966), p. 101.

[3]Ibid., p. 76.

[4]Lars Crandall, "Word Frequency Applied to Stenography," Journal of Business Education 36 (November 1960):68.

second-semester college textbook of Gregg Shorthand, Series 90. An analysis was made of word frequencies of business letters and business memoranda from firms in Oklahoma. An analysis was also made of word frequencies of the reading and writing practice materials in Gregg Shorthand for Colleges, Volume II, Series 90.[1] The word frequencies of materials from each of these sources were compared in order to determine whether a difference existed between the business communications and the instructional materials.

Specifically, the following questions were answered with the data which were collected and analyzed in this study:

1. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business letters?

2. Are any of the 200 most frequently used words in business letters not included in the 200 most frequently used words in textbook materials?

3. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business memoranda?

4. Are any of the 200 most frequently used words in business memoranda not included in the 200 most frequently used words in textbook materials?

5. Are the 50 most frequently used words in business letters the same as the 50 most frequently used words in textbook materials?

6. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in textbook materials?

7. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in business letters?

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[1]Louis A. Leslie, Charles E. Zoubek, and A. James Lemaster, Gregg Shorthand for Colleges, Volume II, Series 90 (New York: Gregg Division, McGraw-Hill Book Company, 1980).

8. Are any of the 200 most frequently used words in textbook materials used more frequently in business letters than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

9. Are any of the 200 most frequently used words in textbook materials used more frequently in business memoranda than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

Statement of Purpose

The purpose of this study was to compare word frequencies of textbook materials used in second-semester college instruction of Gregg Shorthand, Series 90, with word frequencies of letters and memoranda from businesses.

Information gained from this study will be useful to authors and teachers of shorthand and typewriting in providing an opportunity for students to master the most frequently used words in business communications.

Definition of Terms

The following definitions apply in this study:

Textbook. The textbook used in this study was Gregg Shorthand for Colleges, Volume II, Series 90.[1]

Textbook Materials. Textbook materials referred to in this study were the reading and writing practice materials contained in the lessons of the textbook used in this study.

Business Letters. Business letters referred to in this study were letters obtained from business firms located in the State of Oklahoma which have 500 or more employees.

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[1]Ibid.

Business Memoranda. Business memoranda referred to in this study were interoffice memoranda obtained from business firms located in the State of Oklahoma which have 500 or more employees.

Word Frequency. Word frequency refers to the number of times a word occurs in the textbook materials and in the business letters and business memoranda.

Series 90. Series 90 is the 1978 edition of the Gregg Shorthand system.

Limitations of Study

The following limitations apply in this study:

1. Textbook materials used in this study were the reading and writing practice materials contained in Gregg Shorthand for Colleges, Volume II, Series 90,[1] which is the textbook for the second-semester college course in Gregg Shorthand.

2. Business letters and business memoranda used in this study were limited to those obtained from business firms with 500 or more employees located in the State of Oklahoma.

3. The words in the body and postscript of each business letter and business memorandum were counted in this study. Excluded from the tabulation were words appearing in the date, inside address, salutation, complimentary close, and any other parts of the letters and memoranda outside the message. This limitation also applied to the textbook materials.

Procedures

Data for this study were obtained from business letters and business memoranda from firms in Oklahoma and from the reading and writing practice

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[1]Ibid.

materials of the textbook used in this study. One copy of a letter and one copy of an interoffice memorandum were requested from businesses with 500 or more employees located in the State of Oklahoma.

All words appearing in the body or message of the business letters, the business memoranda, and the items from the textbook materials were keypunched on computer cards and tabulated by computer to establish a data base of running words from each of the three types of data. A computer program was written to provide rank order and alphabetical lists of the words in each data base. The alphabetical lists contained the words from each data base in alphabetical order with frequency count. The rank order lists contained the words from each data base in rank order with frequency count according to frequency of use. Separate computer printouts of the rank order and alphabetical lists were obtained for each data base.

Organization of Study

The report of this research problem consists of five chapters, the bibliography, and the appendices. Chapter I includes the Introduction, Statement of Problem, Statement of Purpose, Definition of Terms, Limitations of Study, Procedures, and Organization of Study. Chapter II reviews related literature. Chapter III presents a detailed description of the procedures used in the research study. Chapter IV presents the findings. Chapter V presents the summary, discussion, and recommendations.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

The literature reviewed for this study consisted of dissertations and theses obtained through interlibrary loan and independent studies obtained directly from the researchers. The research reviewed involved word frequency studies and vocabulary level as related to the learning of shorthand.

The review of related literature was organized under the following headings: Word Frequency Studies of Business Communications, Word Frequency Studies of Published Shorthand Learning Materials, and Studies Relating the Importance of Vocabulary Level in Shorthand Learning Materials.

Word Frequency Studies of Business Communications

The principal purpose of Silverthorn's study of the vocabulary of written business communications was to provide a source of reference for the most frequently used words in written business communications.[1] A result of his study was the widely used High Frequency Business Vocabulary Word List, the 5,050 most frequently used words listed in rank order which comprised about 95 percent of the total occurrences of all words tabulated in his study.[2]

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[1]Silverthorn, "Vocabulary of Written Business Communications," p. 10.

[2]Ibid., pp. 46-47.

Silverthorn collected written communications from various types of business firms in the United States which employed secretaries, stenographers, and typists as reported by the U.S. Census Bureau. The types of business communications included in his study were reports, telegrams, intercompany communications, and various types of business letters. The different types of businesses were grouped according to categories used by the Census Bureau, and words were selected for the sample from the communications of the various categories in proportion to the percentage of the total secretaries, stenographers, and typists which were employed in each category. Figures, symbols, trade names, and names of persons, places, organizations, months, and days were excluded from tabulation. Abbreviations were counted as separate words, and word meaning and usage were disregarded in the tabulation. Words were keypunched on data cards and tabulated by computer with periodic checks being made to determine adequacy of the sample and stability of the frequency distributions. The sample was considered adequate when tests for adequacy of the sample indicated that the communications from which the words were tabulated were representative of the whole of written business communications; all high frequency words were included; frequency positions of the words occurring with high frequency were established; and approximate frequency positions of the less frequently occurring words were established.[1]

A total of 300,000 running words was tabulated from 2,039 pieces of written communications, representing 1,012 different writers from 15 categories of businesses in 41 states. Although 11,564 different words were encountered, Silverthorn found that relatively small numbers of words constituted relatively large percentages of the total running words. He found that the first 50 most

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[1]Ibid., pp. 22-45.

frequently used words accounted for approximately 45 percent of the total occurrences of all words; the first 100, slightly more than 50 percent; the first 500, approximately 70 percent; the first 1,000, about 80 percent; the first 5,000, approximately 95 percent. The word the was highest in frequency, accounting for about 5 percent of the total running words, followed in order of frequency by of, to, and, in, you, a, for, we, and your as the ten most frequently used words.[1]

Another word frequency study of business communications was conducted in 1968 by Perry.[2] Although the primary purpose of his study was to compare the most frequently occurring word combinations in business correspondence with the most frequently occurring phrases in shorthand textbooks,[3] the list of most frequently used words in business correspondence which resulted from his study has been used by business educators nationwide as a reference source for frequently used words in current business vocabulary.

Including only categories of businesses reported by the United States Census Bureau as employing secretaries, stenographers, and typists, Perry selected a stratified random sample of business firms and professional and service organizations from specialized directories. The number of businesses selected from each category was based on the percentage of the total number of secretaries, stenographers, and typists which were employed in each category.[4] Only business letters were included in Perry's study; reports, telegrams, memoranda, intercompany communications, and other forms of communications were excluded.[5] Copies of three letters were solicited from each of 1,567

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[1]Ibid., pp. 31-63.

[2]Perry, "Word-Combination Frequencies of Business Correspondence."

[3]Ibid., p. 2. [4]Ibid., pp. 48-50. [5]Ibid., p. 8.

companies and organizations nationwide; responses were received from 687 firms in 49 states, representing a 44 percent return from those invited to participate. The contents of the 2,061 letters received were keypunched on data cards, and a computer printout listing words in rank order by frequency was obtained. Periodic checks were made during the computer processing to determine the point of stabilization of the rank order distributions.[1] Only words appearing in the body and postscript of each letter were included in the tabulation; words appearing in the salutation, complimentary close, letterhead, or other parts of the letter were excluded. Only dictionary words were included in the study; and words representing company and brand names, individual names, and other proper nouns related solely to a particular company were excluded. Numbers spelled as words were counted as words, but numbers appearing as digits were excluded.[2] In order to reflect words used rather than word usage, hyphenated words were counted as separate words unless the expression is normally hyphenated.[3]

The number of running words tabulated from the business letters totaled 317,306; the number of different words totaled 12,109.[4] Perry found that 10 words represented 25.7 percent of the total running words; that 50 words represented 46.49 percent of the total running words; that 100 words represented 53.54 percent of the total running words; that 500 words represented 71.93 percent of the total running words; that 1,000 words represented 80.66 percent of the total running words; and that 5,000 words represented 96.35 percent of the total running words.[5] Since the 1,000 most frequently used words represented over three-fourths of the total words used, Perry recommended that these 1,000 words be cycled in a designated pattern in shorthand books to provide the framework for mastery of

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[1]Ibid., pp. 53, 62. [2]Ibid., pp. 8-9. [3]Ibid., p. 55. [4]Ibid., p. 93.

[5]Ibid., p. 98.

these words and that shorthand teachers assume the responsibility of ensuring that students master the shorthand outlines for these words.[1]

A four-year independent study completed by Mellinger in 1970 also produced an updated high frequency vocabulary list of business office communications.[2] Mellinger analyzed nearly 2,000 letters, memoranda, and reports solicited from a representative sample of 5,000 companies, schools, and nonprofit organizations and institutions in 43 states. A maximum of two communications was solicited from each potential participant. Communications were solicited from different occupational categories in proportion to the relative numbers of stenographers, secretaries, and typists in each occupational category listed in the 1960 census. Tabulation of words in the communications was performed manually, resulting in 295,271 running words and 12,897 different words being tabulated. Most nouns, most numbers, and most abbreviations were not tabulated.[3] Of the total running words tabulated, Mellinger found that the first 10 most frequently used words accounted for 26.08 percent; the first 50 words, 48.07 percent; the first 100 words, 55.61 percent; the first 500 words, 73.28 percent; the first 1,000 words, 81.43 percent; and the first 5,000 words, 96.29 percent.[4]

The purpose of Warner's study was to compare the difficulty level of high school and college shorthand textbooks and books of tests with the difficulty level of routine business letters and unsolicited direct-mail advertising letters in

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[1]Ibid., p. 109.

[2]Mellinger, "Basic Vocabulary for Written Business Office Communications," p. 1.

[3]Ibid. [4]Ibid., p. 2.

an attempt to ascertain whether the instructional materials were of sufficient difficulty to prepare students for the vocabulary level used in business offices.[1]

The instructional materials used in the study consisted of five college level and five secondary level Gregg Diamond Jubilee shorthand textbooks and five books of tests available to both college and secondary shorthand teachers from Gregg Publishing Company. Word samples of approximately 300 words were obtained from each book by taking 100 words at the beginning, 100 words in the middle, and 100 words at the end of each book.[2]

Warner obtained routine and unsolicited direct-mail advertising letters from top-level management personnel and mid-management personnel in the five categories of industry, government, finance, education, and transportation. Letters from top-level management personnel were obtained by requesting a sample of five routine business letters and five unsolicited direct-mail advertising letters from ten randomly selected companies in each of the five categories, with 29 of the 50 companies responding. Letters from mid-management personnel were obtained by requesting the presidents of three randomly selected chapters of the Administrative Management Society (AMS) in each of 15 districts of the United States to collect representative samples of five routine business letters and five unsolicited direct-mail advertising letters from chapter members engaged in industry, government, finance, education, or transportation activities. Of the 45 AMS chapters contacted, 21 chapters returned letters for use in the study.[3]

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[1]Donalda MacLean Warner, "A Comparison of the Difficulty of Materials Used in the Teaching and Testing of Shorthand With the Difficulty of Business Letters in Use in Business Offices" (Ph.D. dissertation, Michigan State University, 1975), pp. 2-3.

[2]Ibid., pp. 48-50. [3]Ibid., pp. 51-54.

The 500 business letters received were divided into three groups--top-level management, mid-management, and unsolicited direct-mail advertising. Each group was subdivided according to the five categories of industry, government, finance, education, and transportation; and a sample of 15 letters was selected and considered representative of each category. The 15 letters from each category were stapled together in groups of three, and a sample of 100 words was taken from each letter--a 100-word block from the beginning of the first letter, a 100-word block from the middle of the second letter, and a 100-word block from the end of the third letter. A total of 225 business letters was analyzed--75 letters from top-management personnel, 75 letters from mid-management personnel, and 75 unsolicited direct-mail advertising letters. [1]

In analyzing the data, Warner used the Perry[2] word list as a basis for establishing vocabulary level of the words analyzed in the study.[3] Approximately 28,647 words were included in the computer analysis, consisting of 4,500 words from books; 22,500 words from business letters; Perry's 1,500 most frequently occurring words; and 148 brief forms. The one-way analysis of variance procedure was used to compare vocabulary content of the instructional materials and the business letters. Warner also used the two-way analysis of variance procedure to compare the letters received from businesses in an attempt to determine differences in letters from the three sources (top-level management, mid-management, and unsolicited direct-mail advertising letters) and among the five categories of businesses (industry, government, finance, education, and

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[1]Ibid., pp. 56, 67.

[2]Perry, "Word-Combination Frequencies of Business Correspondence."

[3]Warner, "Comparison of the Difficulty," p. 120.

transportation) used in the study. The independent variables in the analysis were the college and secondary textbooks, the books of tests, and the letters received from businesses; the six dependent variables were brief forms, syllabic intensity, Perry's 1-100 words, Perry's 101-500 words, Perry's 501-1,500 words, and Perry's over 1,500 words.[1]

Results of the one-way analysis of variance indicated significant differences at the .05 level between the instructional materials and the business letters on four of the dependent variables--brief forms, Perry's 1-100 words, Perry's over 1,500 words, and syllabic intensity. The other two dependent variables, Perry's 101-500 and Perry's 501-1,500, did not indicate differences significant at the .05 level. The analysis revealed that the syllabic intensity of both the routine and the unsolicited business letters was greater than the syllabic intensity of all the instructional materials. The unsolicited business letters contained a significantly greater number of words from Perry's over 1,500 words than the routine business letters as well as the secondary and college textbooks. The analysis indicated that the books of tests were not significantly different from the college or secondary textbooks on any of the dependent variables.[2]

The two-way analysis of variance procedure used to compare the three sources of business letters indicated significant differences at the .05 level on three of the dependent variables--brief forms, Perry's 1-100 words, and Perry's over 1,500 words. When compared with the letters from top-level management, the unsolicited letters contained a significantly greater number of Perry's over 1,500 words and fewer of Perry's 1-100 words and brief forms. When compared with the letters from mid-management, the unsolicited letters contained a significantly greater number of Perry's over 1,500 words but did not differ significantly on the other variables. The letters received from top-level

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[1]Ibid., pp. 61-62. [2]Ibid., pp. 84-86, 126-127.

management personnel did not differ significantly from the letters received from mid-level management personnel. Analysis of differences among the categories of letters indicated statistically significant differences among the categories of government, finance, and transportation on two of the dependent variables--Perry's 101-500 words and Perry's over 1,500 words. The letters from the government and finance categories contained significantly greater numbers of Perry's 101-500 words than the letters from the transportation category; on the other hand, the letters from the transportation and government categories contained significantly more words from Perry's over 1,500 words than the letters from the finance category.[1]

Warner concluded that the secondary textbooks were sufficiently difficult on all the variables to prepare students to pass the tests contained in the five books of tests examined and to write routine letters used in business but not to write unsolicited direct-mail advertising letters. Warner further concluded that the college textbooks were of sufficient difficulty on all the variables to prepare students to pass the tests contained in the five books of tests examined and to write both routine and unsolicited direct-mail advertising letters. Warner found no significant difference in syllabic intensity when the business letters only were analyzed by source or by category and concluded that the differences in difficulty among the letters were due to factors other than syllabic intensity.[2]

Another word frequency study of business communications was conducted by Ober to develop a valid, up-to-date list of the most frequently occurring words in written business communications.[3] Ober requested copies of

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[1]Ibid., pp. 94-95. [2]Ibid., p. 131.

[3]Scot Ober, "The Basic Vocabulary of Written Business Communications," Delta Pi Epsilon Journal 24 (January 1982):14.

up to three pieces of written business communications from a nationwide random sample of 5,000 members of the National Secretaries Association International. A total of 2,504 usable documents, including letters, memoranda, and reports, were received from 1,411 respondents representative of the population of industries nationwide, resulting in a response rate of 33 percent.[1] The contents of the documents were entered directly into a computer, and printouts of the rank order and alphabetical word lists were obtained. Only words appearing in the body of each document were included in the analysis; words appearing in headings (including salutations and complimentary closings in letters) were excluded from the analysis. All numbers, including figures and numbers spelled as words, were excluded. All proper names, with the exception of the word I and its derivatives, were excluded. Only dictionary words were included in the analysis, and spellings of words were made to conform to the first spelling shown in the dictionary when two spellings were listed. All abbreviations and accent marks were excluded, and hyphenated compound words were counted as separate words.[2]

A total of 606,496 running words and 15,522 different words were contained in the 2,504 documents analyzed by Ober. Of the total running words tabulated by Ober, the first 10 most frequently used words accounted for 25.4 percent; the first 50 words, 43.7 percent; the first 100 words, 50.0 percent; the first 500 words, 69.1 percent; the first 1,000 words, 78.5 percent; and the first 5,000 words, 95.7 percent.[3]

Word Frequency Studies of Published Shorthand Learning Materials

The purpose of Vawdrey's study was to determine the extent to which the most frequently used business vocabulary is utilized in the beginning

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[1]Ibid. pp. 14-15. [2]Ibid. pp. 17-19. [3]Ibid. p. 20.

Gregg Diamond Jubilee high school shorthand textbook.[1] The business vocabulary was limited to the first 1,000 words in the Perry[2] list since those words comprise about 81 percent of the total words in his list. Vawdrey studied the illustrated words at the beginning of the lessons which present theory principles, the contextual material in each lesson, and the brief forms. A frequency count was made of the brief forms and the illustrated words in the lessons which present theory principles which were included in the business vocabulary list. A computer was programmed to tabulate the textbook frequency of each word in the business vocabulary list and to calculate the percent of the textbook words which appear in the business vocabulary list.[3]

The findings revealed that only 40 percent of the 1,000 most frequently used business vocabulary words are illustrated at the beginning of theory lessons in the textbook. The frequently used words that are illustrated represent only 29 percent of the total illustrated words in the textbook. According to Vawdrey, "The theory principles are in large measure illustrated by words other than those used most frequently in business correspondence."[4]

Of the total running words in the contextual material, 77 percent are among the 1,000 most frequently used words. However, 52 percent of the 1,000 most frequently used words are used 0-6 times in the contextual material of the

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[1]Colleen Vawdrey, "An Analysis of the Extent to Which the Most Frequently Used Business Vocabulary is Utilized in the Beginning Gregg Diamond Jubilee High School Shorthand Textbook" (Master's thesis, Brigham Young University, 1974), p. 28.

[2]Perry, "Word-Combination Frequencies of Business Correspondence."

[3]Vawdrey, "Extent to Which the Most Frequently Used Business Vocabulary," p. 28.

[4]Ibid., pp. 29-30.

textbook; 16 percent of these 1,000 words are used only one or two times in the contextual material; 13 percent of these 1,000 words are not used at all in the contextual material of the textbook; and 11 percent of these 1,000 words are not used at all in the textbook. Analysis of the brief forms showed that 80 percent are included in the 1,000 most frequently used words. Vawdrey suggested that many of the most frequently used words probably did not receive the emphasis needed for student mastery. [1]

The results of the chi square test performed on each 100-word group indicated a statistically significant difference at the .01 level between the percent of content of the first 1,000 words on the Perry list and the percent of content of the same words in the textbook. Vawdrey recommended that high frequency words be used more extensively in illustrating theory principles and in contextual material and that a study be done to determine the extent to which high frequency words are utilized in other shorthand textbooks.[2]

In 1976 Pullis[3] compared the words used in introducing Gregg shorthand theory in the beginning Gregg Diamond Jubilee college textbook with the most frequently used words in business communications from the Perry[4] list. Pullis found that of the 1,198 words used in introducing Gregg shorthand theory, 372 (31 percent) of the words are beyond the 5,256 most frequently used words on the Perry list. Pullis pointed out that, according to the Perry list, less than 5

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[1]Ibid. [2]Ibid., pp. 28-31.

[3]Joe M. Pullis, "An Analysis of Words Used in Introducing Gregg Shorthand Theory and a Study of Pure Brief Form Derivatives and Compounds in Commonly Used Words" (Independent Study, Louisiana Tech University, 1976).

[4]Perry, "Word-Combination Frequencies of Business Correspondence."

percent of the words used in actual business correspondence occur beyond the 5,000 most frequently used words.[1]

Another study conducted by Pullis[2] in 1977 sought to determine whether the syllabic intensity of dictation material in published shorthand dictation test books accurately reflected the percentage of high frequency words (as defined by Perry[3]) in that material. Pullis analyzed 60 five-minute dictation takes marked for dictation at 100 words per minute from three dictation test books. Pullis found that the number of words per take within the most frequently used 100 words ranged from 198 to 316 (45 percent to 63 percent); within the most frequently used 500 words, from 287 to 419 (63 percent to 83 percent); within the most frequently used 1,500 words, from 357 to 472 (80 percent to 94 percent); and beyond the most frequently used 1,500 words, from 32 to 91 (6 percent to 20 percent). The relationship between syllabic intensity and the following variables was as follows: percent most frequently used 100 words, $r = -.31$; percent most frequently used 500 words, $r = -.28$; and percent most frequently used 1,500 words, $r = -.34$. Pullis concluded that the syllabic intensity of the 60 takes analyzed was not a sensitive index of the percentage of high frequency words contained within the material.[4]

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[1]Pullis, "Words Used in Introducing Gregg Shorthand Theory."

[2]Joe M. Pullis, "The Relationship Between Syllabic Intensity and Percentage of High-Frequency Words Within Published Shorthand Dictation Texts" (Independent Study, Louisiana Tech University, 1977).

[3]Perry, "Word-Combination Frequencies of Business Correspondence."

[4]Pullis, "Relationship Between Syllabic Intensity and Percentage of High-Frequency Words."

Studies Relating the Importance of Vocabulary Level in Shorthand Learning Materials

In 1943 Rowe studied the way students wrote infrequently used words as opposed to frequently used words in Gregg shorthand.[1] For purposes of his study, Rowe defined infrequently used words as those words beyond the first 5,000 in the Horn[2] word list which were not contained in the shorthand texts used by the students. Techniques used by Rowe included taking motion pictures of students while writing and the use of an apparatus called a Scriptochron which measured writing time and pausing time preceding and within writing and also indicated the points within the writing where the writers paused.[3] Analysis of data from the motion pictures and the Scriptochron indicated that pausing time before writing infrequently used words was about 50 percent more than before the writing of frequently used words and that writing time for frequently used words was significantly less than for infrequently used words.[4]

Although the primary purpose of Wessman's study was to determine the effect of delayed transcription on transcription accuracy, she also studied the relationships between vocabulary level and shorthand errors.[5]

Two letters with the same syllabic intensity were selected from a published dictation test book and were dictated by the classroom teachers to

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[1]Clyde Eugene Rowe, "The Writing of Infrequently Used Words in Shorthand" (Columbia University Contributions to Education, No. 869, New York: Teachers College, Columbia University, 1943; reprint ed., New York: AMS Press, Inc., 1972), p. 12.

[2]Ernest Horn, A Basic Writing Vocabulary--10,000 Words Most Commonly Used in Writing (Iowa City, Iowa: College of Education, University of Iowa, 1926), p. 81, cited by Clyde Eugene Rowe, ibid., p. 90.

[3]Rowe, "Writing of Infrequently Used Words," pp. 81-84.

[4]Ibid., pp. 61, 76.

[5]A. LaVonne Wessman, "The Effect of Varying Time Lapses on Accuracy of Shorthand Transcription" (Master's paper, University of Minnesota, 1956), pp. 1-2.

four advanced shorthand classes in three high schools. The first letter was transcribed immediately after dictation; the second letter was transcribed by different groups of students one day, four days, and seven days after dictation.[1] The analysis of variance procedure indicated no significant differences in the number of errors made when the letters were transcribed immediately, one day, four days, or seven days after dictation.[2]

A statistically significant difference was found in the vocabulary level of the two letters based on the word frequency counts of the Silverthorn[3] list, with the first letter containing more low frequency words. Although the two letters had the same syllabic intensity, a higher percentage of shorthand errors was made on the first letter than on the second letter. Analysis revealed that the percentage of shorthand errors increased at each vocabulary level, with more errors occurring on lower frequency words.[4] Wessman concluded that since more shorthand errors and omissions occurred on the more unfamiliar words that students have more trouble writing less common words.[5]

In an attempt to find a better method of predicting difficulty of shorthand dictation material, Curtin investigated the use of the cloze procedure --a method of testing readability of oral and written communications--as a predictor of difficulty.[6] The factors of syllabic intensity, number of different words, and vocabulary level were also investigated as predictors of difficulty.[7]

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[1]Ibid., pp. 7-11. [2]Ibid., p. 14.

[3]Silverthorn, "Vocabulary of Written Business Communications."

[4]Wessman, "Varying Time Lapses," pp. 18-23.

[5]Ibid., p. 42.

[6]Rita C. Curtin, "The Relationship Between Selected Factors and Difficulty of Dictated Material" (Master's paper, University of Minnesota, 1958), pp. 1-2.

[7]Ibid.

Curtin selected a random sample of 41 letters from a published dictation book for use in the study, which was conducted in two parts. The 41 letters were administered to second-year high school shorthand students, with three classes receiving the letters by the cloze procedure and four classes receiving the letters by dictation. In administering the letters by the cloze procedure, every fifth word of each letter was deleted; and the students were instructed to fill in the blanks by guessing. The cloze score for a particular letter was the total number of blanks completed correctly on that letter. The number of shorthand errors made on each letter dictated was the criterion score. The vocabulary level index devised by Hillestad[1] was used to determine vocabulary level for each letter. The letters were punched on data cards; and predictor scores for syllabic intensity, vocabulary level, and number of different words were calculated for each letter by computer.[2]

Coefficients of correlation were calculated between the criterion score (the number of shorthand errors made on each letter) and the four predictor scores--the cloze score, syllabic intensity, number of different words, and vocabulary level. Curtin found no significant relationship between the cloze score and the number of shorthand errors made on the letters dictated. Syllabic intensity and the number of different words also produced nonsignificant correlations with the number of shorthand errors. The correlation coefficient of .501 between the vocabulary level index and shorthand errors was the largest of the four predictors. Curtin concluded that, although its correlation coefficient was not large, the vocabulary index was the best predictor of difficulty of the four studied.[3]

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[1]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials."

[2]Curtin, "Relationship Between Selected Factors," pp. 7-14.

[3]Ibid., pp. 14-16.

In an attempt to determine a method of measuring the difficulty of shorthand dictation material, Hillestad developed a multiple regression equation with which to predict the number of shorthand errors students are likely to make in writing shorthand from dictation.[1] Hillestad also attempted to identify the principles of Gregg Shorthand Simplified which caused most difficulty in writing as measured by errors made in shorthand notes recorded from dictation.[2]

The 100 letters constructed by Hillestad for her study were each 160 actual words long and were prepared by editing different types of letters collected from a variety of businesses so that the group of letters had a specified distribution of frequencies of the following 16 variables to be studied: (1) syllabic intensity, (2) vocabulary level, (3) brief forms, (4) brief form derivatives, (5) blends, (6) oo sounds, (7) o sounds, (8) are, air, and er sounds, (9) terminal t following k or s sounds, (10) plural forms, (11) past tenses, (12) other derivative endings, joined, (13) other derivative endings, disjoined, (14) word beginnings, both joined and disjoined, (15) diphthongs, and (16) words beyond the first 1,500 in frequency of use.[3] The distribution of these variables in the 100 letters was comparable with the distribution in a sample of letters from Dictation for Mailable Transcripts.[4,5]

The letters were dictated over a three-month period to eight fourth-semester high school shorthand classes writing Gregg Shorthand Simplified. The letters were dictated by the teachers of the classes at an untimed speed that the

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[1]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials," p. 110.

[2]Ibid. [3]Ibid., pp. 35-37.

[4]Louis A Leslie and Charles E. Zoubek, Dictation for Mailable Transcripts (New York: Gregg Publishing Division, McGraw-Hill Book Company, Inc., 1950).

[5]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials," p. 36.

students could write comfortably. The letters were randomly assigned to the classes, and all students wrote all letters. From the shorthand notes collected, five papers were randomly chosen from each of the eight classes for each letter, providing a sample of 40 sets of shorthand notes checked for each letter. Only one error was counted for each incorrect outline; errors were not counted for placement on the line, size, proportion or reversal of letters unless the reversal changed the letter.[1]

Of the 16 variables studied, six were significantly related to the criterion of shorthand errors. When the six significant variables were used in a second regression equation, the length of words measured in syllables and the vocabulary level index accounted for over 73 percent of the criterion variance. The final equation used syllables and the number of words beyond 1,500 on the Silverthorn[2] list as the variables. Hillestad concluded that the last equation adequately predicted difficulty of dictation material as measured by the number of errors students would be likely to make in recording dictation.[3]

The error analysis made by Hillestad revealed that errors occurred less frequently on brief forms than on words constructed according to shorthand principles. Hillestad also found that word endings and inconsistently applied principles of shorthand theory caused problems for students in writing shorthand.[4]

The error analysis by Hillestad also revealed that the error rate tended to increase as words became longer, although the increase was irregular.

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[1]Ibid., pp. 43-44.

[2]Silverthorn, "Vocabulary of Written Business Communications."

[3]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials," pp. 112-115.

[4]Ibid., pp. 115-117.

Hillestad found, however, that the error rate was more directly related to vocabulary level than to the number of syllables in the words. The findings indicated that the less frequently the words were used, the greater the percentage of error on them. An error rate of less than 1.5 percent was recorded on the first 100 words of the Silverthorn list, while the second vocabulary level consisting of words ranked 101-300 had an error rate five times as great as the first vocabulary level. The percentage of error increased at a rate of 3 to 6 percent from level to level of vocabulary frequency to a rate of almost 42 percent on words ranking beyond the first 5,050 on the Silverthorn list.[1]

Hillestad recommended broader vocabulary coverage with more practice on the less frequently used words.[2] Concerning dictation materials, she stated:

> In selection of dictation materials, both for practice and for testing, more attention should be paid to the number of words beyond the first 1,500 on the Silverthorn list contained in the dictation material. The number of these words in a piece of dictation seemed to be a better indicator of difficulty than did the number of syllables the words contained.[3]

Hillestad also recommended that a greater number of the first 500 words on the Silverthorn list be automatized as brief forms; that more emphasis be placed on the teaching and use of brief form derivatives; that more help be given students in distinguishing between the oo and o sounds as well as in writing them correctly in shorthand; that teaching materials be organized so that the more easily learned principles are taught early in the course; that teaching materials be arranged according to frequency of use of words; and that presentation of shorthand principles be coordinated with the frequency of use of words.[4]

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[1]Ibid., pp. 89, 115-116. [2]Ibid., p. 117. [3]Ibid, p. 118.

[4]Ibid., pp. 118-119.

In an attempt to validate Hillestad's[1] formula for transcription, Baggett[2] selected a sample of six letters from those used by Hillestad at six different predicted difficulty levels using transcription errors as the criterion. The six letters were dictated to seven second-year high school shorthand classes at 80 words per minute, resulting in 600 acceptable transcripts.[3] The expected order of difficulty of the letters was 1 through 6; however, the order of difficulty was found to be 2, 3, 4, 1, 6, and 5 when the Spearman Rank Correlation Coefficient technique was applied.[4] Baggett concluded that the Hillestad formula was not effective in predicting the order of difficulty of the six letters for this group of students.[5] He recommended further research regarding the possibility of a curvilinear relationship between syllabic intensity and difficulty of dictation material.[6] He also recommended that the effect of vocabulary level on the difficulty of dictation material be investigated.[7]

Because attempts to validate Hillestad's[8] formula were inconclusive, Uthe attempted to develop another formula that would "consistently predict the difficulty level of dictation material used in learning and testing situations."[9]

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[1]Ibid.

[2]Harry William Baggett, Jr., "The Validity of a Measure of the Difficulty of Gregg Shorthand Dictation Materials" (Ph.D. dissertation, University of Minnesota, 1964), p. 50.

[3]Ibid. [4]Ibid., p. 51. [5]Ibid., p. 52.

[6]Ibid. [7]Ibid., p. 54.

[8]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials."

[9]Elaine F. Uthe, "An Evaluation of the Difficulty Level of Shorthand Dictation Materials" (Ph.D. dissertation, University of Minnesota, 1966), p. 1.

She also sought to identify those principles of Gregg Shorthand, Diamond Jubilee Series, that caused most difficulty in recording dictation as reflected by the errors made in shorthand notes.[1]

The 100 letters used in Hillestad's study were randomly divided among 25 groups of fourth-semester high school students who wrote the letters in Gregg Diamond Jubilee shorthand from dictation that had been prerecorded at 80 words per minute. A random sample of three papers for each letter was taken. In addition, three common letters constructed for this study were dictated to all groups as a control.[2]

A total of 35 variables of two types were used by Uthe:

> 1. Those characteristics inherent in the words themselves or in the characteristics of the dictation material: (a) syllabic intensity, (b) vocabulary level, (c) brief forms in the 1-100 vocabulary level range, (d) constructed words in the 1-100 vocabulary level range, (e) words in the 1-100 vocabulary level range, (f) words in the 1,500 vocabulary level range, (g) words in the 501-1,500 vocabulary level range, (h) words beyond the 1,500 vocabulary level range, (i) one-syllable words, (j) two-syllable words, (k) three-syllable words, (l) four- to six-syllable words, (m) punctuation marks, (n) sentence length, and (o) typing stroke intensity.
> 2. Those characteristics related to the shorthand system itself: (a) shorthand stroke intensity in brief forms, (b) shorthand stroke intensity in brief form derivatives, (c) shorthand stroke intensity in constructed words, (d) shorthand stroke intensity, (e) brief forms, (f) brief form derivatives, (g) blends, (h) oo hook, (i) o hook, (j) plurals, (k) blend-past tense combination, (l) past tense (t or d only), (m) all past tenses, (n) disjoined endings, (o) joined endings, (p) disjoined beginnings, (q) joined beginnings, (r) diphthongs, (s) word beginnings, and (t) word endings.[3]

The 35 variables were used in a stepwise regression computer program to find the best predictor or predictors of word and shorthand errors at the .05 level and the F tests of significance. The selected predictors were used in a correlation and multiple linear regression computer program to find the correlation coefficients of the variables to the error scores, the weighted regression coefficient of each selected predictor, and the predicted word and

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[1]Ibid., p. 114. [2]Ibid., pp. 114-115. [3]Ibid., p. 116.

shorthand errors. The three variables which were significant and used in the equation were brief forms, words beyond the first 1,500 on the Silverthorn[1] list, and word endings. Standard deviations above and below the mean of the predicted word errors were used to establish difficulty level categories of "easy," "average," and "difficult."[2]

To validate the equation, Uthe selected six letters which were dictated to four classes in one school which had been grouped according to ability. When mean shorthand error scores were computed, the six letters appeared in the predicted difficulty category.[3]

Uthe also made an analysis of shorthand errors according to vocabulary level, length of word, and shorthand principles. Results showed that the percentage of error made in recording dictation rose from vocabulary level to vocabulary level, indicating that vocabulary level has an impact on difficulty of copy.[4] Results also showed a correlation of -.13 between syllabic intensity and number of errors made.[5] According to Uthe, the lack of correlation between syllabic intensity and the number of errors made in the letters indicates that the difficulty level of dictation materials for practice or testing should not be determined by syllabic intensity.[6]

In 1967 Meyer attempted to validate for transcription the regression formula developed by Uthe[7] for predicting the difficulty level of shorthand

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[1]Silverthorn, "Vocabulary of Written Business Communications."

[2]Uthe, "Evaluation of the Difficulty Level," pp. 116-117.

[3]Ibid., p. 118. [4]Ibid., p. 101. [5]Ibid., p. 76.

[6]Ibid., p. 102. [7]Ibid.

dictation materials. Meyer also attempted to determine the extent to which shorthand errors result in transcription errors.[1]

Meyer selected twelve letters from the 100 letters developed by Hillestad[2] and used by Uthe[3] in developing the formula. The twelve letters consisted of four letters in each of the three difficulty levels of "easy," "medium," and "difficult" based on Uthe's[4] formula. The letters were recorded on tapes at 80 words per minute for dictation to fourth-semester high school shorthand students, resulting in usable transcripts from 95 students in eight different high school groups.[5]

An analysis of variance of transcript errors showed no significant difference in the eight groups; however, significant differences did exist in the errors on the twelve letters and in the three levels of difficulty. Significant differences were also found in the errors made within each level of difficulty as well as some interaction of letters within the groups.[6] When Meyer utilized the Scheffe' test to compare the mean transcript error scores for the twelve letters, the results did not show a distinct division into three levels of difficulty.[7] Results of analysis of variance and Scheffe' tests on errors made in shorthand notes were similar to the results of these tests on the transcripts.[8]

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[1]Lois Irene Meyer, "A Test of the Validity of a Measure of Difficulty of Shorthand Dictation Materials" (Ph.D. dissertation, University of Minnesota, 1967), p. 85.

[2]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials."

[3]Uthe, "Evaluation of the Difficulty Level."

[4]Ibid.

[5]Meyer, "Difficulty of Shorthand Dictation Materials," p. 85.

[6]Ibid., pp. 83-84. [7]Ibid., p. 84. [8]Ibid.

Meyer concluded that her attempt to validate Uthe's formula for transcription was inconclusive. Results indicated that the formula may identify the extremely easy or extremely difficult material but may not make definite distinctions between other levels of difficulty.[1]

Meyer suggested that the following factors may contribute to the difficulty of dictation material: awkward wording of sentences, extremely high syllabic intensity, a possible curvilinear relationship between syllabic intensity and difficulty, and subject matter and its meaning or interest to the student.[2] Meyer recommended that further study of factors contributing to difficulty of dictation material use published classsroom dictation material without alteration to cover specific points of theory. Meyer felt that some of the difficulty of the material used in her study lay in the awkward wording of some of the sentences. Meyer also recommended analysis of dictation material for readability, sentence structure, contextual clarity, and the effect of high and low extremes of syllabic intensity.[3]

The effect of using vocabulary-controlled dictation materials on speed development in beginning shorthand was investigated by Gallion.[4] Gallion prepared special dictation materials which used only the first 1,500 words on the Silverthorn[5] list and correlated with the textbook being used. The vocabulary-controlled materials were used by half the students in the experiment while the textbook materials were used by the remaining students. Gallion also used two speed-development methods: (a) presentation of preview words prior to dictation

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[1]Ibid., p. 85. [2]Ibid., p. 62. [3]Ibid., p. 86.

[4]Leona May Gallion, "A Comparison of Dictation Speed Development Materials and Methods in Beginning Shorthand" (Ed.D dissertation, Colorado State University, 1968).

[5]Silverthorn, "Vocabulary of Written Business Communications."

practice, and (b) tracing of especially prepared shorthand plates during dictation practice. Students from nine beginning shorthand classes in eight participating colleges were randomly assigned to the four treatment combinations used in this study: textbook material with preview words, textbook material with tracing, vocabulary-controlled material with preview words, and vocabulary-controlled material with tracing. Dictation practice material was recorded on tape using the traditional speed-building plan. At the end of ten weeks of classroom instruction, six two-minute taped dictation tests of unfamiliar material restricted to words found in the first 1,500 words on the Silverthorn list were dictated at speeds of 60, 70, and 80 words per minute for use as the criterion measure. Each test was scored on the basis of the number of actual words transcribed correctly. A two-way analysis of variance was used to analyze each of the six tests.[1]

Gallion's analysis showed that students who received the vocabulary-controlled dictation materials achieved slightly higher means than students receiving dictation from textbook materials on five of the six dictation tests, with the difference being significant at the .05 level for one of the tests.[2] No significant differences were found in mean scores of students tracing outlines and those receiving preview words.[3]

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[1]Gallion, "Speed Development Materials and Methods," pp. 44-46.

[2]Ibid., p. 50. [3]Ibid., p. 48.

Anderson,[1] repeating the Gallion[2] study, used the same materials with a micromolar speed-building approach.[3] Students from ten different colleges were randomly assigned to the same four treatment combinations used by Gallion.[4] Anderson used the six criterion tests developed by Gallion and developed three additional tests for dictation at 90 words per minute. Two of the tests at 90 words per minute contained controlled vocabulary in that they were restricted to the first 1,500 words on the Silverthorn list while the third test contained uncontrolled vocabulary in that 15 percent of the words were beyond the 1,500-word level.[5]

Although the differences between the groups were not statistically significant, Anderson found that students who received the vocabulary-controlled dictation materials achieved slightly higher means on seven of the nine criterion tests, including the test with uncontrolled vocabulary, than students receiving dictation from textbook materials. Anderson found no significant differences in mean scores of students tracing outlines and those receiving preview words.[6]

Larsen investigated the effect of emphasizing high frequency words in the teaching of intermediate and advanced Gregg shorthand at the college level.[7] Specially constructed materials which emphasized the 2,800 most

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[1]Alberta Ray Anderson, "A Comparison of Dictation Speed-Development Materials and Methods in Beginning Shorthand Using the Micromolar Approach" (Ed.D. dissertation, Colorado State University, 1969).

[2]Gallion, "Speed Development Materials and Methods."

[3]Anderson, "Materials and Methods in Beginning Shorthand Using the Micromolar Approach," pp. 27-30.

[4]Ibid., p. 20. [5]Ibid., pp. 36-37. [6]Ibid., pp. 66-67.

[7]Nathan R. Larsen, "The Terminal Effect of Emphasizing the Most Frequently Occurring Words in Intermediate and Advanced Gregg Shorthand" (Master's thesis, Brigham Young University, 1970), p. 3.

frequently occurring words in the Perry[1] list were used in the live classroom instruction of the experimental group. Conventional shorthand dictation materials were used in the control group, which received classroom instruction from taped materials as a normal procedure. Both groups completed the same homework assignments.[2]

Data were obtained from two sections each of intermediate and advanced shorthand classes at Brigham Young University. A pretest and two posttests were administered to all groups, and terminal achievement was measured by subtracting the number of words transcribed correctly on the pretest from the average number of words transcribed correctly on the two posttests.[3] Results of t tests indicated no significant difference in the terminal achievement of students in the experimental vs. the control groups when the data from the intermediate and advanced classes were considered separately and when the data from the intermediate and advanced classes were combined.[4] Larsen concluded that students given dictation from materials which emphasized the 2,800 most frequently occurring words in business correspondence could attain approximately the same terminal achievement as students exposed to a large uncontrolled vocabulary.[5]

Mickelsen studied the effect of word frequency on the accuracy of shorthand transcription.[6] Using the Perry[7] word list, Mickelsen constructed three 3-minute dictation tests classified according to high frequency word

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[1]Perry, "Word-Combination Frequencies of Business Correspondence."

[2]Larsen, "Terminal Effect," pp. 25-26.

[3]Ibid., pp. 27-28. [4]Ibid., p. 42. [5]Ibid., p. 46.

[6]Leonhard P. Mickelsen, "The Relationship Between Word Frequency and the Difficulty of Shorthand Dictation Materials" (Ed.D. dissertation, University of North Dakota, 1970), p. 81.

[7]Perry, "Word-Combination Frequencies of Business Correspondence."

indexes of 100 (easy), 70 (average), and 40 (difficult). The word frequency index was based on the first 500 words of the Perry word list and indicated the percentage of high frequency words used in each letter, i.e., all words in the "easy" letter were within the first 500, 70 percent of the words in the "average" letter were from the first 500, and 40 percent of the words in the "difficult" letter were from the first 500. Words occurring in the "average" and "difficult" letters which were beyond the first 500 were stratified by 500-word blocks according to the percentages in the Perry list. Each letter contained 240 actual words and an overall syllabic intensity of 1.43.[1]

The letters were recorded on tape at 80 words per minute by the researcher and administered in randomized order to 117 fourth-semester high school Gregg shorthand students in 15 schools in Southwestern Minnesota. The tests were administered on three successive days in each class by the class instructors. As an adjunct to the study, the three dictation tests used in the main study were administered at 120 words per minute to 20 post-secondary shorthand students who were writing at the 120-words-per-minute speed range as defined in the study. Transcripts were hand scored by Mickelsen, counting only words which had been omitted, added, or incorrectly transcribed as errors.[2]

Results of an analysis of variance (Treatments X Subjects design) applied to raw scores revealed that the raw mean transcription error scores on the three tests were significantly different. The application of Dunn's "c" test for multiple comparisons revealed that each mean transcription error score was significantly different from every other mean transcription error score. These findings were also applicable to the adjunct study.[3]

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[1]Mickelsen, "Relationship Between Word Frequency," pp. 32-34.

[2]Ibid., pp. 35-44. [3]Ibid., pp. 79-82.

Mickelsen's analysis of errors by vocabulary level in the combined tests of the main study indicated an inverse relationship between vocabulary level and transcription errors--as vocabulary level decreased in frequency, the error rate increased. Mickelsen also analyzed errors by word length in syllables and found that the greatest percentage of error occurred in two- and three-syllable words. The highest percentage of error did not occur on the longest words in his study. The findings regarding vocabulary level and word length were similar in the adjunct study. Mickelsen also found in the main study (but not in the adjunct study) that students tended to insert a greater number of extra words in the transcripts as the difficulty of the copy increased. The relationship between vocabulary level and word length measured in syllables on the 100 words most often transcribed incorrectly in the main study was negligible with $r = .141$.[1]

Mickelsen concluded that the indexes of high frequency words used in this study were highly successful in determining the three distinct levels of difficulty in shorthand dictation material and that familiarity of vocabulary appeared to be a very significant factor in measuring the difficulty of shorthand dictation materials. Transcription errors in his study were directly related to vocabulary level, and Mickelsen suggested that vocabulary level may be used as a single determinant in assessing the difficulty of dictation materials for transcription purposes. Mickelsen also concluded that syllabic intensity was an inadequate measure of the difficulty of the dictation tests used in this study and that syllabic intensity of 1.43 did not permit a natural flow of wording similar to that normally used in business communications.[2]

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[1]Ibid., pp. 79-83. [2]Ibid., pp. 83-85.

The primary purpose of the study by Henrie[1] in 1971 was to analyze and compare four shorthand difficulty level prediction formulas to determine which one was most valid and reliable. The formulas he used were the syllabic intensity prediction formula devised by Gregg and Leslie[2] and used by Zoubek[3] and the shorthand difficulty prediction formulas devised by Hillestad,[4] Mellinger,[5] and Uthe.[6]

Henrie used a mean word error score as a criterion. This score was obtained by administering 20 two-minute taped letters to 13 fourth-semester shorthand classes. The letters were selected from shorthand dictation test material with the speed of the dictation ranging from 70 to 100 words per minute. The mean word error score for each letter was based on student transcripts. The predicted difficulty level of each letter was determined by applying each of the four formulas to each of the 20 letters, resulting in a difficulty rating for each letter of "very easy," "easy," "average," "difficult," or "very difficult."[7]

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[1]Bill Sherriff Henrie, "A Comparative Analysis of Difficulty Prediction Formulas for Shorthand Dictation Material" (Ed.D. dissertation, Utah State University, 1971).

[2]Louis A. Leslie, Methods of Teaching Transcription (New York: Gregg Publishing Division, McGraw-Hill Book Company, Inc., 1949), pp. 197-200.

[3]Charles E. Zoubek, Speed Dictation (New York: Gregg Publishing Division, McGraw-Hill Book Company, Inc., 1963).

[4]Hillestad, "Factors Which Contribute to the Difficulty of Shorthand Dictation Materials."

[5]Morris Mellinger, "Let's Adopt the Yardstick of a Word Frequency Index," Business Education World 45 (December 1964):15.

[6]Uthe, "Evaluation of the Difficulty Level."

[7]Henrie, "Analysis of Difficulty Prediction Formulas," pp. 71-72.

Ratings of each of the four formulas were compared with the word error score, against each other prediction formula, and against each prediction formula itself. The statistical treatments used in the comparison were analysis of variance, the Pearson product moment correlation, the split-half reliability formula, and a t-test for testing the significance of correlation coefficients.[1]

The results of Henrie's study indicated a statistically significant difference between prediction formulas at the .01 level, indicating that the four formulas did not agree in their predictions of the difficulty of the letters used in his study.[2] When the prediction formulas were compared against mean word error scores, the Hillestad formula had a correlation of .6201, which was significant at the .01 level. The Uthe formula had the next highest correlation, although it was not statistically significant.[3] When tested for reliability, all except the syllabic intensity formula showed a significant correlation at the .01 level, although the Uthe formula showed a negative correlation.[4] The correlation between the syllabic intensity formula and the other three formulas was not significant, and non-significant correlations for validity and reliability indicated low predictive validity and low reliability for the syllabic intensity formula.[5]

Henrie concluded that the Hillestad formula was the most valid and reliable of the four shorthand difficulty prediction formulas analyzed. Henrie indicated that although the syllabic intensity and Mellinger prediction formulas are easier to calculate, the additional time and effort required to calculate the Hillestad formula would seem to insure greater accuracy.[6]

Henrie noted that the two most valid prediction formulas (Hillestad and Uthe) contained more than one variable; and both included the number of words

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[1]Ibid., pp. 71-74. [2]Ibid., p. 51. [3]Ibid., pp. 48, 53.

[4]Ibid., pp. 55-56. [5] Ibid., p. 59. [6]Ibid., pp. 75-81.

beyond the first 1,500 most frequently used words on the Silverthorn[1] list, indicating that this item must be a significant factor in shorthand difficulty prediction. Because of the significant difference between the results of the prediction formulas he used, Henrie recommended that more research be done in the area of word frequency levels. Henrie recommended further study to compare the high frequency words, including brief forms, and the words beyond the first 1,500 most frequently used words, as well as the word levels between the first 100 and the first 1,500 most frequently used words.[2]

Another attempt to determine a valid method of measuring the difficulty of shorthand dictation material was made in 1972 when Wedell conducted a study to determine the relationship of syllabic intensity, word frequency, and shorthand stroke intensity to the difficulty of shorthand dictation materials.[3]

Wedell composed two business letters of 240 standard words each which were used as dictation tests for the study. Syllabic intensity and word frequency were controlled at the same level for each minute as well as for the three minutes of each letter, and shorthand stroke intensity was varied. Syllabic intensity for the two letters ranged from 1.5 to 1.55; the percentage of frequently occurring words used in each letter was based on the frequency percentages of word groups found in the Perry[4] word list; and shorthand stroke intensity was 2.35 for one letter and 2.75 for the other letter. The letters

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[1]Silverthorn, "Vocabulary of Written Business Communications."

[2]Henrie, "Analysis of Difficulty Prediction Formulas," pp. 80-84.

[3]Allen J. Wedell, "The Relationship of Syllabic Intensity, Word Frequency, and Stroke Intensity to the Difficulty of Shorthand Dictation Material" (Ph.D. dissertation, University of North Dakota, 1972), p. 51.

[4]Perry, "Word-Combination Frequencies of Business Correspondence."

were dictated at 80 words per minute by the participating classroom teachers to 206 students in 15 post-secondary schools in North Dakota, South Dakota, and Minnesota. The participating students had been certified by their teachers as having transcribed material dictated at a minimum of 80 words per minute but not at 100 words per minute with at least 95 percent accuracy. Transcripts were scored by the researcher, with an error being counted for any word that was omitted or substituted for another word in the transcript. Analysis of errors was based on all errors made by students on each of the test letters and on a mean error per word score based on 17 variables which included five syllabic intensity variables, five word frequency variables, and seven shorthand stroke variables.[1]

The findings revealed positive correlations ranging from .44 to .68 among the three factors of syllabic intensity, word frequency, and shorthand stroke intensity; and a significant difference was found in the difficulty of the two letters as measured by a shorthand stroke intensity of 2.35 in one letter and 2.75 in the other letter. When Setwise Multiple Regression was used to determine which variable was most significant, the syllabic intensity variables were dropped first and the word frequency variables were dropped second as the least significant variables. The shorthand stroke intensity variables remained as the most significant set with a correlation coefficient of .43.[2]

An analysis of the mean error per word indicated that the number of errors increased as the number of syllables per word increased; that the number of errors increased as the frequency of word usage decreased; and that the

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[1]Wedell, "Relationship of Syllabic Intensity, Word Frequency, and Stroke Intensity," pp. 22-24, 51-52.

[2]Ibid., pp. 52-53.

number of errors increased as the number of shorthand strokes per word increased.[1]

Wedell concluded that since the factors of syllabic intensity, word frequency, and shorthand stoke intensity had a significant positive intercorrelation, the factors should not be considered totally independent in their contribution to the difficulty of the test letters used in the study. Wedell concluded that none of the factors should be used individually as a single measure in determining difficulty of shorthand dictation material.[2]

Rice[3] investigated the effect of using vocabulary controlled materials on student achievement during the presentation of shorthand theory as measured by dictation speed tests and theory/vocabulary tests. The specially prepared vocabulary controlled materials, used exclusively by the experimental classes, were developed from a vocabulary limited to slightly more than 2,500 words based generally on the first 2,500 most frequently used words in the Perry[4] list.[5] The vocabulary controlled materials consisted of programmed theory, taped reinforcement material, and printed new-matter dictation letters. The traditional Gregg shorthand textbook and theory tapes were used in the control classes, and the same time schedule was observed in these classes as in the

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[1]Ibid., pp. 54-56. [2]Ibid., pp. 56-57.

[3]Pauline Crisp Rice, "The Effect of Controlled Vocabulary Materials During Theory Presentation in College-Level Beginning Shorthand" (Ed.D. dissertation, University of Tennessee, 1975).

[4]Perry, "Word-Combination Frequencies of Business Correspondence."

[5]Rice, "Effect of Controlled Vocabulary Materials," p. 60.

experimental classes. Students who participated in the study had no previous shorthand instruction. The study was conducted at the college level over a period of 15 weeks.[1]

Based on the findings of the study, Rice concluded that:

> . . . . . .
> 2. Students who learn shorthand theory using the specially prepared vocabulary controlled materials achieve higher scores on dictation tests at speeds from 40 to 80 words per minute and write more accurate outlines on word tests when the words emphasize shorthand principles or are selected at random from the first 5,000 words in the Perry list than students who learn shorthand theory using the traditional Gregg textbook materials.
> 3. Students in Level L (Low) ability group who learn shorthand using vocabulary controlled materials achieve significantly higher levels on dictation tests than their counterparts who use the traditional Gregg textbook materials. Students of Level H (High) and M (Middle) ability using the experimental materials attain consistently higher levels of achievement in dictation speeds though not significantly.
> 4. Students in Level M (Middle) ability group who learn shorthand theory using vocabulary controlled materials write more accurate outlines than students who use the traditional Gregg textbook materials, but neither Level H (High) nor Level L (Low) ability students appear to be significantly affected by using the experimental materials.
> . . . . . .[2]

An attempt to determine the relationship between word frequency and difficulty of shorthand dictation materials was made in 1977 by Nickerson, using published shorthand dictation materials rather than specially prepared materials. Nickerson also attempted to determine the extent to which vocabulary used in contemporary business correspondence was used in selected existing five-minute Gregg dictation materials and whether the selected takes appeared to differ significantly in difficulty as measured by the number of transcription errors.[3]

Based on the premise that the most frequently encountered words in business vocabulary would be the easiest to transcribe for shorthand writers

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[1]Ibid., pp. 133-134. [2]Ibid., pp. 138-139.

[3]Ingeborg Antonie Nickerson, "A Measure of Difficulty of Shorthand Dictation Materials" (D.B.A. dissertation, Louisiana Tech University, 1977), p. 2.

because they would have been automatized through frequent use, Nickerson developed a business vocabulary index based on the first 5,000 words of the Perry[1] list to establish and test proposed levels of difficulty of shorthand dictation materials. In developing the index for the Perry list, words were weighted according to their corresponding frequency and expressed in terms of their relationship to the most frequently occurring word, the. The index for the first 5,000 words in the Perry list was 183.37.[2]

The published dictation materials used in Nickerson's study were comprised of the 60 five-minute dictation takes at 100 words per minute included in Previewed Dictation,[3] Progressive Dictation,[4] and Speed Dictation.[5] Vocabulary indexes were devised for each of the takes based on the Perry list, with words beyond the first 5,000 receiving a weight of zero. The 60 takes were arranged in rank order according to vocabulary index; and the six takes having the highest vocabulary indexes were classified as "easy," the six takes from the middle of the array were classified as "average," and the six takes having the lowest vocabulary indexes were classified as "hard." The 18 five-minute takes were recorded on tape at 100 words per minute and administered at the rate of two per week during the last nine weeks of the quarter to 41 students in their fifth quarter of shorthand instruction at the college level in an alternating order of "hard," "average," and "easy."[6]

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[1]Perry, "Word-Combination Frequencies of Business Correspondence."

[2]Nickerson, "A Measure of Difficulty of Shorthand Dictation Materials," p. 40.

[3]Charles E. Zoubek, Previewed Dictation (New York: Gregg Publishing Division, McGraw-Hill Book Company, 1950), pp. 143-178.

[4]Charles E. Zoubek, Progressive Dictation (New York: Gregg Publishing Division, McGraw-Hill Book Company, 1956), pp. 148-184.

[5]Zoubek, Speed Dictation, pp. 161-197.

[6]Nickerson, "A Measure of Difficulty of Shorthand Dictation Materials," pp. 41-43.

Transcription error scores from 738 transcripts were tested for variability using a three-factor analysis of variance and Duncan's multiple range test. The findings indicated that the vocabulary index devised in her study did not satisfactorily identify three distinct levels of difficulty hypothesized in the research; however, the hypothesized difficulty level of "hard" did differ significantly from both the "average" and "easy" levels. Testing for homogeneity of transcription errors in the absence of a learning effect over time revealed significant differences in mean transcription error scores among the 18 administered takes, leading Nickerson to conclude that a significant difference existed in the difficulty of the published dictation tests which was not reflected by the syllabic intensity of the material. Nickerson concluded that students' performance on a given take was to a large extent a measure of the degree of difficulty of the particular take. Nickerson also found that vocabulary distributions of 39 (65 percent) of the 60 takes analyzed were not statistically different from the vocabulary distributions of business communications as defined by Perry; however, vocabulary distributions of 21 (35 percent) of the 60 takes were statistically different from the vocabulary distributions of business communications.[1]

Hooven[2] investigated effects of intensive practice of the shorthand outlines for 500 high frequency words identified by Perry[3] on achievement in shorthand vocabulary and transcription in beginning Gregg Shorthand classes at the high school level. Achievement was measured in three areas--

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[1]Ibid., pp. 44, 86-93.

[2]Hooven, "Intensive Practice of a Target Vocabulary."

[3]Perry, "Word-Combination Frequencies of Business Correspondence."

recording outlines for the 500 target words in word-list and contextual form, recording outlines for unfamiliar words in word-list and contextual form, and transcribing outlines from contextual materials.[1]

The four phases of the research involved determining difficulty indexes for the 500 high frequency words and for a corpus of unfamiliar words; the development of two parallel measuring instruments for use as a pretest and a posttest in the experiment; a pilot study conducted with two high school beginning shorthand classes; and the experiment conducted in nine control and nine experimental classes in 14 high schools in Pennsylvania.[2]

The experimental phase began when the classes completed coverage of the principles of shorthand theory, with the pretest being administered at this point. During the following 25 class periods, the experimental classes received supplementary intensive practice of the 500 high frequency words in treatment sessions during the class period. Teachers followed their usual procedures in all classes except for the treatment sessions. Prescribed textbook coverage and standardized homework assignments were used to control vocabulary encounters. Additional words received by the experimental classes which were not available in the textbook to the control classes were counted and counterbalanced by adjusting homework letters for the experimental group and by providing randomly selected infrequentiy used words with matching syllable counts to the control group. The parallel posttest was administered to measure achievement at the end of the experimental period.[3]

Results of analyses of variance and covariance revealed that the experimental group had a significantly higher mean posttest score than the

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[1]Hooven, "Intensive Practice of a Target Vocabulary," pp. 2, 12.

[2]Ibid., pp. 173-174. [3]Ibid., pp. 174-175.

control group in recording outlines for the 500 high frequency words both in word-list and contextual form. The experimental group had a significantly higher mean posttest score than the control group in constructing outlines for unfamiliar words in word-list form and performed as well as the control group in constructing outlines for unfamiliar words in contextual form. The mean posttest achievement for the experimental group was significantly higher than for the control group in transcribing contextual material.[1]

Hooven concluded that intensive practice, in the manner described in her study, of the shorthand outlines for 500 high frequency words strengthened second-semester Gregg shorthand students' ability to record those outlines in word-list and contextual form, increased their skill in constructing unfamiliar outlines from word lists, and favorably affected their transcribing performance.[2]

Because of previous research indicating that vocabulary level is related to difficulty of shorthand dictation materials, Thomason sought to determine whether difficulty of shorthand testing materials could be determined and/or significantly changed by varying the percentages of words in various frequency categories in the Perry[3] word list by approximately 15 percent while holding brief forms, brief form derivatives, syllabic intensity, number of different words, and number of actual words constant.[4]

Thomason wrote six three-minute shorthand dictation tests specifically for her study which pertained only to business issues. The six tests consisted of two equivalent tests written at each of three different difficulty levels

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[1]Ibid., pp. 165-169. [2]Ibid., p. 175.

[3]Perry, "Word-Combination Frequencies of Business Correspondence."

[4]Annette Johnson Thomason, "The Effect of Word Frequency on Copy Difficulty for Shorthand Testing Materials" (Ed.D. dissertation, Oklahoma State University, 1979), pp. 8, 14.

identified as "easy," "average," and "hard." The Perry word list was divided into seven major word groups, and the percentages of words from these groups which were contained in the "average" difficulty level tests conformed to the percentages found by Perry. The tests in the "easy" difficulty level contained approximately 15 percent more high frequency words shifted from the low frequency range, and tests in the "hard" difficulty level contained approximately 15 percent fewer high frequency words with a corresponding increase in the percentages of low frequency words. The following were held constant for all tests: the percentages of brief forms and brief form derivatives, average syllabic intensity of 1.5, the number of different words, and the number of actual words. Internal control was maintained by holding constant the following for each minute as well as for all three minutes of each test: percentages of brief forms and brief form derivatives, syllabic intensity, and number of actual words.[1]

The tests were recorded on tape at 80 words per minute and given in randomized order to eight post-secondary classes totaling 106 students in Oklahoma who were writing at least 80 but not 100 words per minute. The transcripts were hand scored by the researcher, and only shorthand related errors such as additions, mistranscriptions, and omissions of words were counted as errors. Raw mean transcription error scores were computed for each of the six tests in each of the eight classes.[2]

Results of a two-way analysis of variance performed on raw mean transcription error scores for each of the eight classes indicated that the two tests at each difficulty level were equal in difficulty.[3]

In order to determine whether the three levels of tests were significantly different in difficulty, the raw mean transcription error scores for

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[1]Ibid., p. 84. [2]Ibid., pp. 84-86. [3]Ibid., p. 86.

each of the six groups were treated with the weighted least squares analysis procedure to adjust for any variances caused by unequal group sizes and/or variability caused by the difficulty level of the test. The adjusted mean transcription error scores were analyzed to determine whether a significant difference existed between the "easy" and the "average," the "average" and the "hard," and the "easy" and the "hard" difficulty levels; and average differences between levels for all three comparisons were highly significant at the .001 level when Z scores were computed, indicating a very significant difference in difficulty of the three levels of tests.[1]

Based on the analysis of the data obtained, Thomason concluded:

> 1. It is possible to develop shorthand dictation tests of comparable difficulty by using similar percentages of words from specified frequency categories in the Perry list while holding brief forms, brief form derivatives, syllabic intensity, number of actual words, and number of different words constant.
> 2. The difficulty of copy used for shorthand dictation tests can be significantly changed by increasing or decreasing the percentages of words in the various frequency categories by approximately 15 percent while holding brief forms, brief form derivatives, syllabic intensity, number of actual words, and number of different words constant.[2]

Summary

A review of related literature relating to word frequency studies of business communications indicated that relatively small numbers of words constitute relatively large percentages of total words used. Results of three major word frequency studies indicated that 500 words accounted for over 70 percent of the total words used; that 1,000 words accounted for over 80 percent of the total words used; and that 5,000 words accounted for over 95 percent of the total words used. Recommendations were made that teachers train shorthand students to thoroughly master the recording and transcription of the

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[1]Ibid. [2]Ibid., pp. 86-87.

first 500 to 1,000 high frequency words. Word frequency studies of published shorthand learning materials indicated significant differences in percent of content of high frequency words in the learning materials when compared to the percentage of high frequency words in actual business vocabulary usage.

Research findings have indicated that vocabulary level, as measured by frequency of use of the words, is related to the difficulty of shorthand dictation material. Studies have shown that vocabulary level is a significant factor in determining difficulty of shorthand dictation material and that lower percentages of error occur on high frequency words in recording and transcribing shorthand.

Chapter II consists of a comprehensive review of research and professional literature relating to word frequency and vocabulary level as related to the learning of shorthand. Items included in this research study were limited to those most closely related to this study.

The review of literature was classified into three major categories: (1) Word Frequency Studies of Business Communications, (2) Word Frequency Studies of Published Shorthand Learning Materials, and (3) Studies Relating the Importance of Vocabulary Level in Shorthand Learning Materials.

CHAPTER III

PROCEDURES

Introduction

This chapter presents a detailed description of the procedures used in conducting this study. The chapter is organized under the following headings: Sources of Data, Collection of Data, Preparation of Data, and Analysis of Data.

Sources of Data

Data for this study were obtained from business letters and business memoranda from firms with 500 or more employees located in the State of Oklahoma. Names of firms were obtained and information verified from the following sources: Oklahoma Directory of Manufacturers,[1] Million Dollar Directory,[2] Standard and Poor's Register of Corporations and Executives,[3] American Hospital Association Guide to the Health Care Field,[4] and telephone calls to some firms to verify information.

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[1]Oklahoma Department of Industrial Development, Oklahoma Directory of Manufacturers and Products (Oklahoma City: Oklahoma Department of Industrial Development, 1980).

[2]Million Dollar Directory (New York: Dun & Bradstreet, Inc., 1980).

[3]Standard and Poor's Register of Corporations, Directors and Executives (New York: Standard and Poor's Corporation, 1980).

[4]American Hospital Association, American Hospital Association Guide to the Health Care Field (Chicago: American Hospital Association, 1980).

Textbook data for this study were obtained from the reading and writing practice materials in Gregg Shorthand for Colleges, Volume II, Series 90.[1]

Collection of Data

Data for this study were collected between September and November of 1980. A letter was mailed in September 1980 to each of 102 businesses with 500 or more employees located in the State of Oklahoma, requesting one copy of a letter and one copy of an interoffice memorandum written by someone in that firm. One month after the initial letters were mailed, a follow-up letter was sent to each firm that had not responded. Three weeks after the follow-up letters were mailed, a follow-up telephone call was made to each firm that still had not responded.

Of the 102 firms asked to participate in the study, 4 declined to participate; 1 sent the wrong type of material; and 83 sent usable material, resulting in a response rate of 81 percent. A total of 83 usable business letters and 80 usable business memoranda was received.

The data from the textbook used in this study were collected from the reading and writing practice materials of the textbook lessons. The items in the reading and writing practice materials were numbered sequentially, and a table of random numbers was used to select the items from the textbook. A total of 83 items was selected from the textbook for analysis, corresponding with the number of usable business letters.

Preparation of Data

All words appearing in the body or message of the business letters, the business memoranda, and the items from the textbook materials were

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[1]Leslie, Zoubek, and Lemaster, Gregg Shorthand for Colleges, Volume II, Series 90.

keypunched on computer cards and tabulated by computer. Before the data were keypunched, the following editing procedures were applied to the business letters and business memoranda:

1. Only the words appearing in the body and the postscript of each business letter and business memorandum were included in the analysis. Excluded from the analysis were words appearing in the date, inside address, salutation, complimentary close, letterhead, and other parts of the document outside the body and postscript.

2. Only dictionary words were included in the analysis. The sources used for verifying dictionary words and spelling were Webster's Third New International Dictionary of the English Language Unabridged[1] and 6,000 Words: A Supplement to Webster's Third New International Dictionary.[2]

3. Numbers spelled as words in the messages were counted as words and were included in the tabulation. Excluded from the tabulation were numbers appearing as figures.

4. Hyphenated expressions were counted as separate words unless the expression was listed in the dictionary as a hyphenated expression.

5. Proper nouns that were not related solely to a particular company, such as names of geographic locations and days of the week, were included in the tabulation. However, proper nouns which were related solely to a particular company, such as company names and brand names, were excluded. Names of individuals and any other words that would identify a particular company or

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[1]Webster's Third New International Dictionary of the English Language Unabridged (Springfield, Massachusetts: G. & C. Merriam Company, 1966).

[2]6,000 Words: A Supplement to Webster's Third New International Dictionary (Springfield, Massachusetts: G. & C. Merriam Company, 1976.)

person were excluded to maintain confidentiality. Names of months of the year were excluded because they reflected the time period during which the data were collected rather than normal occurrence in written business communications.

6. Abbreviations were spelled in full when the meaning was known, and each word was counted as a separate word. Abbreviations and single-letter initials were excluded when the meaning was unknown except for expressions abbreviated in common usage, such as etc., a.m., p.m., and f.o.b. Punctuation marks and symbols were excluded except for periods used with abbreviations that were counted.

7. Contractions were counted as contractions instead of being spelled in full. Words that were possessive were counted up to the apostrophe; the apostrophe and any letters following were excluded.

The textbook materials were edited according to the same procedures as the business letters and business memoranda with these exceptions: names of individuals, companies, and months of the year were included. These items were included because they are used in the textbook materials to illustrate shorthand theory principles and would not violate the guidelines listed for these items in the business letters and business memoranda.

A printout of the text of each business letter, business memorandum, and textbook item was obtained for proofreading purposes. The data were keypunched by an experienced keypunch operator who corrected any errors noted during the keypunching process and proofread the printout. The researcher then proofread the printout and made necessary corrections, including both editing and typographical errors. The corrections were then keypunched and proofread by the keypunch operator and proofread again by the researcher.

Analysis of Data

After the content of the business letters, business memoranda, and textbook items were keypunched, the words were tabulated by computer to establish a data base of running words from each of the three types of data analyzed. A computer program was written to provide rank order and alphabetical lists of the words in each data base. The alphabetical lists contained the words from each data base in alphabetical order with frequency count. The rank order lists contained the words from each data base in rank order with frequency count according to frequency of use. The word having the highest frequency of use in each data base was assigned the rank of "1" for that data base, the word having the second highest frequency of use in each data base was assigned the rank of "2" for that data base, etc. Words which had identical frequency counts were assigned the same rank. Separate printouts of the rank order and alphabetical lists were obtained for each data base.

A total of 10,292 running words occurred in the business letter data base, representing 2,144 different words. The 200 most frequently used words in the business letter data base are presented in Table 1 in Chapter 4. The 636 most frequently used words in the business letter data base are listed in rank order with frequency count in Appendix C and in alphabetical order with frequency count in Appendix F. Listing only 500 words in Appendices C and F would have required the establishment of an arbitrary cutoff since many of the words had identical frequency counts and were assigned the same rank.

A total of 10,718 running words occurred in the business memoranda data base, representing 2,145 different words. The 200 most frequently used words in the business memoranda data base are presented in Table 3 in Chapter 4. The 710 most frequently used words in the business memoranda

data base are listed in rank order with frequency count in Appendix D and in alphabetical order with frequency count in Appendix G. Listing only 500 words in Appendices D and G would have required the establishment of an arbitrary cutoff since many of the words had identical frequency counts and were assigned the same rank.

A total of 11,721 running words occurred in the textbook data base, representing 1,879 different words. The 200 most frequently used words in the textbook data base are presented in Table 5 in Chapter 4. The 655 most frequently used words in the textbook data base are listed in rank order with frequency count in Appendix E and in alphabetical order with frequency count in Appendix H. Listing only 500 words in Appendices E and H would have required the establishment of an arbitrary cutoff since many of the words had identical frequency counts and were assigned the same rank.

The analysis of the data and the findings of this study are presented in Chapter IV.

CHAPTER IV

FINDINGS

Introduction

The purpose of this study was to compare word frequencies of textbook materials used in second-semester college instruction of Gregg Shorthand, Series 90, with word frequencies of business letters and business memoranda. This chapter presents the major findings of this study as follows: The Most Frequently Used Words in Business Letters, The Most Frequently Used Words in Business Memoranda, The Most Frequently Used Words in the Textbook Materials, Comparison of the Most Frequently Used Words in the Textbook Materials With Corresponding Words in Business Letters and Business Memoranda, Answers to the Questions Stated in the Problem Section, and Summary.

The Most Frequently Used Words in Business Letters

All words appearing in the body or message of the 83 business letters analyzed in this study were keypunched on data cards and tabulated by computer to establish a data base of running words which were used in the business letters. A program was run which listed all of the words in the data base in rank order according to frequency of use. A total of 10,292 running words occurred in the business letters, representing 2,144 different words. The 636 most frequently used words in the business letters in rank order with frequency count are listed

in Appendix C. The 636 most frequently used words in the business letters are listed in alphabetical order with frequency count in Appendix F. A total of 636 words was presented in Appendices C and F since the frequency counts on many words were the same; actually presenting only 500 words would have required the establishment of an arbitrary cutoff.

The 200 most frequently used words in the business letters are listed in rank order according to word frequency in Table 1. When the word usage was tallied and the frequency totaled the same on two or more words, the lowest rank was assigned to each word in the group. For example, the words be and that each had a frequency count of 118; therefore, be and that were assigned the lower rank of 13. Because many words had the same frequency count, Table 1 contains 213 words.

TABLE 1

THE 200 MOST FREQUENTLY USED WORDS IN BUSINESS LETTERS

Rank	Word	Frequency	Rank	Word	Frequency
1.	the	576	21.	as	80
2.	to	352	22.	or	79
3.	of	318	23.	will	77
4.	and	277	24.	at	74
5.	you	222	25.	would	65
6.	in	212	26.	it	54
7.	a	195	27.	if	53
8.	your	178	28.	by	49
9.	for	173	29.	not	47
10.	we	163	30.	which	41
11.	I	139	30.	was	41
12.	our	119	32.	from	40
13.	be	118	33.	time	37
13.	that	118	34.	any	34
15.	is	101	34.	an	34
16.	on	100	36.	very	32
17.	have	95	37.	letter	31
18.	with	86	38.	can	30
19.	are	82	39.	please	29
19.	this	82	39.	been	29

TABLE 1--Continued

Rank	Word	Frequency	Rank	Word	Frequency
41.	us	28	82.	last	14
42.	my	27	82.	feel	14
43.	more	26	82.	date	14
44.	information	25	82.	because	14
44.	but	25	82.	two	14
46.	me	24	82.	who	14
46.	other	24			
46.	per	24	91.	future	13
46.	may	24	91.	most	13
46.	am	24	91.	job	13
			91.	call	13
51	one	23	91.	there	13
51.	has	23	91.	their	13
51.	company	23	91.	shall	13
54.	like	22	98.	need	12
54.	should	22	98.	make	12
54.	year	22	98.	over	12
57.	forward	21			
57.	were	21	98.	good	12
57.	they	21	98.	parts	12
60.	all	20	98.	looking	12
			98.	during	12
60.	than	20	98.	well	12
60.	work	20	106.	look	11
63.	do	19	106.	inspection	11
63.	thank	19	106.	industrial	11
63.	these	19	106.	again	11
66.	know	18	106.	agreement	11
66.	appreciate	18			
68.	his	17	106.	contact	11
68.	interest	17	106.	enclosed	11
68.	also	17	106.	each	11
			114.	number	10
68.	copy	17	114.	he	10
68.	visit	17	114.	might	10
68.	some	17	114.	person	10
74.	possible	16	114.	much	10
74.	Mr.	16	114.	programs	10
74.	city	16	114.	equipment	10
74.	service	16			
78.	had	15	114.	both	10
78.	no	15	114.	after	10
78.	about	15	114.	cover	10
			114.	business	10
78.	such	15	114.	when	10
82.	lines	14	114.	where	10
82.	program	14	114.	stock	10
82.	Oklahoma	14	114.	years	10

TABLE 1--Continued

Rank	Word	Frequency	Rank	Word	Frequency
114.	through	10	157.	below	8
130.	product	9	157.	done	8
			157.	annual	8
130.	many	9	157.	based	8
130.	help	9	157.	recent	8
130.	present	9	157.	reservation	8
130.	made	9	157.	up	8
130.	following	9	157.	so	8
130.	its	9	157.	since	8
130.	pleased	9	157.	thanks	8
130.	further	9			
130.	hope	9	157.	sales	8
130.	five	9	157.	shares	8
			157.	provisions	8
130.	having	9	184.	plate	7
130.	matter	9	184.	position	7
130.	available	9	184.	new	7
130.	amount	9	184.	products	7
130.	certificate	9	184.	opportunity	7
130.	day	9	184.	left	7
130.	concerning	9	184.	installation	7
130.	could	9			
130.	attached	9	184.	meeting	7
130.	training	9	184.	outstanding	7
			184.	let	7
130.	them	9	184.	month	7
130.	tax	9	184.	plans	7
130.	received	9	184.	however	7
130.	request	9	184.	application	7
130.	upon	9	184.	billing	7
130.	three	9	184.	building	7
157.	order	8	184.	assistance	7
157.	paid	8			
157.	insurance	8	184.	being	7
157.	line	8	184.	conversation	7
			184.	electrical	7
157.	hospital	8	184.	those	7
157.	find	8	184.	questions	7
157.	keep	8	184.	required	7
157.	file	8	184.	see	7
157.	freight	8	184.	within	7
157.	get	8	184.	receive	7
157.	price	8	184.	want	7
157.	name	8			
157.	did	8	184.	section	7
157.	employment	8	184.	while	7
			184.	resume	7

The most frequently used word in the business letters was the, which occurred 576 times and represented 5.60 percent of the total running words in the business letters. The five most frequently used words--the, to, of, and, you--had a combined frequency of 1,745, which represented 16.95 percent of the total running words occurring in the business letters. The second 5-word group--in, a, your, for, we--brought the combined frequency of the ten most frequently used words to 2,666, which represented 25.90 percent of the total running words occurring in the business letters.

A summary of the total number of word occurrences and the percentage of usage by word groups is shown in Table 2. (See Table 2.) The percentage of usage was obtained by dividing the cummulative word occurrences of the word groups by the total of 10,292 running words which occurred in the business letters. The 25 most frequently used words occurred a total of 4,081 times, which represented 39.65 percent of all words used in the business letters. The 50 most frequently used words occurred a total of 4,913 times, which represented 47.74 percent of all words used in the business letters. The 100 most frequently used words represented 55.80 percent of all words used in the letters, and the 200 most frequently used words listed in Table 1 represented 64.41 percent of all words used in the business letters. The 500 most frequently used words represented over three-fourths--77.57 percent--of all words used in the business letters. These percentages indicate that relatively small numbers of words constitute relatively large percentages of total words used in business letters.

The Most Frequently Used Words in Business Memoranda

All words appearing in the body or message of the 80 business memoranda analyzed in this study were keypunched on data cards and tabulated by computer to establish a data base of running words which were used in the

TABLE 2

FREQUENCY AND PERCENTAGE IN WORD OCCURRENCE GROUPS OF 10,292 RUNNING WORDS IN BUSINESS LETTERS

Word Group	Number of Occurrences	Percentage of Total Occurrences
First 5	1,745	16.95
First 10	2,666	25.90
First 15	3,261	31.68
First 20	3,706	36.00
First 25	4,081	39.65
First 30	4,325	42.02
First 35	4,511	43.83
First 40	4,662	45.30
First 45	4,793	46.57
First 50	4,913	47.74
First 100	5,743	55.80
First 200	6,629	64.41
First 500	7,983	77.57
First 1,000	9,119	88.60
First 1,500	9,648	93.74
First 2,000	10,148	98.60
TOTAL 2,144	10,292	100.00

business memoranda. A program was run which listed all of the words in the data base in rank order according to frequency of use. A total of 10,718 running words occurred in the business memoranda, representing 2,145 different words. The 710 most frequently used words in the business memoranda in rank order

TABLE 3

THE 200 MOST FREQUENTLY USED WORDS IN BUSINESS MEMORANDA

Rank	Word	Frequency	Rank	Word	Frequency
1.	the	654	41.	their	29
2.	to	359	42.	can	28
3.	of	311	43.	personnel	27
4.	and	250	43.	time	27
5.	in	211	45.	information	26
6.	a	196	45.	they	26
7.	for	173	47.	following	25
8.	be	155	47.	been	25
9.	will	143	47.	would	25
10.	is	141	50.	one	23
11.	that	132	50.	new	23
12.	we	123	50.	no	23
13.	this	115	50.	attached	23
14.	on	110	50.	report	23
15.	you	109	55.	job	22
16.	are	96	55.	plan	22
17.	your	95	55.	service	22
18.	our	83	55.	these	22
19.	as	82	59.	other	21
20.	have	81	59.	so	21
21.	I	77	59.	than	21
21.	with	77	59.	there	21
23.	all	67	59.	which	21
24.	at	56	64.	but	20
25.	not	55	64.	work	20
26.	from	54	64.	was	20
27.	by	53	67.	may	19
28.	it	51	67.	out	19
29.	or	45	67.	data	19
30.	if	40	67.	copy	19
30.	should	40	67.	savings	19
32.	an	37	72.	only	18
32.	department	37	73.	form	17
34.	please	35	73.	more	17
35.	has	33	73.	he	17
35.	employees	33	73.	departments	17
35.	any	33	73.	years	17
38.	meeting	32	78.	office	16
39.	each	30	78.	members	16
39.	year	30	78.	line	16

TABLE 3--Continued

Rank	Word	Frequency	Rank	Word	Frequency
78.	must	16	117.	manager	12
78.	name	16	117.	customer	12
78.	being	16	117.	days	12
78.	during	16	117.	equipment	12
78.	those	16	117.	week	12
78.	through	16	117.	testing	12
78.	two	16	117.	use	12
78.	some	16	128.	plant	11
89.	people	15	128.	planning	11
89.	do	15	128.	order	11
89.	am	15	128.	program	11
89.	also	15	128.	monthly	11
89.	team	15	128.	parking	11
89.	who	15	128.	know	11
89.	review	15	128.	operating	11
89.	see	15	128.	charges	11
89.	us	15	128.	bond	11
89.	when	15	128.	cost	11
89.	employee	15	128.	division	11
100.	first	14	128.	copies	11
100.	make	14	128.	area	11
100.	company	14	128.	were	11
100.	city	14	128.	used	11
100.	me	14	128.	what	11
100.	date	14	128.	receive	11
100.	building	14	146.	number	10
100.	total	14	146.	involved	10
100.	up	14	146.	could	10
109.	per	13	146.	control	10
109.	inventory	13	146.	attend	10
109.	letter	13	146.	them	10
109.	maintenance	13	146.	repair	10
109.	held	13	146.	well	10
109.	about	13	146.	request	10
109.	received	13	146.	same	10
109.	test	13	146.	within	10
117.	present	12	157.	memorandum	9
117.	management	12	157.	p.m.	9
117.	open	12	157.	go	9
117.	operations	12	157.	person	9

TABLE 3--Continued

Rank	Word	Frequency	Rank	Word	Frequency
157.	next	9	177.	Oklahoma	8
157.	made	9	177.	Mr.	8
157.	processing	9	177.	orders	8
157.	period	9	177.	help	8
157.	provide	9			
157.	duties	9	177.	effective	8
157.	above	9	177.	end	8
157.	campaign	9	177.	approximately	8
157.	annual	9	177.	because	8
			177.	buy	8
157.	class	9	177.	before	8
157.	car	9	177.	feel	8
157.	capacity	9	177.	bonds	8
157.	below	9	177.	earnings	8
157.	states	9	177.	additional	8
157.	regarding	9			
177.	month	8	177.	support	8
177.	get	8	177.	requirements	8
177.	less	8	177.	room	8
177.	hour	8	177.	travel	8
			177.	three	8
177.	need	8	177.	questions	8
177.	hours	8	177.	responsibility	8
177.	his	8	177.	tour	8
177.	machine	8			
177.	given	8			
177.	Friday	8			

with frequency count are listed in Appendix D. The 710 most frequently used words in the business memoranda are listed in alphabetical order with frequency count in Appendix G. A total of 710 words was presented in Appendices D and G since the frequency counts on many words were the same; actually presenting only 500 words would have required the establishment of an arbitrary cutoff.

The 200 most frequently used words in the business memoranda are listed in rank order according to word frequency in Table 3. When the word usage was tallied and the frequency totaled the same on two or more words, the

lowest rank was assigned to each word in the group. For example, the words I and with each had a frequency of 77; therefore, I and with were assigned the lower rank of 21. Because many words had the same frequency count, Table 3 contains 208 words.

The most frequently used word in the business memoranda was the, which occurred 654 times and represented 6.10 percent of the total running words in the business memoranda. The five most frequently used words--the, to, of, and, in--had a combined frequency of 1,785, which represented 16.65 percent of the total running words occurring in the business memoranda. The second 5-word group--a, for, be, will, is--brought the combined frequency of the ten most frequently used words to 2,593, which represented 24.19 percent of the total running words occurring in the business memoranda.

A summary of the total number of word occurrences and the percentage of usage by word groups is shown in Table 4. The percentage of usage was obtained by dividing the cumulative word occurrences of the word groups by the total of 10,718 running words which occurred in the business memoranda. The 25 most frequently used words occurred a total of 3,951 times which represented 36.86 percent of all words used in the business memoranda. The 50 most frequently used words occurred a total of 4,795 times, which represented 44.74 percent of all words used in the business memoranda. The 100 most frequently used words represented 53.12 percent of all words used in the memoranda, and the 200 most frequently used words listed in Table 3 represented 62.71 percent of all words used in the business memoranda. The 500 most frequently used words represented over three-fourths--77.26 percent--of all words used in the business memoranda. These percentages indicate that relatively small numbers of words constitute relatively large percentages of total words used in business memoranda.

TABLE 4

FREQUENCY AND PERCENTAGE IN WORD OCCURRENCE GROUPS OF 10,718 RUNNING WORDS IN BUSINESS MEMORANDA

Word Group	Number of Occurrences	Percentage of Total Occurrences
First 5	1,785	16.65
First 10	2,593	24.19
First 15	3,182	29.69
First 20	3,619	33.77
First 25	3,951	36.86
First 30	4,194	39.13
First 35	4,376	40,83
First 40	4,534	42.30
First 45	4,671	43.58
First 50	4,795	44.74
First 100	5,693	53.12
First 200	6,721	62.71
First 500	8,281	77.26
First 1,000	9,517	88.79
First 1,500	10,073	93.98
First 2,000	10,573	98.65
TOTAL 2,145	10,718	100.00

The Most Frequently Used Words in the Textbook Materials

A sample of 83 items was randomly selected from the reading and writing practice materials in the textbook analyzed in this study. All of the words appearing in the body or message of the 83 items were keypunched on data cards and tabulated by computer to establish a data base of running words which were used in the textbook lessons. A progam was run which listed all of the words in the data base in rank order according to frequency of use. A total of 11,721 running words occurred in the textbook data base, representing 1,879 different words. The 655 most frequently used words in the textbook data base are listed in rank order with frequency count in Appendix E. The 655 most frequently used words in the textbook data base are listed in alphabetical order with frequency count in Appendix H. A total of 655 words was presented in Appendices E and H since the frequency counts on many words were the same; actually presenting only 500 words would have required the establishment of an arbitrary cutoff.

The 200 most frequently used words in the textbook data base are listed in rank order according to word frequency in Table 5. When the word usage was tallied and the frequency totaled the same on two or more words, the lowest rank was assigned to each word in the group. For example, the words I and we each had a frequency of 204; therefore, I and we were assigned the lower rank of 7. Because many words had the same frequency count, Table 5 contains 205 words.

TABLE 5

THE 200 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS

Rank	Word	Frequency	Rank	Word	Frequency
1.	the	639	40.	me	36
2.	to	416	40.	know	36
3.	you	387	43.	or	35
4.	of	325	43.	insurance	35
5.	a	264	43.	credit	35
6.	in	239	43.	very	35
7.	I	204	47.	has	34
7.	we	204	47.	Mr.	34
9.	for	188	47.	when	34
10.	that	183	50.	please	33
11.	and	175	51.	by	31
12.	your	168	52.	there	30
13.	will	167	53.	office	29
14.	have	140	53.	many	29
15.	is	115	53.	am	29
16.	are	112	53.	who	29
17.	our	100	57.	card	28
17.	be	100	58.	more	27
19.	it	88	58.	about	27
20.	at	83	60.	people	26
21.	if	80	60.	however	26
22.	company	76	60.	hope	26
22.	with	76	63.	good	25
24.	this	72	63.	been	25
25.	as	68	63.	year	25
26.	on	65	63.	soon	25
27.	new	60	63.	work	25
28.	would	54	63.	years	25
29.	can	52	69.	like	23
30.	from	51	69.	person	23
31.	not	50	69.	any	23
31.	us	50	69.	all	23
33.	one	46	69.	than	23
34.	my	45	74.	several	22
34.	do	45	75.	need	21
36.	business	44	75.	help	21
37.	an	42	75.	may	21
37.	was	42	75.	food	21
39.	time	38	75.	they	21
40.	just	36	80.	return	20

TABLE 5--Continued

Rank	Word	Frequency	Rank	Word	Frequency
80.	had	20	117.	happy	15
80.	check	20	117.	advertising	15
80.	their	20	117.	course	15
84.	let	19	117.	what	15
84.	he	19	117.	store	15
84.	now	19	126.	send	14
84.	make	19	126.	last	14
84.	position	19	126.	how	14
84.	city	19	126.	next	14
84.	college	19	126.	could	14
84.	these	19	126.	each	14
92.	only	18	126.	general	14
92.	able	18	126.	some	14
92.	give	18	134.	possible	13
92.	glad	18	134.	no	13
92.	thank	18	134.	his	13
92.	which	18	134.	most	13
98.	out	17	134.	account	13
98.	but	17	134.	ago	13
98.	area	17	134.	believe	13
98.	book	17	141.	pay	12
98.	come	17	141.	months	12
98.	want	17	141.	letter	12
98.	take	17	141.	restaurants	12
98.	sure	17	141.	over	12
98.	Smith	17	141.	employees	12
107.	public	16	141.	few	12
107.	problem	16	141.	days	12
107.	much	16	141.	before	12
107.	looking	16	141.	fill	12
107.	enclosed	16	141.	another	12
107.	bank	16	141.	staff	12
107.	first	16	141.	state	12
107.	three	16	154.	management	11
107.	service	16	154.	order	11
107.	should	16	154.	school	11
117.	sales	15	154.	January	11
117.	its	15	154.	find	11
117.	plan	15	154.	past	11
117.	information	15	154.	building	11

TABLE 5--Continued

Rank	Word	Frequency	Rank	Word	Frequency
154.	copy	11	180.	percent	9
154.	think	11	180.	probably	9
154.	wish	11	180.	pleasure	9
154.	street	11	180.	line	9
154.	were	11	180.	move	9
154.	today	11	180.	other	9
167.	mail	10	180.	restaurant	9
167.	organization	10			
167.	hear	10	180.	payment	9
167.	meeting	10	180.	look	9
			180.	hearing	9
167.	products	10	180.	home	9
167.	open	10	180.	get	9
167.	during	10	180.	addition	9
167.	books	10	180.	circular	9
167.	call	10	180.	future	9
167.	complete	10	180.	care	9
167.	such	10	180.	Cunningham	9
167.	tell	10			
167.	them	10	180.	companies	9
180.	paid	9	180.	use	9
			180.	two	9
180.	national	9	180.	usually	9
180.	miss	9	180.	write	9
180.	plans	9			

The most frequently used word in the textbook data base was the, which occurred 639 times and represented 5.45 percent of the total running words in the textbook data base. The five most frequently used words--the, to, you, of, a--had a combined frequency of 2,031, which represented 17.33 percent of the total running words occurring in the textbook data base. The second 5-word group--in, I, we, for, that--brought the combined frequency of the ten most frequently used words to 3,049, which represented 26.01 percent of the total running words occurring in the textbook data base.

A summary of the total number of word occurrences and the percentage of usage by word groups is shown in Table 6. The percentage of usage was obtained by dividing the cumulative word occurrences of the word groups by the

TABLE 6

FREQUENCY AND PERCENTAGE IN WORD OCCURRENCE GROUPS OF 11,721 RUNNING WORDS IN TEXTBOOK MATERIALS

Word Group	Number of Occurrences	Percentage of Total Occurrences
First 5	2,031	17.33
First 10	3,049	26.01
First 15	3,814	32.54
First 20	4,297	36.66
First 25	4,669	39.83
First 30	4,951	42.24
First 35	5,187	44.25
First 40	5,389	45.98
First 45	5,566	47.49
First 50	5,736	48.94
First 100	6,856	58.49
First 200	8,074	68.88
First 500	9,695	82.71
First 1,000	10,842	92.50
First 1,500	11,342	96.77
TOTAL 1,879	11,721	100.00

total of 11,721 running words which occurred in the textbook data base. The 25 most frequently used words occurred a total of 4,669 times, which represented 39.83 percent of all words used in the textbook data base. The 50 most frequently used words occurred a total of 5,736 times, which represented 48.94 percent of all words used in the textbook data base. The 100 most frequently used words represented 58.49 percent of all words used in the textbook data base, and the 200 most frequently used words listed in Table 5 represented 68.88 percent of all words used in the textbook data base. The 500 most frequently used words represented over three-fourths--82.71 percent--of all words used in the textbook data base. These percentages indicate that relatively small numbers of words constitute relatively large percentages of total words used in the textbook data base.

Comparison of the Most Frequently Used Words in Textbook Materials with Corresponding Words in Business Letters and Business Memoranda

Presented in Table 7 in rank order with frequency count is a list of the 200 most frequently used words from the textbook data base and the rank and frequency count of the same words from the business letter data base and the business memoranda data base.

A detailed analysis of the data in Table 7 will be used to respond to the questions in the next section of this chapter. (See Table 7.)

TABLE 7

THE RANK AND FREQUENCY OF THE 200 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS AND THE RANK AND FREQUENCY OF CORRESPONDING WORDS IN BUSINESS LETTERS AND BUSINESS MEMORANDA

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
the	1	639	1	576	1	654
to	2	416	2	352	2	359
you	3	387	5	222	15	109
of	4	325	3	318	3	311
a	5	264	7	195	6	196
in	6	239	6	212	5	211
I	7	204	11	139	21	77
we	7	204	10	163	12	123
for	9	188	9	173	7	173
that	10	183	13	118	11	132
and	11	175	4	277	4	250
your	12	168	8	178	17	95
will	13	167	23	77	9	143
have	14	140	17	95	20	81
is	15	115	15	101	10	141
are	16	112	19	82	16	96
our	17	100	12	119	18	83
be	17	100	13	118	8	155
it	19	88	26	54	28	51
at	20	83	24	74	24	56
if	21	80	27	53	30	40
company	22	76	51	23	100	14
with	22	76	18	86	21	77
this	24	72	19	82	13	115
as	25	68	21	80	19	82
on	26	65	16	100	14	110
new	27	60	184	7	50	23
would	28	54	25	65	47	25
can	29	52	38	30	42	28
from	30	51	32	40	26	54

TABLE 7--Continued

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
not	31	50	29	47	25	55
us	31	50	41	28	89	15
one	33	46	51	23	50	23
my	34	45	42	27	209	7
do	34	45	63	19	89	15
business	36	44	114	10	391	4
an	37	42	34	34	32	37
was	37	42	30	41	64	20
time	39	38	33	37	43	27
just	40	36	328	4	391	4
me	40	36	46	24	100	14
know	40	36	66	18	128	11
or	43	35	22	79	29	45
insurance	43	35	157	8	527	3
credit	43	35	637	2	209	7
very	43	35	36	32	251	6
has	47	34	51	23	35	33
Mr.	47	34	74	16	177	8
when	47	34	114	10	89	15
please	50	33	39	29	34	35
by	51	31	28	49	27	53
there	52	30	91	13	59	21
office	53	29	214	6	78	16
many	53	29	130	9	251	6
am	53	29	46	24	89	15
who	53	29	82	14	89	15
card	57	28	1030	1	391	4
more	58	27	43	26	73	17
about	58	27	78	15	109	13
people	60	26	214	6	89	15
however	60	26	184	7	251	6
hope	60	26	130	9	527	3
good	63	25	98	12	251	6
been	63	25	39	29	47	25
year	63	25	54	22	39	30
soon	63	25	268	5	391	4
work	63	25	60	20	64	20
years	63	25	114	10	73	17

TABLE 7--Continued

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
like	69	23	54	22	313	5
person	69	23	114	10	157	9
any	69	23	34	34	35	33
all	69	23	60	20	23	67
than	69	23	60	20	59	21
several	74	22	1030	1	527	3
need	75	21	98	12	177	8
help	75	21	130	9	177	8
may	75	21	46	24	67	19
food	75	21	637	2	Not listed*	
they	75	21	57	21	45	26
return	80	20	214	6	209	7
had	80	20	78	15	527	3
check	80	20	214	6	711	2
their	80	20	91	13	41	29
let	84	19	184	7	251	6
he	84	19	114	10	73	17
now	84	19	328	4	251	6
make	84	19	98	12	100	14
position	84	19	184	7	527	3
city	84	19	74	16	100	14
college	84	19	328	4	Not listed*	
these	84	19	63	19	55	22
only	92	18	448	3	72	18
able	92	18	268	5	391	4
give	92	18	214	6	157	9
glad	92	18	1030	1	Not listed*	
thank	92	18	63	19	251	6
which	92	18	30	41	59	21
out	98	17	448	3	67	19
but	98	17	44	25	64	20
area	98	17	637	2	128	11
book	98	17	Not listed*		711	2
come	98	17	637	2	527	3
want	98	17	184	7	209	7
take	98	17	268	5	251	6
sure	98	17	214	6	251	6

TABLE 7--Continued

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
Smith	98	17	Not listed*		Not listed*	
public	107	16	Not listed*		313	5
problem	107	16	637	2	313	5
much	107	16	114	10	251	6
looking	107	16	98	12	1057	1
enclosed	107	16	106	11	1057	1
bank	107	16	328	4	391	4
first	107	16	214	6	100	14
three	107	16	130	9	177	8
service	107	16	74	16	55	22
should	107	16	54	22	30	40
sales	117	15	157	8	209	7
its	117	15	130	9	251	6
plan	117	15	1030	1	55	22
information	117	15	44	25	45	26
happy	117	15	448	3	Not listed*	
advertising	117	15	Not listed*		1057	1
course	117	15	448	3	Not listed*	
what	117	15	448	3	128	11
store	117	15	1030	1	527	3
send	126	14	1030	1	527	3
last	126	14	82	14	313	5
how	126	14	268	5	527	3
next	126	14	268	5	157	9
could	126	14	130	9	146	10
each	126	14	106	11	39	30
general	126	14	268	5	313	5
some	126	14	68	17	78	16
possible	134	13	74	16	251	6
no	134	13	78	15	50	23
his	134	13	68	17	177	8
most	134	13	91	13	1057	1
account	134	13	637	2	711	2
ago	134	13	448	3	1057	1
believe	134	13	214	6	1057	1
pay	141	12	Not listed*		313	5
months	141	12	1030	1	251	6

TABLE 7--Continued

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
letter	141	12	37	31	109	13
restaurants	141	12	Not listed*		Not listed*	
over	141	12	98	12	209	7
employees	141	12	328	4	35	33
few	141	12	448	3	391	4
days	141	12	214	6	117	12
before	141	12	328	4	177	8
fill	141	12	1030	1	391	4
another	141	12	448	3	313	5
staff	141	12	328	4	209	7
state	141	12	268	5	391	4
management	154	11	214	6	117	12
order	154	11	157	8	128	11
school	154	11	1030	1	Not listed*	
January	154	11	Not listed*		Not listed*	
past	154	11	448	3	313	5
find	154	11	157	8	251	6
building	154	11	184	7	100	14
copy	154	11	68	17	67	19
think	154	11	268	5	391	4
wish	154	11	328	4	527	3
street	154	11	Not listed*		1057	1
were	154	11	57	21	128	11
today	154	11	637	2	391	4
mail	167	10	Not listed*		711	2
organization	167	10	448	3	Not listed*	
hear	167	10	637	2	527	3
meeting	167	10	184	7	38	32
products	167	10	184	7	Not listed*	
open	167	10	1030	1	117	12
during	167	10	98	12	78	16
books	167	10	Not listed*		Not listed*	
call	167	10	91	13	209	7
complete	167	10	268	5	313	5
such	167	10	78	15	313	5
tell	167	10	637	2	Not listed*	
them	167	10	130	9	146	10
paid	180	9	157	8	391	4

TABLE 7--Continued

Word	Textbook		Business Letters		Business Memoranda	
	Rank	Frequency	Rank	Frequency	Rank	Frequency
national	180	9	1030	1	Not listed*	
miss	180	9	1030	1	Not listed*	
plans	180	9	184	7	527	3
percent	180	9	Not listed*		527	3
probably	180	9	637	2	391	4
pleasure	180	9	448	3	1057	1
line	180	9	157	8	78	16
move	180	9	Not listed*		527	3
other	180	9	46	24	59	21
restaurant	180	9	Not listed*		Not listed*	
payment	180	9	448	3	711	2
look	180	9	106	11	251	6
hearing	180	9	637	2	1057	1
home	180	9	Not listed*		Not listed*	
get	180	9	157	8	177	8
addition	180	9	448	3	711	2
circular	180	9	Not listed*		Not listed*	
future	180	9	91	13	391	4
care	180	9	637	2	313	5
Cunningham	180	9	Not listed*		Not listed*	
companies	180	9	328	4	711	2
use	180	9	214	6	117	12
two	180	9	82	14	78	16
usually	180	9	448	3	Not listed*	
write	180	9	448	3	527	3

*Not listed in Data Base

Answers to the Questions Stated In the Problem Section

In this section the writer will respond to the specific questions and make reference to detailed data found in the tables which have been discussed in the previous sections. In each instance where necessary for clarification, the writer will include those words and/or frequency counts which communicate the basic findings relating to that question.

Question 1. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business letters?

When the data in Table 7 were analyzed, the researcher found that 84 words which are within the first 200 most frequently used words in the textbook data base are beyond the first 200 most frequently used words in the data base of the business letters. The 84 words are:

just	sure	restaurants	books
credit	Smith	employees	complete
office	public	few	tell
card	problem	days	national
people	bank	before	miss
soon	first	fill	percent
several	plan	another	probably
food	happy	staff	pleasure
return	advertising	state	move
check	course	management	restaurant
now	what	school	payment
college	store	January	hearing
only	send	past	home
able	how	think	addition
give	next	wish	circular
glad	general	street	care
out	account	today	Cunningham
area	ago	mail	companies
book	believe	organization	use
come	pay	hear	usually
take	months	open	write

In the analysis of the data in Tabie 7, the researcher found that 16 words listed in the 200 most frequently used words in the textbook data base are not included in the data base of the business letters. The 16 words are:

book	pay	mail	restaurant
Smith	restaurants	books	home
public	January	percent	circular
advertising	street	move	Cunningham

Three of these words, however, are proper nouns, which were not tabulated in the business letters in order to preserve confidentiality.

The answer to Question 1 is no based on the analysis which shows 84 words, or 42 percent, of the 200 most frequently used words in the textbook data base to be different from the 200 most frequently used words in the business letter data base.

Question 2. Are any of the 200 most frequently used words in business letters not included in the 200 most frequently used words in textbook materials?

When the 200 most frequently used words in the business letter data base which are listed in Table 1 were compared with the 200 most frequently used words in the textbook data base which are listed in Tables 5 and 7, the researcher found that 92 words which are within the first 200 most frequently used words in the business letter data base are beyond the first 200 most frequently used words in the textbook data base. The 92 words are:

per	concerning	done	month
forward	attached	annual	application
appreciate	program	based	billing
interest	Oklahoma	recent	assistance
also	feel	parts	being
visit	date	well	conversation
lines	because	inspection	number
where	job	industrial	might
stock	shall	again	programs
through	training	agreement	equipment
product	tax	contact	both
present	received	reservation	after
made	request	up	cover
following	upon	so	electrical
pleased	hospital	since	those
further	keep	thanks	questions
five	file	shares	required
having	freight	provisions	see
matter	price	plate	within

available	name	opportunity	receive
amount	did	left	section
certificate	employment	installation	while
day	below	outstanding	resume

The researcher found that 19 words listed in the 200 most frequently used words in the business letter data base are not listed in the textbook data base. The 19 words are:

shall	training	thanks	billing
inspection	upon	shares	electrical
industrial	file	provisions	required
equipment	freight	installation	resume
certificate	reservation	outstanding	

The answer to Question 2 is yes based on the analysis which shows that 92 words, or 46 percent, of the 200 most frequently used words in the business letter data base are not included in the 200 most frequently used words in the textbook data base.

Question 3. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business memoranda?

When the data in Table 7 were analyzed, the researcher found that 99 words which are within the first 200 most frequently used words in the textbook data base are beyond the first 200 most frequently used words in the data base of the business memoranda. The 99 words are:

my	book	ago	complete
business	come	believe	such
just	want	pay	tell
insurance	take	months	paid
credit	sure	restaurants	national
very	Smith	over	miss
many	public	few	plans
card	problem	fill	percent
however	much	another	probably
hope	looking	staff	pleasure
good	enclosed	state	move
soon	bank	school	restaurant
like	sales	January	payment
several	its	past	look
food	happy	find	hearing

return	advertising	think	home
had	course	wish	addition
check	store	street	circular
let	send	today	future
now	last	mail	care
position	how	organization	Cunningham
college	general	hear	companies
able	possible	products	usually
glad	most	books	write
thank	account	call	

In the analysis of the data in Table 7, the researcher found that 20 words listed in the 200 most frequently used words in the textbook data base are not included in the data base of the business memoranda. The 20 words are:

food	course	products	restaurant
college	restaurants	books	home
glad	school	tell	circular
Smith	January	national	Cunningham
happy	organization	miss	usually

Three of these words, however, are proper nouns, which were not tabulated in the business memoranda in order to preserve confidentiality.

The answer to Question 3 is no based on the analysis which shows 99 words, or 49.5 percent, of the 200 most frequently used words in the textbook data base to be different from the 200 most frequently used words in the business memoranda data base.

Question 4. Are any of the 200 most frequently used words in business memoranda not included in the 200 most frequently used words in textbook materials?

When the 200 most frequently used words in the business memoranda data base which are listed in Table 3 were compared with the 200 most frequently used words in the textbook data base which are listed in Tables 5 and 7, the researcher found that 102 words which are within the first 200 most frequently used words in the business memoranda data base are beyond the first 200 most frequently used words in the textbook data base. The 102 words are:

department	inventory	involved	less
personnel	maintenance	control	hour
following	held	attend	hours
attached	received	repair	machine
report	test	well	given
job	present	request	Friday
so	operations	same	Oklahoma
data	manager	within	orders
savings	customer	memorandum	effective
form	equipment	p.m.	end
departments	week	go	approximately
members	testing	made	because
must	plant	processing	buy
name	planning	period	feel
being	program	provide	bonds
those	monthly	duties	earnings
through	parking	above	additional
also	operating	campaign	support
team	charges	annual	requirements
review	bond	class	room
see	cost	car	travel
employee	division	capacity	questions
date	copies	below	responsibility
total	used	states	tour
up	receive	regarding	per
number	month		

The researcher found that 19 words listed in the 200 most frequently used words in the business memoranda data base are not listed in the textbook data base. The 19 words are:

savings	test	control	machine
team	equipment	duties	end
inventory	testing	above	approximately
maintenance	parking	regarding	earnings
held	charges	hour	

The answer to Question 4 is yes based on the analysis which shows that 102 words, or 51 percent, of the 200 most frequently used words in the business memoranda data base are not included in the 200 most frequently used words in the textbook data base.

Question 5. Are the 50 most frequently used words in business letters the same as the 50 most frequently used words in textbook materials?

When the 50 most frequently used words in the business letter data base which are listed in Table 1 were compared with the 50 most frequently used

words in the textbook data base which are listed in Tables 5 and 7, the researcher found that 12 words which are within the first 50 most frequently used words in the business letter data base are not listed in the first 50 most frequently used words in the textbook data base. The 12 words are:

any	but	may	am
information	other	by	letter
per	been	more	which

The researcher found that 12 words which are within the first 50 most frequently used words in the textbook data base are not listed in the first 50 most frequently used words in the business letter data base. The 12 words are:

business	has	Mr.	company
insurance	new	credit	just
one	do	know	when

The answer to Question 5 is no based on the analysis which shows that 12 words, or 24 percent, of the 50 most frequently used words in the business letter data base are not listed in the 50 most frequently used words in the textbook data base. The analysis also shows that 12 words, or 24 percent, of the 50 most frequently used words in the textbook data base are not listed in the 50 most frequently used words in the business letter data base.

Question 6. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in textbook materials?

When the 50 most frequently used words in the business memoranda data base which are listed in Table 3 were compared with the 50 most frequently used words in the textbook data base which are listed in Tables 5 and 7, the researcher found that 19 words which are within the first 50 most frequently used words in the business memoranda data base are not listed in the first 50 most frequently used words in the textbook data base. The 19 words are:

all	department	meeting	should
any	employees	no	their
attached	each	on	they
by	following	personnel	year
been	information	report	

The researcher found that 14 words which are within the first 50 most frequently used words in the textbook data base are not listed in the first 50 most frequently used words in the business memoranda data base. The 14 words are:

business	insurance	me	was
company	just	Mr.	when
credit	know	us	do
my	very		

The answer to Question 6 is no based on the analysis which shows that 19 words, or 38 percent, of the 50 most frequently used words in the business memoranda data base are not listed in the 50 most frequently used words in the textbook data base. The analysis also shows that 14 words, or 28 percent, of the 50 most frequently used words in the textbook data base are not listed in the 50 most frequently used words in the business memoranda data base.

Question 7. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in business letters?

When the 50 most frequently used words in the business memoranda data base which are listed in Table 3 were compared with the 50 most frequently used words in the business letter data base which are listed in Table 1, the researcher found that 17 words which are within the first 50 most frequently used words in the business memoranda data base are not listed in the first 50 most frequently used words in the business letter data base. The 17 words are:

all	has	report	attached
meeting	should	department	new
their	employees	no	they
each	one	year	following
personnel			

The researcher found that 13 words which are within the first 50 most frequently used words in the business letter data base are not listed in the first 50 most frequently used words in the business memoranda data base. The 13 words are:

am	may	very	but
my	which	letter	other
was	more	per	me
us			

The answer to Question 7 is no based on the analysis which shows that 17 words, or 34 percent, of the 50 most frequently used words in the business memoranda data base are not listed in the 50 most frequently used words in the business letter data base. The analysis also shows that 13 words, or 26 percent, of the 50 most frequently used words in the business letter data base are not listed in the 50 most frequently used words in the business memoranda data base.

Question 8. Are any of the 200 most frequently used words in textbook materials used more frequently in business letters than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

When the data in Table 7 were analyzed, the researcher found that some words were used more frequently in the business letter data base than in the textbook data base. A difference in frequency of ten or more was used as the standard for the purpose of answering Question 8.

The researcher compared the frequencies of the 200 most frequently used words in the textbook data base with the frequencies of those same words in the business letter data base. The researcher found 17 words which had a frequency count in the business letter data base that was 10 or more higher than their frequency count in the textbook data base. The 17 words are:

and	as	which	your
on	information	our	would
letter	be	or	were
with	by	other	this
any			

The answer to Question 8 is no based on the analysis which shows that 17 words, or 8.5 percent, of the 200 most frequently used words in the textbook data base had a frequency count in the business letter data base that was 10 or more higher than their frequency count in the textbook data base.

Question 9. Are any of the 200 most frequently used words in textbook materials used more frequently in business memoranda than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

When the data in Table 7 were analyzed, the researcher found that some words were used more frequently in the business memoranda data base than in the textbook data base. A difference in frequency of ten or more was used as the standard for the purpose of answering Question 9.

The researcher compared the frequencies of the 200 most frequently used words in the textbook data base with the frequencies of those same words in the business memoranda data base. The researcher found 18 words which had a frequency count in the business memoranda data base that was 10 or more higher than their frequency count in the textbook data base. The 18 words are:

the	on	information	and
or	each	is	by
no	be	any	employees
this	all	meeting	as
should	other		

The answer to Question 9 is no based on the analysis which shows that 18 words, or 9 percent, of the 200 most frequently used words in the textbook data base had a frequency count in the business memoranda data base that was 10 or more higher than their frequency count in the textbook data base.

Summary

The purpose of this study was to compare word frequencies of textbook materials used in second-semester college instruction of Gregg Shorthand, Series 90, with word frequencies of business letters and business memoranda.

This chapter presents an analysis of the most frequently used words in the business letters and business memoranda analyzed in this study. An analysis of the most frequently used words in the textbook materials analyzed in this study is also presented. A comparison of the 200 most frequently used words in the textbook materials with corresponding words in the business letters and business memoranda is used to respond to the questions stated in the problem section.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Introduction

The purpose of this study was to compare word frequencies of textbook materials used in second-semester college instruction of Gregg Shorthand Series 90, with word frequencies of business letters and business memoranda. This chapter presents a summary of this study and is organized as follows: Restatement of the Problem, Results, Discussion, and Recommendations.

Restatement of the Problem

The problem of this study was an analysis and comparison of word frequencies of business communications from firms in Oklahoma with word frequencies of the second-semester college textbook for Gregg Shorthand, Series 90. The word frequencies of materials from these sources were compared in order to determine whether a difference existed between the business communications and the instructional materials.

Data for this study were obtained from business letters and business memoranda from firms in Oklahoma and from the reading and writing practice materials of the textbook used in this study, Gregg Shorthand for Colleges, Volume II, Series 90.[1] One copy of a letter and one copy of an interoffice memorandum were requested from each of 102 businesses with 500 or more

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[1]Leslie, Zoubek, and Lemaster, Gregg Shorthand for Colleges, Volume II Series 90.

employees located in the State of Oklahoma. Usable material was received from 83 firms, resulting in a response rate of 81 percent. A total of 83 usable business letters and 80 usable business memoranda was received. A table of random numbers was used to select 83 items from the reading and writing practice materials of the textbook lessons, corresponding with the number of usable business letters received.

All words appearing in the body or message of the business letters, the business memoranda, and the items from the textbook were keypunched on computer cards and tabulated by computer to establish a data base of running words from each of the three types of data. A computer program was written to provide rank order and alphabetical lists of the words in each data base. The alphabetical lists contained the words from each data base in alphabetical order with frequency count. The rank order lists contained the words from each data base in rank order with frequency count according to frequency of use. Separate computer printouts of the rank order and alphabetical lists were obtained for each data base.

Results

The computer printout which listed all words occurring in the business letter data base contained a total of 10,292 running words, representing 2,144 different words. The ten most frequently used words in the business letters were the, to, of, and, you, in, a, your, for, and we. The ten most frequently used words represented 25.9 percent of the total running words occurring in the business letters. The 100 most frequently used words represented 55.8 percent and the 500 most frequently used words represented 77.57 percent of the total running words occurring in the business letters.

A total of 10,718 running words occurred in the business memoranda, representing 2,145 different words. The ten most frequently used words in the

business memoranda were the, to, of, and, in, a, for, be, will, and is. The ten most frequently used words represented 24.19 percent of the total running words occurring in the business memoranda. The 100 most frequently used words represented 53.12 percent and the 500 most frequently used words represented 77.26 percent of the total running words occurring in the business memoranda.

A total of 11,721 running words occurred in the textbook data base, representing 1,879 different words. The ten most frequently used words in the textbook data base were the, to, you, of, a, in, I, we, for, and that. The ten most frequently used words represented 26.01 percent of the total running words occurring in the textbook data base. The 100 most frequently used words represented 58.49 percent and the 500 most frequently used words represented 82.71 percent of the total running words occurring in the textbook data base.

The following questions were answered based on the data collected and analyzed in this study:

Question 1. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business letters?

The answer to this question is no based on the analysis which shows 84 words, or 42 percent, of the 200 most frequently used words in the textbook data base to be different from the 200 most frequently used words in the business letter data base.

Question 2. Are any of the 200 most frequently used words in business letters not included in the 200 most frequently used words in textbook materials?

The answer to this question is yes based on the analysis which shows that 92 words, or 46 percent, of the 200 most frequently used words in the business letter data base are not included in the 200 most frequently used words in the textbook data base.

Question 3. Are the 200 most frequently used words in textbook materials the same as the 200 most frequently used words in business memoranda?

The answer to this question is no based on the analysis which shows 99 words, or 49.5 percent, of the 200 most frequently used words in the textbook data base to be different from the 200 most frequently used words in the business memoranda data base.

Question 4. Are any of the 200 most frequently used words in business memoranda not included in the 200 most frequently used words in textbook materials?

The answer to this question is yes based on the analysis which shows that 102 words, or 51 percent, of the 200 most frequently used words in the business memoranda data base are not included in the 200 most frequently used words in the textbook data base.

Question 5. Are the 50 most frequently used words in business letters the same as the 50 most frequently used words in textbook materials?

The answer to this question is no based on the analysis which shows that 12 words, or 24 percent, of the 50 most frequently used words in the business letter data base are not listed in the 50 most frequently used words in the textbook data base. The analysis also shows that 12 words, or 24 percent, of the 50 most frequently used words in the textbook data base are not listed in the 50 most frequently used words in the business letter data base.

Question 6. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in textbook materials?

The answer to this question is no based on the analysis which shows that 19 words, or 38 percent, of the 50 most frequently used words in the business

memoranda data base are not listed in the 50 most frequently used words in the textbook data base. The analysis also shows that 14 words, or 28 percent, of the 50 most frequently used words in the textbook data base are not listed in the 50 most frequently used words in the business memoranda data base.

Question 7. Are the 50 most frequently used words in business memoranda the same as the 50 most frequently used words in business letters?

The answer to this question is no based on the analysis which shows that 17 words, or 34 percent, of the 50 most frequently used words in the business memoranda data base are not listed in the 50 most frequently used words in the business letter data base. The analysis also shows that 13 words, or 26 percent, of the 50 most frequently used words in the business letter data base are not listed in the 50 most frequently used words in the business memoranda data base.

Question 8. Are any of the 200 most frequently used words in the textbook materials used more frequently in business letters than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

The answer to this question is no based on the analysis which shows that 17 words, or 8.5 percent, of the 200 most frequently used words in the textbook data base had a frequency count in the business letter data base that was 10 or more higher than their frequency count in the textbook data base.

Question 9. Are any of the 200 most frequently used words in the textbook materials used more frequently in business memoranda than they are used in textbook materials, thereby implying a greater emphasis on identified words when teaching?

The answer to this question is no based on the analysis which shows that 18 words, or 9 percent, of the 200 most frequently used words in the textbook

data base had a frequency count in the business memoranda data base that was 10 or more higher than their frequency count in the textbook data base.

Discussion

The analysis and comparison of the data collected for this study indicate that a large percentage of words which have a high frequency of use in the textbook data base do not have a high frequency of use in the business letter data base and the business memoranda data base. This analysis indicates that the words emphasized in the textbook materials do not reflect the high frequency words used in letters and memoranda in business and industry with 500 or more employees in the State of Oklahoma.

The comparison of the word frequencies of the business letters and the business memoranda indicates that a large percentage of the words which have a high frequency of use in business letters do not have a high frequency of use in business memoranda. The analysis also indicates that a large percentage of the words which have a high frequency of use in business memoranda do not have a high frequency of use in business letters. The analysis indicates that different words need to be emphasized when teaching the vocabulary of business letters and business memoranda.

Recommendations

In view of the findings of this study, the researcher recommends that (1) a replicate of this study should be made using business letters and business memoranda in a different geographical area; and (2) teachers should supplement textbook materials using outside resource words obtained from business and industry when teaching vocabulary to second-semester college shorthand students.

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APPENDIX A

LETTERS SENT TO BUSINESSES

PLAIN STATIONERY

May I have your help in a research study that will help improve the preparation and training of secretarial students?

The purpose of this study is to determine how similar instructional materials are to letters and memos written by individuals in Oklahoma businesses. The information gained from this study will aid instructors in determining how to modify instructional materials used in teaching shorthand.

In order to obtain the necessary data for this study, I am requesting a copy of one letter and one interoffice memo from business firms in Oklahoma with 500 or more employees. Identifying names and addresses may be deleted if desired. All letters and memos will be kept in the strictest confidence.

Please participate in this study by sending a copy of one letter and one interoffice memo written by someone in your firm. Your help in providing realistic materials for comparison with current instructional materials will be appreciated.

Your early response will assist in my starting the analysis of the materials.

Sincerely,

Nancy E. Brooks

PLAIN STATIONERY

My research study that will aid in the preparation and training of secretarial students still needs your help.

The purpose of the study is to determine how similar instructional materials are to letters and memos written by individuals in Oklahoma businesses. The information gained from this study will aid instructors in determining how to modify instructional materials used in teaching shorthand.

Please participate in this study by sending a copy of one letter and one interoffice memo written by someone in your firm. Identifying names and addresses may be deleted if desired. The study will not analyze content or grammar, and all letters and memos will be kept strictly confidential.

Because I have requested materials from a limited number of representative business firms, your help is needed in order for the study to be successful. Your assistance in providing realistic materials for comparison with current instructional materials will be appreciated.

Your early response will assist in my starting the analysis of the materials.

Sincerely,

Nancy E. Brooks

PLAIN STATIONERY

Thank you for the letter and the interoffice memo you sent for use in my research study of instructional materials used in teaching shorthand.

The letter and the interoffice memo will provide valuable data for my research study, and I appreciate very much your sending them.

Sincerely,

Nancy E. Brooks

APPENDIX B

RANKS AND CORRESPONDING FREQUENCIES OF WORDS IN GREGG TEXTBOOK, BUSINESS LETTERS, AND BUSINESS MEMORANDA

RANKS AND CORRESPONDING FREQUENCIES OF WORDS IN GREGG TEXTBOOK, BUSINESS LETTERS, AND BUSINESS MEMORANDA

Textbook		Business Letters		Business Memoranda	
Rank	Frequency	Rank	Frequency	Rank	Frequency
1	639	1	576	1	654
2	416	2	352	2	359
3	387	3	318	3	311
4	325	4	277	4	250
5	264	5	222	5	211
6	239	6	212	6	196
7	204	7	195	7	173
9	188	8	178	8	155
10	183	9	173	9	143
11	175	10	163	10	141
12	168	11	139	11	132
13	167	12	119	12	123
14	140	13	118	13	115
15	115	15	101	14	110
16	112	16	100	15	109
17	100	17	95	16	96
19	88	18	86	17	95
20	83	19	82	18	83
21	80	21	80	19	82
22	76	22	79	20	81
24	72	23	77	21	77
25	68	24	74	23	67
26	65	25	65	24	56
27	60	26	54	25	55
28	54	27	53	26	54
29	52	28	49	27	53
30	51	29	47	28	51
31	50	30	41	29	45
33	46	32	40	30	40
34	45	33	37	32	37
36	44	34	34	34	35
37	42	36	32	35	33
39	38	37	31	38	32
40	36	38	30	39	30
43	35	39	29	41	29
47	34	41	28	42	28
50	33	42	27	43	27
51	31	43	26	45	26
52	30	44	25	47	25
53	29	46	24	50	23
57	28	51	23	55	22
58	27	54	22	59	21

Textbook		Business Letters		Business Memoranda	
Rank	Frequency	Rank	Frequency	Rank	Frequency
60	26	57	21	64	20
63	25	60	20	67	19
69	23	63	19	72	18
74	22	66	18	73	17
75	21	68	17	78	16
80	20	74	16	89	15
84	19	78	15	100	14
92	18	82	14	109	13
98	17	91	13	117	12
107	16	98	12	128	11
117	15	106	11	146	10
126	14	114	10	157	9
134	13	130	9	177	8
141	12	157	8	209	7
154	11	184	7	251	6
167	10	214	6	313	5
180	9	268	5	391	4
206	8	328	4	527	3
243	7	448	3	711	2
273	6	637	2	1057	1
324	5	1030	1		
397	4				
484	3				
656	2				
993	1				

APPENDIX C

THE 636 MOST FREQUENTLY USED WORDS IN BUSINESS LETTERS IN RANK ORDER

THE 636 MOST FREQUENTLY USED WORDS IN BUSINESS LETTERS IN RANK ORDER

Rank	Word	Frequency	Rank	Word	Frequency
	1-100				
1.	the	576	41.	us	28
2.	to	352	42.	my	27
3.	of	318	43.	more	26
4.	and	277	44.	information	25
5.	you	222	44.	but	25
6.	in	212	46.	me	24
7.	a	195	46.	other	24
8.	your	178	46.	per	24
9.	for	173	46.	may	24
10.	we	163	46.	am	24
11.	I	139	51.	one	23
12.	our	119	51.	has	23
13.	be	118	51.	company	23
13.	that	118	54.	like	22
15.	is	101	54.	should	22
16.	on	100	54.	year	22
17.	have	95	57.	forward	21
18.	with	86	57.	were	21
19.	are	82	57.	they	21
19.	this	82	60.	all	20
21.	as	80	60.	than	20
22.	or	79	60.	work	20
23.	will	77	63.	do	19
24.	at	74	63.	thank	19
25.	would	65	63.	these	19
26.	it	54	66.	know	18
27.	if	53	66.	appreciate	18
28.	by	49	68.	his	17
29.	not	47	68.	interest	17
30.	which	41	68.	also	17
30.	was	41	68.	copy	17
32.	from	40	68.	visit	17
33.	time	37	68.	some	17
34.	any	34	74.	possible	16
34.	an	34	74.	Mr.	16
36.	very	32	74.	city	16
37.	letter	31	74.	service	16
38.	can	30	78.	had	15
39.	please	29	78.	no	15
39.	been	29	78.	about	15

Rank	Word	Frequency	Rank	Word	Frequency
78.	such	15	114.	both	10
82.	lines	14	114.	after	10
82.	program	14	114.	cover	10
82.	Oklahoma	14	114.	business	10
82.	last	14	114.	when	10
82.	feel	14	114.	where	10
82.	date	14	114.	stock	10
82.	because	14	114.	years	10
82.	two	14	114.	through	10
82.	who	14	130.	product	9
91.	future	13	130.	many	9
91.	most	13	130.	help	9
91.	job	13	130.	present	9
91.	call	13	130.	made	9
91.	there	13	130.	following	9
91.	their	13	130.	its	9
91.	shall	13	130.	pleased	9
98.	need	12	130.	further	9
98.	make	12	130.	hope	9
98.	over	12	130.	five	9
	101-200		130.	having	9
			130.	matter	9
98.	good	12	130.	available	9
98.	parts	12	130.	amount	9
98.	looking	12	130.	certificate	9
98.	during	12	130.	day	9
98.	well	12	130.	concerning	9
106.	look	11	130.	could	9
106.	inspection	11	130.	attached	9
106.	industrial	11	130.	training	9
106.	again	11			
106.	agreement	11	130.	them	9
			130.	tax	9
106.	contact	11	130.	received	9
106.	enclosed	11	130.	request	9
106.	each	11	130.	upon	9
114.	number	10	130.	three	9
114.	he	10	157.	order	8
114.	might	10	157.	paid	8
114.	person	10	157.	insurance	8
114.	much	10	157.	line	8
114.	programs	10			
114.	equipment	10			

Rank	Word	Frequency	Rank	Word	Frequency
157.	hospital	8		201-300	
157.	find	8			
157.	keep	8	184.	being	7
157.	file	8	184.	conversation	7
157.	freight	8	184.	electrical	7
157.	get	8	184.	those	7
157.	price	8	184.	questions	7
157.	name	8	184.	required	7
157.	did	8	184.	see	7
157.	employment	8	184.	within	7
			184.	receive	7
157.	below	8	184.	want	7
157.	done	8			
157.	annual	8	184.	section	7
157.	based	8	184.	while	7
157.	recent	8	184.	resume	7
157.	reservation	8	214.	records	6
157.	up	8	214.	typed	6
157.	so	8	214.	small	6
157.	since	8	214.	used	6
157.	thanks	8	214.	contract	6
			214.	benefits	6
157.	sales	8	214.	committee	6
157.	shares	8			
157.	provisions	8	214.	close	6
184.	plate	7	214.	facilities	6
184.	position	7	214.	margin	6
184.	new	7	214.	president	6
184.	products	7	214.	involved	6
184.	opportunity	7	214.	given	6
184.	left	7	214.	telephone	6
184.	installation	7	214.	subject	6
			214.	use	6
184.	meeting	7	214.	same	6
184.	outstanding	7			
184.	let	7	214.	additional	6
184.	month	7	214.	days	6
184.	plans	7	214.	check	6
184.	however	7	214.	best	6
184.	application	7	214.	appreciation	6
184.	billing	7	214.	office	6
184.	building	7	214.	interested	6
184.	assistance	7	214.	personal	6
			214.	give	6
			214.	quality	6

Rank	Word	Frequency	Rank	Word	Frequency
214.	sign	6	268.	great	5
214.	sure	6	268.	here	5
214.	reason	6	268.	steel	5
214.	salary	6	268.	schedule	5
214.	department	6	268.	seeing	5
214.	address	6	268.	services	5
214.	believe	6	268.	remain	5
214.	dated	6	268.	repeal	5
214.	first	6	268.	enclosing	5
214.	offer	6	268.	effective	5
214.	people	6	268.	advise	5
214.	include	6	268.	better	5
214.	necessary	6	268.	enjoyed	5
214.	special	6	268.	into	5
214.	return	6	268.	member	5
214.	Tulsa	6	268.	next	5
214.	review	6	268.	how	5
214.	above	6	268.	working	5
214.	directly	6	268.	soon	5
214.	consider	6	268.	successful	5
214.	does	6		301-400	
214.	congratulations	6			
214.	management	6	268.	therefore	5
214.	part	6	268.	states	5
214.	government	6	268.	under	5
214.	long	6	268.	state	5
214.	form	6	268.	balance	5
268.	reviewed	5	268.	association	5
268.	take	5	268.	charge	5
268.	shortages	5	268.	certainly	5
			268.	express	5
268.	term	5	268.	medical	5
268.	requested	5			
268.	success	5	268.	memo	5
268.	complete	5	268.	general	5
268.	engineer	5	268.	understand	5
268.	commission	5	268.	type	5
268.	able	5	268.	tape	5
268.	corporation	5	268.	right	5
268.	commissioner	5	268.	think	5
268.	permit	5	268.	tour	5
			268.	continue	5
			268.	between	5

Rank	Word	Frequency	Rank	Word	Frequency
268.	family	5	328.	way	4
268.	background	5	328.	said	4
268.	back	5	328.	quite	4
268.	electricians	5	328.	shipped	4
268.	load	5	328.	shipments	4
268.	firm	5	328.	requesting	4
268.	monthly	5	328.	thereof	4
328.	toward	4	328.	code	4
328.	seminar	4	328.	court	4
328.	rate	4	328.	copies	4
328.	wish	4	328.	companies	4
328.	qualified	4	328.	attention	4
328.	united	4	328.	complimentary	4
328.	retirement	4	328.	color	4
328.	staff	4	328.	accordance	4
328.	sending	4	328.	don't	4
328.	rental	4	328.	although	4
328.	action	4	328.	followed	4
328.	ever	4	328.	invoice	4
328.	become	4	328.	follows	4
328.	beginning	4	328.	Medicare	4
328.	architect	4	328.	impressed	4
328.	employing	4	328.	helpful	4
328.	experience	4	328.	just	4
328.	charges	4	328.	issue	4
328.	confirm	4	328.	gold	4
328.	excellent	4	328.	invitation	4
328.	included	4	328.	trip	4
328.	potential	4	328.	using	4
328.	problems	4	328.	weld	4
328.	material	4	328.	six	4
328.	jobs	4	328.	receiving	4
328.	him	4	328.	wife	4
328.	policy	4	328.	structure	4
328.	making	4	328.	supervision	4
328.	plant	4	328.	similar	4
328.	numbers	4	328.	reach	4
328.	rather	4	328.	report	4
328.	withholding	4	328.	existing	4
328.	white	4	328.	customer	4

Rank	Word	Frequency	Rank	Word	Frequency
	401-500		328.	honor	4
			328.	proud	4
328.	examination	4	328.	perhaps	4
328.	continued	4	328.	indicated	4
328.	bank	4	328.	opportunities	4
328.	factory	4	328.	pin	4
328.	college	4	328.	near	4
328.	effect	4	448.	unit	3
328.	center	4	448.	system	3
328.	employees	4	448.	tours	3
328.	operations	4			
328.	presented	4	448.	Tuesday	3
			448.	source	3
328.	page	4	448.	tack	3
328.	group	4	448.	separate	3
328.	maintenance	4	448.	ten	3
328.	local	4	448.	simply	3
328.	professional	4	448.	remove	3
328.	mentioned	4	448.	survey	3
328.	provided	4	448.	trade	3
328.	twenty	4	448.	volume	3
328.	supervisor	4			
328.	purchase	4	448.	regards	3
			448.	word	3
328.	statement	4	448.	advancement	3
328.	regularly	4	448.	few	3
328.	written	4	448.	coverage	3
328.	require	4	448.	agreements	3
328.	reference	4	448.	brochure	3
328.	until	4	448.	drive	3
328.	show	4	448.	addition	3
328.	activities	4	448.	agree	3
328.	case	4			
328.	before	4	448.	along	3
			448.	acquainted	3
328.	basis	4	448.	completed	3
328.	board	4	448.	division	3
328.	extend	4	448.	education	3
328.	evening	4	448.	arrived	3
328.	desire	4	448.	items	3
328.	computer	4	448.	full	3
328.	cost	4	448.	offered	3
328.	design	4	448.	issued	3
328.	now	4			
328.	forwarded	4			

Rank	Word	Frequency	Rank	Word	Frequency
448.	materials	3	448.	allow	3
448.	past	3	448.	collect	3
448.	organization	3	448.	assure	3
448.	project	3	448.	discuss	3
448.	planning	3	448.	participate	3
448.	plaque	3	448.	pounds	3
448.	productivity	3	448.	million	3
448.	level	3	448.	little	3
448.	plus	3	448.	location	3
448.	files	3	448.	join	3
448.	off	3	448.	investors	3
448.	particular	3	448.	must	3
448.	horsepower	3	448.	hesitate	3
448.	life	3	448.	item	3
448.	later	3	448.	inclusive	3
448.	unfortunately	3	448.	pleasure	3
448.	regulations	3	448.	lights	3
448.	throughout	3	448.	letters	3
448.	summary	3	448.	operation	3
448.	response	3	448.	out	3
	501-600		448.	inquiry	3
			448.	gave	3
448.	short	3	448.	mounted	3
448.	qualifications	3	448.	urge	3
448.	regard	3	448.	question	3
448.	weekend	3	448.	Wednesday	3
448.	tried	3	448.	run	3
448.	ways	3	448.	stores	3
448.	wishes	3	448.	something	3
448.	support	3	448.	usually	3
448.	what	3			
448.	quoted	3	448.	returning	3
			448.	recently	3
448.	class	3	448.	signed	3
448.	aware	3	448.	various	3
448.	direct	3	448.	she	e
448.	energy	3	448.	share	3
448.	commitments	3	448.	standard	3
448.	arrangements	3	448.	recommend	3
448.	conference	3	448.	car	3
448.	dress	3	448.	established	3
448.	award	3			
448.	executive	3			

Rank	Word	Frequency	Rank	Word	Frequency
448.	catalog	3		601-636	
448.	adviser	3			
448.	course	3	448.	total	3
448.	assist	3	448.	receipt	3
448.	convenience	3	448.	too	3
448.	due	3	448.	taking	3
448.	always	3	448.	appreciated	3
448.	discussed	3	448.	ago	3
448.	arrange	3	448.	etc.	3
448.	bring	3	448.	covered	3
			448.	construed	3
448.	field	3	448.	European	3
448.	increase	3	448.	article	3
448.	only	3	448.	another	3
448.	prefer	3	448.	contacted	3
448.	light	3	448.	envelopes	3
448.	paragraph	3	448.	decision	3
448.	physical	3	448.	current	3
448.	prices	3	448.	adjustment	3
448.	hours	3	448.	foreign	3
448.	manufacturer	3	448.	major	3
			448.	members	3
448.	low	3			
448.	photograph	3	448.	important	3
448.	notice	3	448.	located	3
448.	lifetime	3	448.	production	3
448.	individual	3	448.	means	3
448.	p.m.	3	448.	four	3
448.	portion	3	448.	industry	3
448.	plaques	3	448.	proceed	3
448.	happy	3	448.	payment	3
448.	flight	3	448.	pressure	3
			448.	fitness	3
448.	structural	3			
448.	write	3	448.	manager	3
448.	sale	3	448.	high	3
448.	temporary	3	448.	list	3
448.	suggest	3	448.	input	3
448.	results	3	448.	personnel	3
448.	safety	3	448.	placement	3
448.	units	3			
448.	tie	3			
448.	reservations	3			

APPENDIX D

THE 710 MOST FREQUENTLY USED WORDS IN BUSINESS MEMORANDA IN RANK ORDER

THE 710 MOST FREQUENTLY USED WORDS IN BUSINESS MEMORANDA IN RANK ORDER

Rank	Word	Frequency	Rank	Word	Frequency
	1-100				
1.	the	654	41.	their	29
2.	to	359	42.	can	28
3.	of	311	43.	personnel	27
4.	and	250	43.	time	27
5.	in	211	45.	information	26
6.	a	196	45.	they	26
7.	for	173	47.	following	25
8.	be	155	47.	been	25
9.	will	143	47.	would	25
10.	is	141	50.	one	23
11.	that	132	50.	new	23
12.	we	123	50.	no	23
13.	this	115	50.	attached	23
14.	on	110	50.	report	23
15.	you	109	55.	job	22
16.	are	96	55.	plan	22
17.	your	95	55.	service	22
18.	our	83	55.	these	22
19.	as	82	59.	other	21
20.	have	81	59.	so	21
21.	I	77	59.	than	21
21.	with	77	59.	there	21
23.	all	67	59.	which	21
24.	at	56	64.	but	20
25.	not	55	64.	work	20
26.	from	54	64.	was	20
27.	by	53	67.	may	19
28.	it	51	67.	out	19
29.	or	45	67.	data	19
30.	if	40	67.	copy	19
30.	should	40	67.	savings	19
32.	an	37	72.	only	18
32.	department	37	73.	form	17
34.	please	35	73.	more	17
35.	has	33	73.	he	17
35.	employees	33	73.	departments	17
35.	any	33	73.	years	17
38.	meeting	32	78.	office	16
39.	each	30	78.	members	16
39.	year	30	78.	line	16

Rank	Word	Frequency	Rank	Word	Frequency
78.	must	16	117.	manager	12
78.	name	16	117.	customer	12
78.	being	16	117.	days	12
78.	during	16	117.	equipment	12
78.	those	16	117.	week	12
78.	through	16	117.	testing	12
78.	two	16	117.	use	12
78.	some	16	128.	plant	11
89.	people	15	128.	planning	11
89.	do	15	128.	order	11
89.	am	15	128.	program	11
89.	also	15	128.	monthly	11
89.	team	15	128.	parking	11
89.	who	15	128.	know	11
89.	review	15	128.	operating	11
89.	see	15	128.	charges	11
89.	us	15	128.	bond	11
89.	when	15	128.	cost	11
89.	employee	15	128.	division	11
100.	first	14	128.	copies	11
	101-200		128.	area	11
			128.	were	11
100.	make	14	128.	used	11
100.	company	14	128.	what	11
100.	city	14	128.	receive	11
100.	me	14	146.	number	10
100.	date	14	146.	involved	10
100.	building	14	146.	could	10
100.	total	14	146.	control	10
100.	up	14	146.	attend	10
109.	per	13			
109.	inventory	13	146.	them	10
			146.	repair	10
109.	letter	13	146.	well	10
109.	maintenance	13	146.	request	10
109.	held	13	146.	same	10
109.	about	13	146.	within	10
109.	received	13	157.	memorandum	9
109.	test	13	157.	p.m.	9
117.	present	12	157.	go	9
117.	management	12	157.	person	9
117.	open	12			
117.	operations	12	157.	next	9

Rank	Word	Frequency	Rank	Word	Frequency
157.	made	9	177.	travel	8
157.	processing	9	177.	three	8
157.	period	9	177.	questions	8
157.	provide	9	177.	responsibility	8
157.	give	9	177.	tour	8
157.	duties	9	209.	want	7
157.	above	9	209.	requisition	7
157.	campaign	9			
157.	annual	9	209.	return	7
			209.	appropriate	7
157.	class	9	209.	action	7
157.	car	9	209.	a.m.	7
157.	capacity	9	209.	approval	7
157.	below	9	209.	lines	7
157.	states	9	209.	head	7
157.	regarding	9	209.	my	7
177.	month	8	209.	keep	7
177.	get	8	209.	start	7
177.	less	8			
177.	hour	8	209.	staff	7
			209.	required	7
177.	need	8	209.	Cushing	7
177.	hours	8	209.	completed	7
177.	his	8	209.	credit	7
177.	machine	8	209.	expansion	7
177.	given	8	209.	president	7
177.	Friday	8	209.	into	7
177.	Oklahoma	8	209.	format	7
177.	Mr.	8	209.	united	7
177.	orders	8			
177.	help	8	209.	together	7
			209.	requested	7
177.	effective	8	209.	call	7
177.	end	8	209.	costs	7
177.	approximately	8	209.	better	7
177.	because	8	209.	five	7
177.	buy	8	209.	over	7
177.	before	8	209.	four	7
177.	feel	8	209.	payroll	7
177.	bonds	8	209.	various	7
177.	earnings	8			
177.	additional	8	209.	sales	7
			209.	stores	7
	201-300		209.	quality	7
			209.	between	7
177.	support	8	209.	committee	7
177.	requirements	8	209.	communications	7
177.	room	8	209.	performance	7

Rank	Word	Frequency	Rank	Word	Frequency
209.	project	7	251.	good	6
209.	lot	7	251.	increase	6
209.	house	7	251.	procedure	6
			251.	much	6
251.	then	6	251.	find	6
251.	purchase	6	251.	possible	6
251.	set	6	251.	names	6
251.	scheduled	6	251.	sure	6
251.	results	6	251.	result	6
251.	both	6	251.	system	6
251.	claim	6			
251.	district	6		301-400	
251.	let	6			
251.	group	6	251.	recently	6
			251.	rate	6
251.	preliminary	6	251.	ext.	6
251.	personal	6	251.	detail	6
251.	great	6	251.	along	6
251.	forward	6	251.	list	6
251.	part	6	251.	however	6
251.	supervisors	6	251.	individual	6
251.	take	6	251.	prepaid	6
251.	quarter	6	251.	process	6
251.	too	6			
251.	subject	6	251.	many	6
			251.	its	6
251.	available	6	313.	unit	5
251.	boxes	6	313.	warehouse	5
251.	accident	6	313.	usage	5
251.	months	6	313.	weeks	5
251.	items	6	313.	put	5
251.	now	6	313.	section	5
251.	policy	6	313.	submitted	5
251.	proposed	6	313.	far	5
251.	follows	6			
251.	follow	6	313.	addressee	5
			313.	asked	5
251.	look	6	313.	capital	5
251.	reported	6	313.	assistance	5
251.	thank	6	313.	facility	5
251.	where	6	313.	corporate	5
251.	very	6	313.	like	5
251.	under	6	313.	lower	5
251.	advise	6	313.	it's	5
251.	discuss	6	313.	merchandise	5
251.	cards	6			
251.	managers	6			

Rank	Word	Frequency	Rank	Word	Frequency
313.	past	5	313.	recommend	5
313.	major	5	313.	signs	5
313.	second	5	313.	suggested	5
313.	reception	5	313.	such	5
313.	say	5	313.	supervisory	5
313.	via	5	313.	right	5
313.	supervisor	5	313.	taken	5
313.	public	5	313.	continue	5
313.	Tulsa	5	313.	electrical	5
313.	another	5	313.	after	5
313.	care	5	313.	expect	5
313.	appreciate	5	313.	contract	5
313.	due	5	313.	Angeles	5
313.	changed	5	313.	board	5
313.	attended	5	313.	prior	5
313.	point	5	313.	higher	5
313.	member	5	313.	fiscal	5
313.	pay	5	313.	participation	5
313.	participate	5	313.	procedures	5
313.	Los	5	313.	later	5
313.	include	5	391.	read	4
313.	type	5	391.	resistance	4
313.	sent	5	391.	today	4
313.	Toronto	5	391.	successful	4
313.	until	5	391.	rates	4
313.	way	5	391.	south	4
313.	special	5	391.	value	4
313.	engineering	5	391.	relations	4
313.	certification	5	391.	turn	4
313.	conference	5	391.	reference	4
313.	back	5		401-500	
313.	California	5			
313.	every	5	391.	throughout	4
313.	complete	5	391.	card	4
313.	problem	5	391.	center	4
313.	last	5	391.	able	4
313.	forms	5	391.	beyond	4
313.	needs	5	391.	agenda	4
313.	general	5	391.	appointed	4
313.	important	5	391.	energy	4
			391.	air	4
			391.	bill	4

Rank	Word	Frequency	Rank	Word	Frequency
391.	does	4	391.	investment	4
391.	change	4	391.	left	4
391.	heavy	4	391.	minimum	4
391.	kind	4	391.	processes	4
391.	him	4	391.	property	4
391.	officer	4	391.	lobby	4
391.	local	4	391.	outstanding	4
391.	final	4	391.	future	4
391.	Monday	4	391.	soon	4
391.	instructions	4	391.	requesting	4
391.	probably	4	391.	working	4
391.	manner	4	391.	west	4
391.	opinion	4	391.	reports	4
391.	oil	4	391.	status	4
391.	telephone	4	391.	word	4
391.	reach	4	391.	therefore	4
391.	since	4	391.	upon	4
391.	services	4	391.	state	4
391.	success	4	391.	few	4
391.	visitors	4	391.	analysis	4
391.	think	4	391.	don't	4
391.	shall	4	391.	changes	4
391.	shop	4	391.	contact	4
391.	questionnaire	4	391.	buyers	4
391.	distribution	4	391.	business	4
391.	attaching	4	391.	economic	4
391.	current	4	391.	amount	4
391.	dated	4	391.	decision	4
391.	dinner	4	391.	best	4
391.	establish	4	391.	done	4
391.	coast	4	391.	paid	4
391.	case	4	391.	parts	4
391.	break	4	391.	kilowatt	4
391.	adjustment	4	391.	outlined	4
391.	determine	4	391.	perform	4
391.	efforts	4	391.	Korea	4
391.	physical	4	391.	presently	4
391.	placed	4	391.	opportunity	4
391.	maximum	4	391.	forwarded	4
391.	note	4	391.	objective	4

Rank	Word	Frequency	Rank	Word	Frequency
391.	figures	4	527.	remind	3
391.	hand	4	527.	registers	3
391.	reservation	4	527.	published	3
391.	specific	4	527.	reporting	3
391.	purpose	4	527.	signed	3
391.	thirty	4	527.	scheduling	3
391.	Wednesday	4	527.	sponsored	3
391.	raffle	4	527.	purchased	3
391.	visit	4	527.	canned	3
391.	sending	4	527.	concerned	3
	501-600		527.	activities	3
			527.	away	3
391.	side	4	527.	complimentary	3
391.	typed	4	527.	covering	3
391.	etc.	4	527.	correspondence	3
391.	affirmative	4	527.	confirmed	3
391.	beginning	4	527.	expanded	3
391.	federal	4	527.	clearly	3
391.	bank	4	527.	executive	3
391.	description	4	527.	drive	3
391.	early	4			
391.	based	4	527.	dollar	3
			527.	customers	3
391.	analysts	4	527.	conducted	3
391.	cafeteria	4	527.	either	3
391.	aware	4	527.	agreement	3
391.	conversation	4	527.	north	3
391.	Ponca	4	527.	photo	3
391.	front	4	527.	interested	3
391.	matter	4	527.	had	3
391.	further	4	527.	levels	3
391.	industrial	4			
391.	just	4	527.	liability	3
			527.	orderly	3
391.	here	4	527.	item	3
391.	off	4	527.	hourly	3
391.	letters	4	527.	hope	3
391.	free	4	527.	practice	3
391.	fill	4	527.	guests	3
391.	schedule	4	527.	needed	3
527.	softball	3	527.	mentioned	3
527.	requests	3	527.	hospital	3
527.	tool	3			
527.	wage	3			

Rank	Word	Frequency	Rank	Word	Frequency
527.	memorandums	3	527.	hold	3
527.	technical	3	527.	freight	3
527.	response	3	527.	goals	3
527.	release	3	527.	pattern	3
527.	vacation	3	527.	location	3
527.	route	3	527.	missing	3
527.	western	3	527.	others	3
527.	teams	3	527.	whether	3
527.	still	3	527.	write	3
527.	respective	3	527.	pull	3
527.	Thursday	3	527.	recognition	3
527.	telex	3	527.	question	3
527.	session	3	527.	site	3
527.	several	3	527.	step	3
527.	attention	3	527.	wish	3
527.	everyday	3	527.	provides	3
527.	add	3	527.	recognize	3
527.	effect	3	527.	send	3
527.	benefits	3	527.	significant	3
527.	encourage	3	527.	tests	3
527.	accounting	3	527.	drop	3
527.	display	3	527.	continued	3
527.	damage	3	527.	documentation	3
527.	crayons	3	527.	dealers	3
527.	award	3	527.	directly	3
527.	again	3	527.	driveaway	3
527.	expense	3	527.	engineers	3
527.	basis	3	527.	chairman	3
527.	approved	3	527.	attendees	3
527.	confidential	3	527.	authorized	3
	601-700		527.	checklist	3
			527.	design	3
527.	brief	3	527.	appears	3
527.	observe	3	527.	cars	3
527.	memo	3	527.	asset	3
527.	position	3	527.	cooperation	3
527.	getting	3	527.	day	3
527.	meetings	3	527.	involving	3
527.	move	3	527.	prizes	3
527.	internal	3	527.	insurance	3
527.	plans	3			
527.	light	3			

Rank	Word	Frequency	Rank	Word	Frequency
527.	presentation	3	527.	assuming	3
527.	method	3	527.	ability	3
527.	percent	3	527.	areas	3
527.	performed	3	527.	cases	3
527.	post	3	527.	come	3
527.	material	3	527.	comments	3
527.	listed	3	527.	field	3
527.	having	3	527.	consigned	3
527.	poultry	3	527.	close	3
527.	materials	3	527.	departmental	3
527.	pooling	3	527.	bills	3
527.	production	3	527.	airport	3
527.	previous	3	527.	evaluation	3
527.	show	3	527.	necessary	3
527.	twenty	3	527.	how	3
527.	store	3	527.	Hawaii	3
527.	representatives	3	527.	financial	3
527.	shipment	3	527.	indicates	3
527.	submit	3	527.	objectives	3
527.	water	3	527.	guidelines	3
527.	supply	3		701-710	
527.	situation	3			
527.	requisitions	3	527.	lab	3
527.	revision	3	527.	frame	3
527.	requirement	3	527.	hear	3
527.	vice	3	527.	luncheon	3
527.	suggest	3	527.	improve	3
527.	directory	3	527.	potential	3
527.	ensure	3	527.	proper	3
527.	eight	3	527.	little	3
			527.	margin	3
			527.	files	3

APPENDIX E

THE 655 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS IN RANK ORDER

THE 655 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS IN RANK ORDER

Rank	Word	Frequency	Rank	Word	Frequency
	1-100		40.	me	36
			40.	know	36
1.	the	639	43.	or	35
2.	to	416	43.	insurance	35
3.	you	387	43.	credit	35
4.	of	325	43.	very	35
5.	a	264	47.	has	34
6.	in	239	47.	Mr.	34
7.	I	204	47.	when	34
7.	we	204	50.	please	33
9.	for	188			
10.	that	183	51.	by	31
			52.	there	30
11.	and	175	53.	office	29
12.	your	168	53.	many	29
13.	will	167	53.	am	29
14.	have	140	53.	who	29
15.	is	115	57.	card	28
16.	are	112	58.	more	27
17.	our	100	58.	about	27
17.	be	100	60.	people	26
19.	it	88			
20.	at	83	60.	however	26
			60.	hope	26
21.	if	80	63.	good	25
22.	company	76	63.	been	25
22.	with	76	63.	year	25
24.	this	72	63.	soon	25
25.	as	68	63.	work	25
26.	on	65	63.	years	25
27.	new	60	69.	like	23
28.	would	54	69.	person	23
29.	can	52			
30.	from	51	69.	any	23
			69.	all	23
31.	not	50	69.	than	23
31.	us	50	74.	several	22
33.	one	46	75.	need	21
34.	my	45	75.	help	21
34.	do	45	75.	may	21
36.	business	44	75.	food	21
37.	an	42	75	they	21
37.	was	42	80.	return	20
39.	time	38			
40.	just	36			

Rank	Word	Frequency	Rank	Word	Frequency
80.	had	20	117.	happy	15
80.	check	20	117.	advertising	15
80.	their	20	117.	course	15
84.	let	19	117.	what	15
84.	he	19	117.	store	15
84.	now	19	126.	send	14
84.	make	19	126.	last	14
84.	position	19	126.	how	14
84.	city	19	126.	next	14
84.	college	19	126.	could	14
84.	these	19	126.	each	14
92.	only	18	126.	general	14
92.	able	18	126.	some	14
92.	give	18	134.	possible	13
92.	glad	18	134.	no	13
92.	thank	18	134.	his	13
92.	which	18	134.	most	13
98.	out	17	134.	account	13
98.	but	17	134.	ago	13
98.	area	17	134.	believe	13
	101-200		141.	pay	12
			141.	months	12
98.	book	17	141.	letter	12
98.	come	17	141.	restaurants	12
98.	want	17	141.	over	12
98.	take	17	141.	employees	12
98.	sure	17	141.	few	12
98.	Smith	17	141.	days	12
107.	public	16	141.	before	12
107.	problem	16	141.	fill	12
107.	much	16			
107.	looking	16	141.	another	12
			141.	staff	12
107.	enclosed	16	141.	state	12
107.	bank	16	154.	management	11
107.	first	16	154.	order	11
107.	three	16	154.	school	11
107.	service	16	154.	January	11
107.	should	16	154.	past	11
117.	sales	15	154.	find	11
117.	its	15	154.	building	11
117.	plan	15			
117.	information	15			

Rank	Word	Frequency	Rank	Word	Frequency
154.	copy	11		201-300	
154.	think	11			
154.	wish	11	180.	companies	9
154.	street	11	180.	use	9
154.	were	11	180.	two	9
154.	today	11	180.	usually	9
167.	mail	10	180.	write	9
167.	organization	10	206.	house	8
167.	hear	10	206.	rating	8
167.	meeting	10	206.	into	8
			206.	manufacturing	8
167.	products	10	206.	planning	8
167.	open	10			
167.	during	10	206.	job	8
167.	books	10	206.	receive	8
167.	call	10	206.	quality	8
167.	complete	10	206.	large	8
167.	such	10	206.	immediately	8
167.	tell	10	206.	room	8
167.	them	10	206.	see	8
180.	paid	9	206.	campaign	8
			206.	forward	8
180.	national	9	206.	bill	8
180.	miss	9			
180.	plans	9	206.	best	8
180.	percent	9	206.	every	8
180.	probably	9	206.	franchise	8
180.	pleasure	9	206.	did	8
180.	line	9	206.	because	8
180.	move	9	206.	customers	8
180.	other	9	206.	feel	8
180.	restaurant	9	206.	entire	8
			206.	form	8
180.	payment	9	206.	Spain	8
180.	look	9			
180.	hearing	9	206.	small	8
180.	home	9	206.	week	8
180.	get	9	206.	so	8
180.	addition	9	206.	those	8
180.	circular	9	206.	understand	8
180.	future	9	206.	simply	8
180.	care	9	206.	students	8
180.	Cunningham	9	206.	way	8
			206.	transcript	8
			206.	special	8

Rank	Word	Frequency	Rank	Word	Frequency
206.	Washington	8	273.	prices	6
206.	travel	8	273.	publication	6
243.	main	7	273.	part	6
243.	regular	7	273.	international	6
243.	must	7	273.	quite	6
243.	here	7	273.	present	6
243.	recently	7	273.	particular	6
243.	quickly	7	273.	marketing	6
243.	Mrs.	7	273.	refrigerator	6
243.	opportunity	7	273.	made	6
243.	own	7	273.	manager	6
243.	Hamilton	7	273.	board	6
243.	Dr.	7	273.	appreciate	6
243.	branch	7	273.	accident	6
243.	exactly	7	273.	day	6
243.	fast	7	273.	after	6
243.	found	7	273.	correspondence	6
243.	field	7	273.	available	6
243.	beautiful	7	273.	carry	6
243.	further	7	273.	designed	6
				301-400	
243.	character	7			
243.	accept	7	273.	easily	6
243.	construction	7	273.	even	6
243.	courses	7	273.	fine	6
243.	amount	7	273.	ever	6
243.	department	7	273.	additional	6
243.	well	7	273.	costs	6
243.	ten	7	273.	four	6
243.	states	7	273.	experience	6
243.	visit	7	273.	difficult	6
			273.	great	6
243.	weeks	7			
243.	under	7	273.	full	6
273.	increase	6	273.	away	6
273.	purchased	6	273.	cost	6
273.	premiums	6	273.	done	6
273.	meet	6	273.	supply	6
273.	least	6	273.	things	6
273.	mailed	6	273.	why	6
273.	place	6	273.	up	6
273.	number	6	273.	united	6
			273.	table	6

Rank	Word	Frequency	Rank	Word	Frequency
273.	similar	6	324.	Alabama	5
273.	through	6	324.	family	5
273.	uptown	6	324.	date	5
324.	program	5	324.	dishes	5
324.	records	5	324.	busy	5
324.	note	5	324.	claim	5
324.	having	5	324.	efficiency	5
324.	recent	5	324.	application	5
324.	price	5	324.	arrived	5
324.	ordinarily	5	324.	copies	5
324.	location	5	324.	enough	5
324.	say	5	324.	easy	5
324.	handle	5	324.	eastern	5
324.	members	5	324.	charge	5
324.	November	5	324.	expect	5
324.	remember	5	324.	begin	5
324.	offer	5	324.	executives	5
324.	publishing	5	324.	Dallas	5
324.	Ms.	5	324.	containers	5
324.	opinion	5	324.	agency	5
324.	matter	5	324.	ask	5
324.	review	5	324.	also	5
324.	name	5	324.	agree	5
324.	sending	5	324.	decided	5
324.	local	5	324.	until	5
324.	high	5	324.	using	5
324.	responsible	5	324.	used	5
324.	lee	5	324.	then	5
324.	representatives	5	324.	site	5
324.	representative	5	324.	trip	5
324.	might	5	324.	something	5
324.	major	5	324.	yet	5
324.	reference	5	324.	women	5
324.	personal	5	324.	sorry	5
324.	manuscript	5	324.	within	5
324.	schools	5	324.	whenever	5
324.	issue	5	397.	money	4
324.	received	5	397.	serve	4
324.	interesting	5	397.	involved	4
324.	coverage	5	397.	medical	4

Rank	Word	Frequency	Rank	Word	Frequency
	401-500		397.	evaluate	4
			397.	Birmingham	4
397.	often	4	397.	division	4
397.	keep	4	397.	error	4
397.	obligations	4	397.	establish	4
397.	request	4	397.	appear	4
397.	pamphlet	4	397.	between	4
397.	reason	4	397.	certainly	4
397.	opened	4	397.	build	4
397.	neighborhood	4	397.	go	4
397.	moving	4			
397.	hospital	4	397.	details	4
			397.	cannot	4
397.	risk	4	397.	announce	4
397.	located	4	397.	brown	4
397.	light	4	397.	completed	4
397.	responsibility	4	397.	citizens	4
397.	project	4	397.	actually	4
397.	newspapers	4	397.	a.m.	4
397.	others	4	397.	car	4
397.	operate	4	397.	catalog	4
397.	limits	4			
397.	land	4	397.	claims	4
			397.	class	4
397.	placed	4	397.	Carson	4
397.	her	4	397.	cash	4
397.	James	4	397.	shows	4
397.	live	4	397.	speaking	4
397.	him	4	397.	spend	4
397.	real	4	397.	tables	4
397.	policy	4	397.	text	4
397.	read	4	397.	sign	4
397.	interview	4			
397.	Jackson	4	397.	yourself	4
			397.	trouble	4
397.	group	4	397.	touch	4
397.	gold	4	397.	stay	4
397.	asked	4	397.	since	4
397.	countries	4	397.	services	4
397.	efficiently	4	397.	throughout	4
397.	current	4	397.	shopping	4
397.	ahead	4	397.	type	4
397.	frankly	4	397.	transfer	4
397.	again	4			
397.	beginning	4			

Rank	Word	Frequency	Rank	Word	Frequency
397.	taxes	4	484.	hours	3
397.	white	4	484.	realize	3
397.	short	4	484.	morning	3
484.	page	3	484.	property	3
484.	places	3	484.	selling	3
484.	recommendation	3	484.	long	3
484.	prepare	3	484.	month	3
484.	increased	3	484.	process	3
484.	paying	3	484.	plane	3
484.	moved	3	484.	purchase	3
484.	period	3	484.	head	3
484.	satisfactorily	3	484.	planned	3
484.	indeed	3	484.	less	3
484.	learn	3	484.	operations	3
484.	particularly	3	484.	necessary	3
484.	market	3	484.	making	3
484.	Monday	3	484.	plant	3
484.	informative	3	484.	plastic	3
484.	Michigan	3	484.	never	3
484.	pleased	3	484.	paper	3
	501-600		484.	introduce	3
			484.	intersection	3
484.	schedule	3	484.	overdue	3
484.	old	3	484.	guarantee	3
484.	materials	3	484.	p.m.	3
484.	near	3	484.	personally	3
484.	include	3	484.	interested	3
484.	needs	3	484.	presentation	3
484.	manage	3	484.	myself	3
484.	published	3	484.	Palmer	3
484.	residents	3			
484.	prompt	3	484.	Moore	3
			484.	individual	3
484.	right	3	484.	either	3
484.	sale	3	484.	effect	3
484.	highly	3	484.	basic	3
484.	items	3	484.	annual	3
484.	impact	3	484.	calling	3
484.	rather	3	484.	free	3
484.	remodeling	3	484.	government	3
484.	prefer	3	484.	effective	3
484.	sell	3			
484.	same	3			

Rank	Word	Frequency	Rank	Word	Frequency
484.	circumstances	3		601-655	
484.	graduation	3			
484.	final	3	484.	electronic	3
484.	goods	3	484.	establishments	3
484.	Gordon	3	484.	classes	3
484.	children	3	484.	excellent	3
484.	grades	3	484.	faced	3
484.	appears	3	484.	France	3
484.	getting	3	484.	action	3
484.	convention	3	484.	color	3
			484.	Boston	3
484.	estimate	3	484.	failed	3
484.	estate	3			
484.	concerned	3	484.	dependability	3
484.	association	3	484.	against	3
484.	goal	3	484.	depositors	3
484.	drop	3	484.	being	3
484.	correct	3	484.	enclosing	3
484.	commercial	3	484.	category	3
484.	glass	3	484.	cover	3
484.	applied	3	484.	delivery	3
			484.	Germany	3
484.	dependable	3	484.	fee	3
484.	change	3			
484.	ford	3	484.	congratulations	3
484.	banking	3	484.	chapter	3
484.	forms	3	484.	executive	3
484.	blocks	3	484.	both	3
484.	among	3	484.	congratulate	3
484.	credits	3	484.	convenience	3
484.	accounting	3	484.	working	3
484.	attend	3	484.	suitable	3
			484.	totally	3
484.	deposit	3	484.	welcome	3
484.	given	3			
484.	bond	3	484.	worked	3
484.	Detroit	3	484.	title	3
484.	automobile	3	484.	stationery	3
484.	asking	3	484.	still	3
484.	goes	3	484.	town	3
484.	factory	3	484.	wanted	3
484.	certain	3	484.	situation	3
484.	back	3	484.	worth	3
			484.	written	3
			484.	told	3

Rank	Word	Frequency	Rank	Word	Frequency
484.	too	3	484.	subject	3
484.	skills	3	484.	taken	3
484.	turn	3	484.	successful	3
484.	somewhat	3	484.	wishes	3
484.	she	3	484.	Springfield	3
484.	stock	3			
484.	speak	3			
484.	true	3			
484.	stadium	3			
484.	successfully	3			

APPENDIX F

THE 636 MOST FREQUENTLY USED WORDS IN BUSINESS LETTERS IN ALPHABETICAL ORDER

THE 636 MOST FREQUENTLY USED WORDS IN BUSINESS LETTERS IN ALPHABETICAL ORDER

Word	Frequency	Word	Frequency
a	195	arrange	3
able	5	arrangements	3
about	15	arrived	3
above	6	article	3
accordance	4	as	80
acquainted	3	assist	3
action	4	assistance	7
activities	4	association	5
addition	3	assure	3
additional	6	at	74
address	6	attached	9
adjustment	3	attention	4
advancement	3	available	9
advise	5	award	3
adviser	3	aware	3
after	10	back	5
again	11	background	5
ago	3	balance	5
agree	3	bank	4
agreement	11	based	8
agreements	3	basis	4
all	20	be	118
allow	3	because	14
along	3	become	4
also	17	been	29
although	4	before	4
always	3	beginning	4
am	24	being	7
amount	9	believe	6
an	34	below	8
and	277	benefits	6
annual	8	best	6
another	3	better	5
any	34	between	5
application	7	billing	7
appreciate	18	board	4
appreciated	3	both	10
appreciation	6	bring	3
architect	4	brochure	3
are	82	building	7

Word	Frequency	Word	Frequency
business	10	continued	4
but	25	contract	6
by	49	convenience	3
call	13	conversation	7
can	30	copies	4
car	3	copy	17
case	4	corporation	5
catalog	3	cost	4
center	4	could	9
certainly	5	course	3
certificate	9	court	4
charge	5	cover	10
charges	4	coverage	3
check	6	covered	3
city	16	current	3
class	3	customer	4
close	6	date	14
code	4	dated	6
collect	3	day	9
college	4	days	6
color	4	decision	3
commission	5	department	6
commissioner	5	design	4
commitments	3	desire	4
committee	6	did	8
companies	4	direct	3
company	23	directly	6
complete	5	discuss	3
completed	3	discussed	3
complimentary	4	division	3
computer	4	do	19
concerning	9	does	6
conference	3	don't	4
confirm	4	done	8
congratulation	6	dress	3
consider	6	drive	3
construed	3	due	3
contact	11	during	12
contacted	3	each	11
continue	5	education	3

Word	Frequency	Word	Frequency
effect	4	followed	4
effective	5	following	9
electrical	7	follows	4
electricians	5	for	173
employees	4	foreign	3
employing	4	form	6
employment	8	forward	21
enclosed	11	forwarded	4
enclosing	5	four	3
energy	3	freight	8
engineer	5	from	40
enjoyed	5	full	3
envelopes	3	further	9
equipment	10	future	13
established	3	gave	3
etc.	3	general	5
European	3	get	8
evening	4	give	6
ever	4	given	6
examination	4	gold	4
excellent	4	good	12
executive	3	government	6
existing	4	great	5
experience	4	group	4
express	5	had	15
extend	4	happy	3
facilities	6	has	23
factory	4	have	95
family	5	having	9
feel	14	he	10
few	3	help	9
field	3	helpful	4
file	8	here	5
files	3	hesitate	3
find	8	high	3
firm	5	him	4
first	6	his	17
fitness	3	honor	4
five	9	hope	9
flight	3	horsepower	3

Word	Frequency	Word	Frequency
hospital	8	just	4
hours	3	keep	8
how	5	know	18
however	7	last	14
I	139	later	3
if	53	left	7
important	3	let	7
impressed	4	letter	31
in	212	letters	3
include	6	level	3
included	4	life	3
inclusive	3	lifetime	3
increase	3	light	3
indicated	4	lights	3
individual	3	like	22
industrial	11	line	8
industry	3	lines	14
information	25	list	3
input	3	little	3
inquiry	3	load	5
inspection	11	local	4
installation	7	located	3
insurance	8	location	3
interest	17	long	6
interested	6	look	11
into	5	looking	12
investors	3	low	3
invitation	4	made	9
invoice	4	maintenance	4
involved	6	major	3
is	101	make	12
issue	4	making	4
issued	3	management	6
it	54	manager	3
item	3	manufacturer	3
items	3	many	9
its	9	margin	6
job	13	material	4
jobs	4	materials	3
join	3	matter	9

Word	Frequency	Word	Frequency
may	24	one	23
me	24	only	3
means	3	operation	3
medical	5	operations	4
Medicare	4	opportunities	4
meeting	7	opportunity	7
member	5	or	79
members	3	order	8
memo	5	organization	3
mentioned	4	other	24
might	10	our	119
million	3	out	3
month	7	outstanding	7
monthly	5	over	12
more	26	p.m.	3
most	13	page	4
mounted	3	paid	8
Mr.	16	paragraph	3
much	10	part	6
must	3	participate	3
my	27	particular	3
name	8	parts	12
near	4	past	3
necessary	6	payment	3
need	12	people	6
new	7	per	24
next	5	perhaps	4
no	15	permit	5
not	47	person	10
notice	3	personal	6
now	4	personnel	3
number	10	photograph	3
numbers	4	physical	3
of	318	pin	4
off	3	placement	3
offer	6	planning	3
offered	3	plans	7
office	6	plant	4
Oklahoma	14	plaque	3
on	100	plaques	3

Word	Frequency	Word	Frequency
plate	7	rather	4
please	29	reach	4
pleased	9	reason	6
pleasure	3	receipt	3
plus	3	receive	7
policy	4	received	9
portion	3	receiving	4
position	7	recent	8
possible	16	recently	3
potential	4	recommend	3
pounds	3	records	6
prefer	3	reference	4
present	9	regard	3
presented	4	regards	3
president	6	regularly	4
pressure	3	regulations	3
price	8	remain	5
prices	3	remove	3
problems	4	rental	4
proceed	3	repeal	5
product	9	report	4
production	3	request	9
productivity	3	requested	5
products	7	requesting	4
professional	4	require	4
program	14	required	7
programs	10	reservation	8
project	3	reservations	3
proud	4	response	3
provided	4	results	3
provisions	8	resume	7
purchase	4	retirement	4
qualification	3	return	6
qualified	4	returning	3
quality	6	review	6
question	3	reviewed	5
questions	7	right	5
quite	4	run	3
quoted	3	safety	3
rate	4	said	4

Word	Frequency	Word	Frequency
salary	6	states	5
sale	3	steel	5
sales	8	stock	10
same	6	stores	3
schedule	5	structural	3
section	7	structure	4
see	7	subject	6
seeing	5	success	5
seminar	4	successful	5
sending	4	such	15
separate	3	suggest	3
service	16	summary	3
services	5	supervision	4
shall	13	supervisor	4
share	3	support	3
shares	8	sure	6
she	3	survey	3
shipments	4	system	3
shipped	4	tack	3
short	3	take	5
shortages	5	taking	3
should	22	tape	5
show	4	tax	9
sign	6	telephone	6
signed	3	temporary	3
similar	4	ten	3
simply	3	term	5
since	8	than	20
six	4	thank	19
small	6	thanks	8
so	8	that	118
some	17	the	576
something	3	their	13
soon	5	them	9
source	3	there	13
special	6	therefore	5
staff	4	thereof	4
standard	3	these	19
state	5	they	21
statement	4	think	5

Word	Frequency	Word	Frequency
this	82	visit	17
those	7	volume	3
three	9	want	7
through	10	was	41
throughout	3	way	4
tie	3	ways	3
time	37	we	163
to	352	Wednesday	3
too	3	weekend	3
total	3	weld	4
tour	5	well	12
tours	3	were	21
toward	4	what	3
trade	3	when	10
training	9	where	10
tried	3	which	41
trip	4	while	7
Tuesday	3	white	4
Tulsa	6	who	14
twenty	4	wife	4
two	14	will	77
type	5	wish	4
typed	6	wishes	3
under	5	with	86
understand	5	withholding	4
unfortunately	3	within	7
unit	3	word	3
united	4	work	20
units	3	working	5
until	4	would	65
up	8	write	3
upon	9	written	4
urge	3	year	22
us	28	years	10
use	6	you	222
used	6	your	178
using	4		
usually	3		
various	3		
very	32		

APPENDIX G

THE 710 MOST FREQUENTLY USED WORDS IN BUSINESS MEMORANDA IN ALPHABETICAL ORDER

THE 710 MOST FREQUENTLY USED WORDS IN BUSINESS MEMORANDA IN ALPHABETICAL ORDER

Word	Frequency	Word	Frequency
a	196	approved	3
a.m.	7	approximately	8
ability	3	are	96
able	4	area	11
about	13	areas	3
above	9	as	82
accident	6	asked	5
accounting	3	asset	3
action	7	assistance	5
activities	3	assuming	3
add	3	at	56
additional	8	attached	23
addressee	5	attaching	4
adjustment	4	attend	10
advise	6	attended	5
affirmative	4	attendees	3
after	5	attention	3
again	3	authorized	3
agenda	4	available	6
agreement	3	award	3
air	4	aware	4
airport	3	away	3
all	67	back	5
along	6	bank	4
also	15	based	4
am	15	basis	3
amount	4	be	155
an	37	because	8
analysis	4	been	25
analysts	4	before	8
and	250	beginning	4
Angeles	5	being	16
annual	9	below	9
another	5	benefits	3
any	33	best	4
appears	3	better	7
appointed	4	between	7
appreciate	5	beyond	4
appropriate	7	bill	4
approval	7	bills	3

Word	Frequency	Word	Frequency
board	5	close	3
bond	11	coast	4
bonds	8	come	3
both	6	comments	3
boxes	6	committee	7
break	4	communications	7
brief	3	company	14
building	14	complete	5
business	4	completed	7
but	20	complimentary	3
buy	8	concerned	3
buyers	4	conducted	3
by	53	conference	5
cafeteria	4	confidential	3
California	5	confirmed	3
call	7	consigned	3
campaign	9	contact	4
can	28	continue	5
canned	3	continued	3
capacity	9	contract	5
capital	5	control	10
car	9	conversation	4
card	4	cooperation	3
cards	6	copies	11
care	5	copy	19
cars	3	corporate	5
case	4	correspondence	3
cases	3	cost	11
center	4	costs	7
certification	5	could	10
chairman	3	covering	3
change	4	crayons	3
changed	5	credit	7
changes	4	current	4
charges	11	Cushing	7
checklist	3	customer	12
city	14	customers	3
claim	6	damage	3
class	9	data	19
clearly	3	date	14

Word	Frequency	Word	Frequency
dated	4	either	3
day	3	electrical	5
days	12	employee	15
dealers	3	employees	33
decision	4	encourage	3
department	37	end	8
departmental	3	energy	4
departments	17	engineering	5
description	4	engineers	3
design	3	ensure	3
detail	6	equipment	12
determine	4	establish	4
dinner	4	etc.	4
directly	3	evaluation	3
directory	3	every	5
discuss	6	everyday	3
display	3	executive	3
distribution	4	expanded	3
district	6	expansion	7
division	11	expect	5
do	15	expense	3
documentation	3	ext.	6
does	4	facility	5
dollar	3	far	5
don't	4	federal	4
done	4	feel	8
drive	3	few	4
driveaway	3	field	3
drop	3	figures	4
due	5	files	3
during	16	fill	4
duties	9	final	4
each	30	financial	3
early	4	find	6
earnings	8	first	14
economic	4	fiscal	5
effect	3	five	7
effective	8	follow	6
efforts	4	following	25
eight	3	follows	6

Word	Frequency	Word	Frequency
for	173	hire	5
form	17	him	4
format	7	his	8
forms	5	hold	3
forward	6	hope	3
forwarded	4	hospital	3
four	7	hour	8
frame	3	hourly	3
free	4	hours	8
freight	3	house	7
Friday	8	how	3
from	54	however	6
front	4	I	77
further	4	if	40
future	4	important	5
general	5	improve	3
get	8	in	211
getting	3	include	5
give	9	increase	6
given	8	indicates	3
go	9	individual	6
goals	3	industrial	4
good	6	information	26
great	6	instructions	4
group	6	insurance	3
guests	3	interested	3
guidelines	3	internal	3
had	3	into	7
hand	4	inventory	13
has	33	investment	4
have	81	involved	10
having	3	involving	3
Hawaii	3	is	141
he	17	it	51
head	7	it's	5
hear	3	item	3
heavy	4	items	6
held	13	its	6
help	8	job	22
here	4	just	4

Word	Frequency	Word	Frequency
keep	7	margin	3
kilowatt	4	material	3
kind	4	materials	3
know	11	matter	4
Korea	4	maximum	4
lab	3	may	19
last	5	me	14
later	5	meeting	32
left	4	meetings	3
less	8	member	5
let	6	members	16
letter	13	memo	3
letters	4	memorandum	9
levels	3	memorandums	3
liability	3	mentioned	3
light	3	merchandise	5
like	5	method	3
line	16	minimum	4
lines	7	missing	3
list	6	Monday	4
listed	3	month	8
little	3	monthly	11
lobby	4	months	6
local	4	more	17
location	3	move	3
look	6	Mr.	8
Los	5	much	6
lot	7	must	16
lower	5	my	7
luncheon	3	name	16
machine	8	names	6
made	9	necessary	3
maintenance	13	need	8
major	5	needed	3
make	14	needs	5
management	12	new	23
manager	12	next	9
managers	6	no	23
manner	4	north	3
many	6	not	55

Word	Frequency	Word	Frequency
note	4	pay	5
now	6	payroll	7
number	10	people	15
objective	4	per	13
objectives	3	percent	3
observe	3	perform	4
of	311	performance	7
off	4	performed	3
office	16	period	9
officer	4	person	9
oil	4	personal	6
Oklahoma	8	personnel	27
on	110	photo	3
one	23	physical	4
only	18	placed	4
open	12	plan	22
operating	11	planning	11
operations	12	plans	3
opinion	4	plant	11
opportunity	4	please	35
or	45	point	5
order	11	policy	6
orderly	3	Ponca	4
orders	8	pooling	3
other	21	position	3
others	3	possible	6
our	83	post	3
out	19	potential	3
outlined	4	poultry	3
outstanding	4	practice	3
over	7	preliminary	6
p.m.	9	prepaid	6
paid	4	present	12
parking	11	presentation	3
part	6	presently	4
participate	5	president	7
participation	5	previous	3
parts	4	prior	5
past	5	prizes	3
pattern	3	probably	4

Word	Frequency	Word	Frequency
problem	5	registers	3
procedure	6	relations	4
procedures	5	release	3
process	6	remind	3
processes	4	repair	10
processing	9	report	23
production	3	reported	6
program	11	reporting	3
project	7	reports	4
proper	3	representatives	3
property	4	request	10
proposed	6	requested	7
provide	9	requesting	4
provides	3	requests	3
public	5	required	7
published	3	requirements	3
pull	3	requirements	8
purchase	6	requisition	7
purchased	3	requisitions	3
purpose	4	reservation	4
put	5	resistance	4
quality	7	respective	3
quarter	6	response	3
question	3	responsibility	8
questionnaire	4	result	6
questions	8	results	6
raffle	4	return	7
rate	6	review	15
rates	4	revision	3
reach	4	right	5
read	4	room	8
receive	11	route	3
received	13	sales	7
recently	6	same	10
reception	5	savings	19
recognition	3	say	5
recognize	3	schedule	4
recommend	5	scheduled	6
reference	4	scheduling	3
regarding	9	second	5

Word	Frequency	Word	Frequency
section	5	submit	3
see	15	submitted	5
send	3	success	4
sending	4	successful	4
sent	5	such	5
service	22	suggest	3
services	4	suggested	5
session	3	supervisor	5
set	6	supervisors	6
several	3	supervisory	5
shall	4	supply	3
shipment	3	support	8
shop	4	sure	6
should	40	system	6
show	3	take	6
side	4	taken	5
signed	3	team	15
significant	3	teams	3
signs	5	technical	3
since	4	telephone	4
site	3	telex	3
situation	3	test	13
so	21	testing	12
softball	3	tests	3
some	16	than	21
soon	4	thank	6
south	4	that	132
special	5	the	654
specific	4	their	29
sponsored	3	them	10
staff	7	then	6
start	7	there	21
state	4	therefore	4
states	9	these	22
status	4	they	26
step	3	think	4
still	3	thirty	4
store	3	this	115
stores	7	those	16
subject	6	three	8

Word	Frequency	Word	Frequency
through	16	was	20
throughout	4	water	3
Thursday	3	way	5
time	27	we	123
to	359	Wednesday	4
today	4	week	12
together	7	weeks	5
too	6	well	10
tool	3	were	11
Toronto	5	west	4
total	14	western	3
tour	8	what	11
travel	8	when	15
Tulsa	5	where	6
turn	4	whether	3
twenty	3	which	21
two	16	who	15
type	5	will	143
typed	4	wish	3
under	6	with	77
unit	5	within	10
united	7	word	4
until	5	work	20
up	14	working	4
upon	4	would	25
us	15	write	3
usage	5	year	30
use	12	years	17
used	11	you	109
vacation	3	your	95
value	4		
various	7		
very	6		
via	5		
vice	3		
visit	4		
visitors	4		
wage	3		
want	7		
warehouse	5		

APPENDIX H

THE 655 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS IN ALPHABETICAL ORDER

THE 655 MOST FREQUENTLY USED WORDS IN TEXTBOOK MATERIALS IN ALPHABETICAL ORDER

Word	Frequency	Word	Frequency
a	264	as	68
a.m.	4	ask	5
able	18	asked	4
about	27	asking	3
accept	7	association	3
accident	6	at	83
account	13	attend	3
accounting	3	automobile	3
action	3	available	6
actually	4	away	6
addition	9	back	3
additional	6	bank	16
advertising	15	banking	3
after	6	basic	3
again	4	be	100
against	3	beautiful	7
agency	5	because	8
ago	13	been	25
agree	5	before	12
ahead	4	begin	5
Alabama	5	beginning	4
all	23	being	3
also	5	believe	13
am	29	best	8
among	3	between	4
amount	7	bill	8
an	42	Birmingham	4
and	175	blocks	3
announce	4	board	6
annual	3	bond	3
another	12	book	17
any	23	books	10
appear	4	Boston	3
appears	3	both	3
application	5	branch	7
applied	3	brown	4
appreciate	6	build	4
are	112	building	11
area	17	business	44
arrived	5	busy	5

Word	Frequency	Word	Frequency
but	17	congratulate	3
by	31	congratulations	3
call	10	construction	7
calling	3	containers	5
campaign	8	convenience	3
can	52	convention	3
cannot	4	copies	5
car	4	copy	11
card	28	correct	3
care	9	correspondence	6
carry	6	cost	6
Carson	4	costs	6
cash	4	could	14
catalog	4	countries	4
category	3	course	15
certain	3	courses	7
certainly	4	cover	3
change	3	coverage	5
chapter	3	credit	35
character	7	credits	3
charge	5	Cunningham	9
check	20	current	4
children	3	customers	8
circular	9	Dallas	5
circumstances	3	date	5
citizens	4	day	6
city	19	days	12
claim	5	decided	5
claims	4	delivery	3
class	4	department	7
classes	3	dependability	3
college	19	dependable	3
color	3	deposit	3
come	17	depositors	3
commercial	3	designed	6
companies	9	details	4
company	76	Detroit	3
complete	10	did	8
completed	4	difficult	6
concerned	3	dishes	5

Word	Frequency	Word	Frequency
division	4	fast	7
do	45	fee	3
done	6	feel	8
Dr.	7	few	12
drop	3	field	7
during	10	fill	12
each	14	final	3
easily	6	find	11
eastern	5	fine	6
easy	5	first	16
effect	3	food	21
effective	3	for	188
efficiency	5	ford	3
efficiently	4	form	8
either	3	forms	3
electronic	3	forward	8
employees	12	found	7
enclosed	16	four	6
enclosing	3	France	3
enough	5	franchise	8
entire	8	frankly	4
error	4	free	3
establish	4	from	51
establishments	3	full	6
estate	3	further	7
estimate	3	future	9
evaluate	4	general	14
even	6	Germany	3
ever	6	get	9
every	8	getting	3
exactly	7	give	18
excellent	3	given	3
executive	3	glad	18
executives	5	glass	3
expect	5	go	4
experience	6	goal	3
faced	3	goes	3
factory	3	gold	4
failed	3	good	25
family	5	goods	3

Word	Frequency	Word	Frequency
Gordon	3	indeed	3
government	3	individual	3
grades	3	information	15
graduation	3	informative	3
great	6	insurance	35
group	4	interested	3
guarantee	3	interesting	5
had	20	international	6
Hamilton	7	intersection	3
handle	5	interview	4
happy	15	into	8
has	34	introduce	3
have	140	involved	4
having	5	is	115
he	19	issue	5
head	3	it	88
hear	10	items	3
hearing	9	its	15
help	21	Jackson	4
her	4	James	4
here	7	January	11
high	5	job	8
highly	3	just	36
him	4	keep	4
his	13	know	36
home	9	land	4
hope	26	large	8
hospital	4	last	14
hours	3	learn	3
house	8	least	6
how	14	lee	5
however	26	less	3
I	204	let	19
if	80	letter	12
immediately	8	light	4
impact	3	like	23
in	239	limits	4
include	3	line	9
increase	6	live	4
increased	3	local	5

Word	Frequency	Word	Frequency
located	4	moved	3
location	5	moving	4
long	3	Mr.	34
look	9	Mrs.	7
looking	16	Ms.	5
made	6	much	16
mail	10	must	7
mailed	6	my	45
main	7	myself	3
major	5	name	5
make	19	national	9
making	3	near	3
manage	3	necessary	3
management	11	need	21
manager	6	needs	3
manufacturing	8	neighborhood	4
manuscript	5	never	3
many	29	new	60
market	3	newspapers	4
marketing	6	next	14
materials	3	no	13
matter	5	not	50
may	21	note	5
me	36	November	5
medical	4	now	19
meet	6	number	6
meeting	10	obligations	4
members	5	of	325
Michigan	3	offer	5
might	5	office	29
miss	9	often	4
Monday	3	old	3
money	4	on	65
month	3	one	46
months	12	only	18
Moore	3	open	10
more	27	opened	4
morning	3	operate	4
most	13	operations	3
move	9	opinion	5

Word	Frequency	Word	Frequency
opportunity	7	plastic	3
or	35	please	33
order	11	pleased	3
ordinarily	5	pleasure	9
organization	10	policy	4
other	9	position	19
others	4	possible	13
our	100	prefer	3
out	17	premiums	6
over	12	prepare	3
overdue	3	present	6
own	7	presentation	3
p.m.	3	price	5
page	3	prices	6
paid	9	probably	9
Palmer	3	problem	16
pamphlet	4	process	3
paper	3	products	10
part	6	program	5
particular	6	project	4
particularly	3	prompt	3
past	11	property	3
pay	12	public	16
paying	3	publication	6
payment	9	published	3
people	26	publishing	5
percent	9	purchase	3
period	3	purchased	6
person	23	quality	8
personal	5	quickly	7
personally	3	quite	6
place	6	rather	3
placed	4	rating	8
places	3	read	4
plan	15	real	4
plane	3	realize	3
planned	3	reason	4
planning	8	receive	8
plans	9	received	5
plant	3	recent	5

Word	Frequency	Word	Frequency
recently	7	short	4
recommendation	3	should	16
records	5	shows	4
reference	5	sign	4
refrigerator	6	similar	6
regular	7	simply	8
remember	5	since	4
remodeling	3	site	5
representative	5	situation	3
representatives	5	skills	3
request	4	small	8
residents	3	Smith	17
responsibility	4	so	8
responsible	5	some	14
restaurant	9	something	5
restaurants	12	somewhat	3
return	20	soon	25
review	5	sorry	5
right	3	Spain	8
risk	4	speak	3
room	8	speaking	4
sale	3	special	8
sales	15	spend	4
same	3	Springfield	3
satisfactorily	3	stadium	3
say	5	staff	12
schedule	3	state	12
school	11	states	7
schools	5	stationery	3
see	8	stay	4
sell	3	still	3
selling	3	stock	3
send	14	store	15
sending	5	street	11
serve	4	students	8
service	16	subject	3
services	4	successful	3
several	22	successfully	3
she	3	such	10
shopping	4	suitable	3

Word	Frequency	Word	Frequency
supply	6	trouble	4
sure	17	true	3
table	6	turn	3
tables	4	two	9
take	17	type	4
taken	3	under	7
taxes	4	understand	8
tell	10	united	6
ten	7	until	5
text	4	up	6
than	23	uptown	6
thank	18	us	50
that	183	use	9
the	639	used	5
their	20	using	5
them	10	usually	9
then	5	very	35
there	30	visit	7
these	19	want	17
they	21	wanted	3
things	6	was	42
think	11	Washington	8
this	72	way	8
those	8	we	204
three	16	week	8
through	6	weeks	7
throughout	4	welcome	3
time	38	well	7
title	3	were	11
to	416	what	15
today	11	when	34
told	3	whenever	5
too	3	which	18
totally	3	white	4
touch	4	who	29
town	3	why	6
transcript	8	will	167
transfer	4	wish	11
travel	8	wishes	3
trip	5	with	76

Word	Frequency	Word	Frequency
within	5	years	25
women	5	yet	5
work	25	you	387
worked	3	your	168
working	3	yourself	4
worth	3		
would	54		
write	9		
written	3		
year	25		