

VOCABULARY ACQUISITION IN THE TWO-YEAR COLLEGE:  
A COMPARISON OF CONTEXTUAL AND ACONTEXTUAL  
INSTRUCTIONAL APPROACHES

By

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## PREFACE

This study is offered to those persons engaged in the teaching of English in the two-year college in hope that it will help them in some small way to better equip for academic success the larger part of our citizenry who while perhaps inept, yet aspire to higher learning through the community college.

It is dedicated to my parents, Mr. and Mrs. William L. Brown, Sr., who instilled in me a high regard for education and to whom I owe a debt which could never be repaid. This volume is a tribute especially to my father who would have taken the most delight in its realization.

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## CHAPTER I

### INTRODUCTION

#### Statement of the Problem

The adult student's success or failure in higher education is heavily dependent upon his verbal and mental skills. This assertion has been supported frequently by research findings concerning student achievement and intellectual placement studies during the last forty to fifty years. Repeatedly in this research, one finds the significance of vocabulary stressed as both the key to academic success and as the best single indicator of intellectual capacity and academic potential. Researchers such as William Templeman,<sup>1</sup> Harold W. Bernard,<sup>2</sup> C. P. Archer,<sup>3</sup> Robert H. Shaffer,<sup>4</sup> Ben Ashmore,<sup>5</sup> and George Smith,<sup>6</sup> have concluded that those skills typically thought of as "English skills," and those especially involving vocabulary capability, are paramount in importance to intellectual achievement.

Little formal instruction in vocabulary development, however, is evident in higher education, even in the freshman English core. The highly-prestigious final report on The State of the Knowledge About the Teaching of Vocabulary, funded by the Office of Education, U.S. Department of Health, Education, and Welfare and published in March, 1967, concludes that "the number of words many students [in higher education] have available for use is limited and too little attention is given to vocabulary development at this level."<sup>7</sup> While students in higher



education may be exposed to a variety of new vocabulary words through the processes of reading and/or listening to lectures, such exposure adds little to their vocabulary fund. Many college and university professors have relegated the teaching of vocabulary to the public school teacher. Expecting students to grasp advanced concepts and information in the disciplines they teach, these instructors create manifold problems both for themselves and for their students who have only hazy understandings of the material presented them. This tendency in higher education has caused many educators to deplore the situation so aptly reflected in the words of A. M. Withers: "Teachers of literature in . . . colleges have in the main abdicated from bothersome efforts at inculcating or furthering student command of vocabulary." While thinking their "office" is "preeminently to analyze ideas," these instructors neglect the one capacity which makes possible such analysis for their students--their vocabularies.<sup>8</sup>

The reasons this situation exists in higher education are not easily discerned. It would seem obvious that the conscious instruction in vocabulary, especially in the freshman English class, is worthwhile. Earlier studies of freshmen vocabularies, such as those conducted in the twenties by Paul Witty and Mabel Fry, concluded that upon extensive study of the vocabulary employed by university freshmen and upperclassmen in composition, "an appalling paucity of expression was manifested in both groups."<sup>9</sup> More recent studies such as those of Ernest Fossum<sup>10</sup> reached similar conclusions: the vocabularies of college students are deficient in those areas in which the greatest skill is needed. One attitude toward the "paucity of expression" reflected in college students maintains that it is not due to ignorance of a variety of words, but to

a reluctance in students to use them in writing because they do not know how to spell them correctly. Similar theories exist which advance the idea that in speaking, students do not use more words they actually know because of the inability to pronounce them correctly.

However, rather extensive studies by Frank Laycock concluded that "vocabulary complexity shows no correlation with spelling ability" and that "there is no evidence . . . that freshmen inhibit their written vocabulary because of fear of misspelling."<sup>11</sup> Yet the doubt remains whether a conscious, more formalized study of vocabulary in higher education is necessary; such doubt may stem from the attitude that college students increase their recognition vocabularies merely by incidental exposure to new words as readily as they do formal vocabulary study.

However, even if the college instructor of English assumes the need for vocabulary instruction and earnestly determines to incorporate such study into the freshman core, how is he to stimulate the greatest possible vocabulary acquisition? If it is true that adult students in higher education increase their vocabularies by only incidental exposure to new words, how might the instructor best stimulate such exposure? Are there any assurances that this method would yield a greater return than a more formal presentation of new words for study and testing? The attempt to answer these questions creates a problem which the freshman English instructor must face. This study will address itself to this pedagogical dilemma.

## Indications of Research Needs

Given the recognition of the necessity and/or desirability of formal vocabulary instruction in higher education, the instructor is still faced with an almost overwhelming array of methods and techniques currently used in vocabulary instruction. A review of those techniques and some of the studies which have evaluated them is contained in Chapter II of this study.

While a large variety of techniques exists and a number of studies are available which compare the instructional effectiveness of most of them, the bulk of this data is insufficient for the instructor in higher education. The fifth edition of Bibliography of Vocabulary Studies, released in January, 1973, lists over twenty-five hundred studies in vocabulary done during the period from 1874 to 1972. Every conceivable facet of language acquisition is examined; yet only a fraction of these studies deals with the acquisition of vocabulary in adults. An even smaller percentage of these studies utilize an adult population attending the two-year college.

Thus, a pressing need for research in the area of vocabulary instruction lies in the area of adult education in one of the fastest-growing areas of higher education, the two-year college. This study is a contribution to meeting that end.

## Purpose of the Study

The purpose of this study was to discern through previous research in the field and through controlled experiment whether vocabulary acquisition in adult students is greater when the words are introduced

organically within an instructional situation out of which a contextual relationship for the words develops, or introduced inorganically outside a given situation and without a contextual relationship for the words developing.

#### Hypotheses to be Tested

In order to accomplish the purposes of this study, the following hypotheses were tested for significance:

- Ho<sub>1</sub> There is no statistically-significant difference between the language-acquisition change scores of adult students when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.
- Ho<sub>2</sub> There is no statistically-significant difference between the female adults' language-acquisition change scores and the adult males' language-acquisition change scores when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.
- Ho<sub>3</sub> There is no statistically-significant difference between the language-acquisition change scores of adult students 18-22 years of age and the language-acquisition change scores of adult students 23-49 years of age when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.
- Ho<sub>4</sub> There is no statistically-significant difference among the language-acquisition change scores of adult students who have been classified as having high general mental ability, average general mental ability, and low general mental ability when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.

### Limitations of the Study

In order to achieve a relatively high degree of control during the experiment, various limitations were placed on the procedure to render the experimental data/results more comparable and thus more reliable. Without such limitations, the parameters of the data collection process would not be properly defined and thus not lend the data to analysis.

The population of the experiment was limited to an urban two-year college. Specifically, the sample drawn from this population was limited to those adult students randomly-enrolled into six freshman English Composition I classes offered during the fall and spring semesters of 1975-76 by the Humanities Division of Oscar Rose Junior College, Midwest City, Oklahoma. This sample was typical of the population of the college in that there was a mixture of males and females (44 males and 90 females); there was a wide age distribution (from 18 to 49 years of age); and there was a marked variety of general ability levels within the sample. There was also a predominance of Caucasian students.

The experiment was run twice, using three classes each semester. Subsequently, these students' general intellectual abilities were determined by a single administration of the Quick Word Test (QWT), Level 1, Form BM. Their assignment into three general ability levels within each randomly-composed class was limited by the stanine levels into which their performances on this measurement placed them. Thus, the data collected was capable of being grouped for analysis according to age, sex, and general ability level. There being fewer than the desirable number of Black students necessary for significant statistical

analysis (approximately fifty), race could not be considered a significant variable for analysis in this study.

The students' achievement scores were limited to a pre- and post-test administration of the Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B. General achievement levels within the context of this study were indicated by pre- and post-test change scores from these two tests. However, from the core of words extracted from these tests during the treatment phase of this experiment, more select achievement data was derived.

#### Assumptions Made in the Study

Various assumptions were made about the students, testing instruments, and teaching methods used in this study. The most important of these assumptions were the following:

1. The sample of students taught by differing methods and variously grouped were generally representative of the population of students enrolled in the urban two-year college. The broad distribution based on age, sex, and general ability level substantiated this assumption.
2. The sample taught by two different methods were generally comparable in respect to age, sex, and general ability levels.
3. The instruments chosen for measuring the general ability levels of the subjects, the Quick Word Test, Level 1, Form BM, possessed the validity and reliability needed to measure the participants' mental abilities.
4. The instruments chosen for measuring the vocabulary acquisition of the subjects, the Bobbs-Merrill Vocabulary Tests for High

School and College Freshmen Students, Forms A and B, possessed the validity and reliability needed to measure the participants' vocabulary achievement.

5. The research design and the selection of participants controlled the effects of extraneous independent variables.

#### Definitions of Terms

In order to minimize the confusion of multiple interpretations of certain terminology used in this study, the following terms are defined as they were used within the context of this study:

1. Experimental Group A: One of the three English Composition I classes used during the treatment phase of the experiment. This group was taught the sampling core words by incorporating these words into eight lists of fifteen words each; by asking the students to look up these words in a dictionary, learn the definitions, and take a test over each list; and by avoiding the development of a contextual relationship for this exposure to the words.
2. Experimental Group B: Another of the three English Composition I classes used during the treatment phase of the experiment. This group was taught the same sampling core words as Group A, yet by a method which sought to develop a contextual relationship for the exposure to the words. These words were introduced incidently within the instructional/learning situation; they were used in class discussion/lecture, incorporated into assignments, and/or included in reading assignments. This group was not tested over these words during the semester.

The only attention overtly drawn to them was that their meanings were clarified in class.

3. Experimental Group C: Another of the three English Composition I classes used during the treatment phase of the study, but not receiving any further treatment except for being administered the same pre- and post-test as Groups A and B. Acting as a control group, this class received no formal vocabulary instruction or intentional exposure to the sampling core words. Their performance on measurements used in the experiment provided some indication of the test contamination level present in using the same pre- and post-measurement instruments.
4. Low General Ability Students: Those students within each of the three Groups A, B, and C scoring within the one through three stanine levels on the Quick Word Test, Level 1, Form BM.
5. Average General Ability Students: Those students within each of the three Groups A, B, and C scoring within the four to six stanine levels on the Quick Word Test, Level 1, Form BM.
6. High General Ability Students: Those students within each of the three Groups A, B, and C scoring within the seven to nine stanine levels on the Quick Word Test, Level 1, Form BM.
7. Adult Student: Those persons above the age of seventeen enrolled in their freshman year of post-secondary education.
8. Sampling Core Words: Those words chosen randomly from the Bobbs-Merrill Vocabulary Tests for High School and College Freshmen Students, Forms A and B; taught by varying methods; and isolated for statistical analysis of change scores on pre- and post-test measurements of that test.



9. Pretest General Vocabulary Scores: Those student scores taken from the first administration of the Bobbs-Merrill Vocabulary Tests for High School and College Freshmen Students, Forms A and B.
10. Posttest General Vocabulary Scores: Those student scores taken from the second administration of the Bobbs-Merrill Vocabulary Test for High School College Freshmen Students, Forms A and B.
11. Pretest Sampling Vocabulary Scores: Those student scores limited to the experimental sampling core words taken from the first administration of the Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B.
12. Posttest Sampling Vocabulary Scores: Those student scores limited to the experimental sampling core words taken from the second administration of the Bobbs-Merrill Vocabulary Tests for High School and College Freshmen Students, Forms A and B.
13. Organically/inorganically Introduced: These terms refer to two very different methods of introducing words for the purposes of teaching vocabulary. When these words are "worked into" the activities of the class and appear to "grow out of" these activities, they are introduced organically as an apparent need for their use emerges. When these words are superimposed on the class activities, their use appears to be arbitrary; no immediate need is apparent, and their introduction becomes inorganic by not growing out of the immediate activities.
14. Contextual Relationship: This term refers to the result of

placing the vocabulary learner into various working relationships with the word(s) studied. The theoretical premise behind such a practice (suggested by the ideas of Thomas J. Edwards<sup>12</sup>) is that in the attempt at word-mastery, one must (similar to a child's process of language acquisition) be able to place the word(s) learned into the various contextual situations out of which the symbolic meanings are manifested. Among these contextual situations are printed contexts, writer's (reader's) mental contexts, speaker's (listener's) mental contexts, historical contexts, situational contexts. Thus, when a contextual relationship for a word develops, it is assumed that the ramifications of meaning for the learner also increase as his proximity to those words increases in definition.

15. Acontextual Relationship: This term refers to the result of not placing the vocabulary learner into various working relationships with the word(s) studied. Due to the absence of such exposure, the vocabulary learner's proximity to the word(s) studied remains abstract and isolated from any necessary and/or meaningful context.

## ENDNOTES

<sup>1</sup>Among the published opinions of Dr. Templeman are the following: "Vocabulary and Success in College," School and Society, LI (February 17, 1940), 221-224; "Vocabulary and Success in College," Journal of Higher Education, XIII (April, 1942), 213-215; "A College English Teacher Looks at the Study of Latin," College English, IV (May, 1943), 491-499; "Does Vocabulary-Building Have Value?" College English, XVI (March, 1955), 366-368.

<sup>2</sup>Harold W. Bernard, "Some Relations of Vocabulary to Scholarship," School and Society, LI (April, 1940), 494-496.

<sup>3</sup>C. P. Archer, "English Composition: Vocabulary," Review of Educational Research, XIX (April, 1949), 148-149.

<sup>4</sup>Robert H. Shaffer, "The Effect of English Deficiency upon a Student's Adjustment in College," Bulletin of the School of Education, Indiana University, XXIV (January, 1948), 5-34.

<sup>5</sup>Ben Ashmore, "High School Teachers' Marks as Indicators of College Success," Journal of the American Association of Collegiate Registrars, XIV (January, 1946), 219-230.

<sup>6</sup>George Smith, "Opinions Related to College Expectations and Vocabulary Level," Journal of Social Psychology, XXXII (November, 1950), 255-263.

<sup>7</sup>Walter T. Petty and others. The State of the Knowledge About Teaching Vocabulary. U. S. Department of Health, Education, and Welfare, Office of Education (Washington, March, 1967), 24.

<sup>8</sup>A. M. Withers, "Word's the Thing," College English, XI (Summer, 1963), 163.

<sup>9</sup>Paul Witty and Mabel Fry, "The Vocabulary Content of Compositions Written by College Students," Journal of Educational Research, XXIX (February, 1929), 138.

<sup>10</sup>An interesting study of the oral vocabulary of an experimental group of speech students can be found in: Ernest Fossum, "An Analysis of the Dynamic Vocabulary of Junior College Students," Speech Monographs, XI (1944), 315-317.

<sup>11</sup>Frank Laycock, "Spelling Ability and Vocabulary Level of 100 College Freshmen," Journal of Educational Psychology, XLV (December, 1954), 490.

<sup>12</sup>Thomas J. Edwards, "Context Clues and Word Mastery in the Junior College," Junior College Journal, XXIX (March, 1959), 392-398.

## CHAPTER II

### REVIEW OF RELATED LITERATURE/RESEARCH

#### Overview of the Literature

Within the literature surrounding the communication component of English and reading, a major portion is devoted to the teaching/learning of vocabulary. Even a cursory investigation of library card catalogues, of the professional journals devoted to reading and English, and of the bibliographies of English studies will reveal an amazing amount of interest in the teaching of vocabulary. While most of this interest is focused on the elementary and secondary levels of education and/or deals primarily with the learning of foreign language vocabulary, a portion of it deals with the acquisition of vocabulary in higher education.

The following chapter contains a review of selected studies and research in the field of vocabulary literature on the college level; however, it also contains reviews of those studies on other educational levels which were deemed pertinent to the present study. The main purpose of this chapter is to place the present study in perspective within the context of the literature on the teaching/learning of vocabulary. Specifically, it discusses various methods advocated for teaching vocabulary and several of the studies done to determine the relative preferability of those methods.

## Methods Advocated to Stimulate Vocabulary Acquisition

A large portion of the literature dealing with vocabulary is devoted to discussions of the various methods to stimulate its acquisition. Most of these methods fall into four broad categories: instruction through language games and/or word analyses techniques; instruction through dictionary drill utilizing word lists; instruction through extensive assigned reading; and instruction through a combination of techniques. Each of these methods will be discussed in the following section.

Several methods of encouraging vocabulary acquisition utilize language games and/or word analyses techniques. Among the most popular are crossword puzzles, acrostics, Password, Scrabble, antonym-synonym games, vocabulary bees--the list of possibilities seems endless. Yet all emphasize the excitement of language and seek to couch its learning in terms of amusement and intellectual titillation. While these methods are often used with younger children, their employment with older students is also encouraged. George Feinstein, for example, advocated emphasizing the game-playing aspect of vocabulary development in his book To Stimulate Reading, aimed at a college audience. Presented as a self-paced type of supplemental activity for students, Feinstein's "Vocabulary Game" encourages students to "entertain themselves" for a few minutes each day by making "dictionary discoveries" about words.<sup>1</sup> Essentially his approach utilizes lists of Latin or Greek roots, prefixes, and suffixes from which students are challenged to discern current meanings or to coin words of their own. The students are encouraged to

consult the dictionary in the course of their study, but formal use of a dictionary is not required.

Other more formalized studies of word analyses are found in E. L. Dale, Jerry Milligan, and Willard Wynn. Dale and Milligan, two widely-recognized authors on vocabulary development, have written on a wide range of techniques to stimulate vocabulary acquisition, but one method they stress is the "Structural Approach" of word analysis. This procedure undertakes the study of word meanings through analyzing prefixes, suffixes, and roots. It stresses both the study of the origin of a word and the mutations the word has undergone. Such methods help students decipher the meanings of words in other school subjects as well as those of the English course. These methods also increase their sensitivity to language and their awareness of the dynamics of language. Typically, the words for study are isolated from other assignments and obtained from word lists or from examples of words illustrating the linguistic morphology under discussion at a given time.<sup>2</sup>

Willard Wynn suggests a method he calls the "Synonym Method." A large number of words (two to three hundred) are assigned to each student at the beginning of the semester. These words are taken either from reading material the group will study, or dictated in class discussion/lecture. These students are challenged to find as many synonyms as possible for each word. Periodically during the semester, they are tested on selected words and asked to list the synonyms they have found. Wynn admits that this method encourages memorization of words and separates the words from their contexts, but he also maintains that it encourages students to explore their own recognition vocabularies to find more precise and/or descriptive words to use. Hence this method

improves the students' diction in writing and in speaking.<sup>3</sup>

A second major category of vocabulary instruction involves techniques which encourage word acquisition through dictionary drill and the use of word-lists for definition construction. While perhaps not as entertaining as those methods in the previous category, these methods obviously have merit. Variations of these techniques are advocated by Clarence Schneider, Alan Snyder, and again, Willard Wynn. Schneider advocates extensive dictionary drill as a means to increase freshmen students' vocabularies and to make them more responsible users of language. His technique involves extensive initial lecture on the morphology of language, assignments of work to follow up principles introduced in lecture, and subsequent activities and/or assignments which form a sustaining program carried on intermittently throughout the semester. In all phases of this technique, Schneider stresses pronunciation and meaning, utilizes lists drawn from assigned readings, and numerous quizzes.<sup>4</sup> Similarly, Wynn utilizes lists of ten words per week in the "Definition Method" he advocates. After pronouncing each word, the instructor asks the students to learn the correct spelling, part of speech, and complete definition as they appear in the dictionary. On tests at the end of the week, the instructor asks the students to recall this information and to use the words in sentences which illustrate the meanings of the words. Occasionally he requires that they spell the proper pronunciation of each word by using common diacritical marks. As an enforcement for this method, Wynn attempts to use these words in class discussion and/or lecture. While this method, Wynn confesses, is "hard," he feels it gives students "a calm certainty of accomplishment" and is decidedly effective in increasing their vocabularies.<sup>5</sup>



Alan Snyder also uses a dictionary drill method employing lists of words, but his method attempts to place the students into more of a contextual relationship with the words than does Wynn's or Schneider's methods. His technique is composed of five stages. A list of words arranged alphabetically is given to each student. The instructor then pronounces, defines, and illustrates each word using abstract examples. Next, the students look up each word in the dictionary and write in their own words the definitions of each word. The following class period an open-book examination is given wherein twenty statements are read by the instructor. These statements do not define the words; they only refer to them. The students record the word to which the statements refer. These words also are introduced intermittently in lecture or into class discussion. Snyder maintains that this method causes students to handle words in context, not as isolated synonyms or antonyms. It provides some training in thinking of words as ideas, in handling words in context similar to the printed page. Thus, he feels it goes beyond the routine dictionary word list drill technique for word-mastery.<sup>6</sup>

A third major category of vocabulary instruction techniques involves those which encourage word acquisition through the use of extensive assigned reading. Reading has long been regarded as a primary means of increasing one's vocabulary; in fact, in most instances the study of vocabulary is considered the proper domain of the reading class and a large number of the articles and experiments concerning vocabulary acquisition are contained in reading journals. Among those who actively support the use of reading assignments for the stimulation of vocabulary acquisition are Katherine Buxbaum and Mary Kay Dodson. Dodson maintains

that the use of vocabulary lists is just about useless. Rather, she utilizes the assigned reading for the course to stimulate vocabulary learning. In most of the reading assigned to students Dodson underlines key words which she wants them to learn. They are then asked to read each selection twice: once for the gist of the passage, and a second time to decipher the meanings in context of the underlined words. While they may use the dictionary, the students are encouraged to determine the meaning of each word by using the context clues she discusses earlier in the semester. Dodson assigns wide reading in selections which do not have underlined words. She reports that often the success of this method is suggested by the students themselves underlining words which they will learn by following the previously-learned method, this time on their own.<sup>7</sup>

Similar to Dodson, Buxbaum also deplores the use of instructor-prepared lists to teach vocabulary. She feels that "words in context, not isolated words, should be our chief--indeed, almost our only--concern."<sup>8</sup> Her method involves extensive reading assigned in both fiction and non-fiction. In their reading, the students are encouraged to make lists of the words they cannot discern the meaning of as they appear in the context of the reading selection. Looking over these lists, the instructor adds more dimension to the existing dictionary definitions and informally tests the students as a whole on those words which appear most frequently. Both of these methods utilize a type of list and/or specific word approach to vocabulary instruction; yet in each instance, the words are inherently necessary in the context of assigned reading. Both attempt to encourage wide student reading in the attempt to stimulate further, often independent vocabulary

acquisition.

As with any attempt at instruction, no one strategy for promoting vocabulary acquisition is rigidly divorced from all others. In fact, a fourth category of techniques used to foster vocabulary acquisition actively attempts to incorporate a variety of methods into a single instructional strategy. In some cases, these methods complement each other; in other cases, they are designed to accommodate the differing learning styles of a diverse student population. Among those authors who recognize the advantage in a variety of instructional methods are Anthony Manzo, Regina Heavey, and Julia Sherbourne. Utilizing both the synonym method of Willard Wynn and the dictionary method of Schneider and Snyder, Sherbourne combines these with the assigned reading method of Buxbaum and Dodson in order to provide the greatest range of exposure possible to new words. While she admits that "the best teacher of vocabulary is direct experience with words," Sherbourne realizes that due to a lack of time, "substitutes must be found." Thus, she maintains that virtually any method can be helpful if it is "used with care and in combination with" other methods.<sup>9</sup> Similarly, Regina Heavey asserts that because of the variety of requirements for successful vocabulary instruction, an equally large number of methods must be employed in concert. She maintains that college-bound students today differ markedly among themselves in intellectual capacity and cultural background. Thus, there is no one body of words or set of techniques for introducing them that is completely satisfactory. Given the need for vocabulary instruction to be based upon an awareness of need, presented in context and not isolation, proceed from the known to the unknown and be heuristic in that it conditions the student to become his own teacher, the methods of

stimulating vocabulary acquisition must be marked by diversity.<sup>10</sup>

In response to the need for variety of methods for vocabulary instruction, Anthony Manzo has compiled an extensive study of the various methods employed to teach vocabulary. Over a dozen methods are discussed in this study, ranging from Etymological Approaches and Word Derivation Methods to Prepared Word-Lists, Content Class Strategies, and Analyses of Contextual Uses. While he makes no attempt to advocate one strategy over another, his detailed illustration of each method and his rationale for the use of each indicate that he recognizes the need for a combination of methods in seeking to bring about relatively the same ends--vocabulary acquisition.<sup>11</sup>

Thus, within the large body of literature dealing with vocabulary, one finds many methods of promoting vocabulary acquisition. While each author undoubtedly feels that his espoused method is indeed the best, one must turn to research in the area of vocabulary instruction to discern what methods, if any, might be considered "best." The following section investigates some of those studies.

#### Experiments Determining Relative Preferability of Methods

Given the vast array of methods from which to choose in the attempt to stimulate vocabulary acquisition in the educational setting, one is struck by the seemingly endless variety of strategies possible. Yet as one reads more extensively in the literature of vocabulary development, he becomes aware of certain commonalities among these methods, especially concerning the means by which the student-learner is exposed to new words. This exposure is characteristically done by one of three methods:

by introducing the words to be mastered directly and by interjecting them inorganically into the educational setting; by introducing them indirectly and causing (or in some cases allowing) them to appear to develop organically out of the educational setting and activities; or by introducing them through a combination of these methods. In the first case, the student-learner does not tend to develop a contextual relationship for the new words to which he is exposed; in the second case, a contextual relationship tends to develop usually from the first exposure; in the third, a contextual relationship tends to develop for some words and an acontextual relationship results for others.

These three commonalities will provide the framework for the following discussion of selected experimental studies into the effectiveness of various methods of vocabulary instruction. Specifically, the following discussion will focus on those studies testing methods of instruction which expose the student-learner to new words directly through the use of word-lists, dictionary drills, programmed instruction, and other inorganically-designed means; those which expose the student-learner to new words indirectly through organically-designed educational activities; and those which expose the student-learner to new words through a combination of these two methods.

A number of experimental studies have been done testing methods of vocabulary instruction which expose student-learners to new words directly through the use of word-lists, dictionary drills, programmed materials and other means which are inorganically interjected into the educational setting. Some of those researchers are the following: J. Estill Alexander and Harry V. Barnard (1971), Philip R. V. Curoe (1939), I. W. Miles (1945), A. C. Eurich (1932), and Sidney J. Rauch

(1971). Each of these studies has produced evidence generally supporting the effectiveness of the method tested. In 1968, Alexander and Barnard<sup>12</sup> conducted a study comparing the relative effectiveness of programmed vocabulary materials and conventional dictionary/word-lists materials. The sample of subjects utilized in the study was drawn from the heterogeneous population of students enrolled in compulsory remedial reading courses on the college level. The conclusions reached in the experiment were inconclusive as to which method produced greater results. No significant difference was found between the means of the two groups tested; in addition, mean gains were similar. At the end of the experiment, however, each subject filled out a questionnaire concerning the work he had done in the study. Results of the questionnaire indicated that attention and interest levels were higher in the programmed materials group. From these findings, Alexander and Barnard conclude that programmed vocabulary instruction with its more direct mode of presentation seemed more effective than the other method tested.

The studies of Alvin C. Eurich also found data supporting the preferability of direct methods of word exposure. During the 1929-30 school year, Eurich conducted an experiment with 429 college freshmen enrolled in English Composition I at the University of Minnesota. Of this number, 196 were subjected to special vocabulary drills that involved the study of one hundred words per week; 233 students were designated as a control group and given no additional vocabulary study. Posttest scores indicated that the average score of the experimental group was 48 at the beginning of the year and 62 at the end. For the control group, the average score at the beginning was 47 and at the end was 49. Thus, concerning the merits of a direct introduction of words

for mastery, Eurich concludes that vocabulary instruction is "more effectively done by working directly and by providing specific drills" than it is by "attempting to aspire to it by indirect means."<sup>13</sup>

The experimental studies of Philip R. V. Curoe, while perhaps not as sophisticated as some others in the field, nevertheless produced results which support the direct method of vocabulary word exposure. During the years 1939 and 1940, Curoe conducted two studies in vocabulary acquisition with students in educational methods courses at Hunter College. One sample of college seniors was designated as a control group and received no vocabulary instruction; another identical sample was taught vocabulary directly through what Curoe calls the "Today's Words" technique. Initially each group had been given the same test of vocabulary mastery. During the experiment, Curoe set aside three minutes at the beginning of each class period to expose students to five new words. He wrote the words on the board, discussed the meanings, pronunciation, and syllabication of each word and encouraged the students to use them frequently. No further mention was made of "today's words" on future days. At the end of the semester, students in both groups were retested over the same initial group of words. Curoe reports that those receiving the continuing exposure to new vocabulary words "significantly outscored the control group." From this data and that of a repetition of the experiment (more refined in design) the following year, Curoe concludes that college students can increase their active vocabularies with brief, yet constant, attention directed toward that end.<sup>14</sup>

Those studies discussed above support the more direct method of vocabulary instruction which exposes the student-learner to new words through means essentially divorced from the regular activities within

the educational setting. Other studies, however, have produced results which support modes of vocabulary instruction of a quite different nature. Several experimental studies have been done which test those methods of vocabulary instruction which expose student-learners to new words indirectly through instructional strategies which appear to grow out of the regular activities of the educational setting. Among those who have conducted such studies are the following: Walter Burchard Johns (1936), James Douglas Young (1951), C. L. Harlan (1926), and Sidney J. Rauch (1971).

Those studies done by Young and Rauch are primarily concerned with testing specific methods of organic vocabulary instruction. Young attempted to discover what effect presenting new words in a meaningful context had upon the learning of those words. Yet not only does his study attempt to determine the value of context in building vocabulary, but it also seeks to determine whether words are learned most readily when encountered in material read orally, read silently, or listened to being read. His study employed a sample of 450 students from all academic levels at George Pepperdine College. Initially the subjects were given a standardized vocabulary test of 210 items. After having been grouped into three numerically equal experimental groups, the subjects were then exposed to an original story (written by the researcher and incorporating all 210 words from the pretest) by three distinct means: one group read the story silently; one group read the story aloud; one group heard the story read to them. Immediately following treatment, each subject was administered the same standardized vocabulary pretest as a posttest measurement. Young reports tremendous gains between the pre- and posttest administration of the test; he



suggests that this is adequate proof that presenting words in meaningful contexts is an extremely effective means of vocabulary instruction. Of those three means of encountering new words (reading silently, reading aloud, or listening), those in the first group demonstrated greatest gain.<sup>15</sup>

Less formal in design, while perhaps no less reliable, the studies of Sidney J. Rauch also attempt to determine the viability of what he calls "The Dilettante Approach." Similar to the method advocated by Shirley Aaronson,<sup>16</sup> this method exposes student-learners to new words through the reading and/or discussion processes inherent in regular class activities. Rauch's study employed students in a college reading improvement class at Hofstra University. Twenty minutes of each class session were devoted to student discussion, review, or analysis of a current play, movie, television program, novel, or article. Topics were selected at least one week in advance; students were encouraged to select those words and phrases that seemed to make the critics' point of view most readily communicated. While Rauch does not appear to have been concerned with the apparent variables involved in the study, he reports that the results from his study indicate that his methods had been "most successful" and that the students involved had demonstrated an increased mastery of vocabulary and an increased enthusiasm for wider exposure to the written word.<sup>17</sup> Similar to Young, Rauch produces these results through the use of specific, yet indirect means of exposing student-learners to new words for mastery.

While these studies tested methods of indirect means of vocabulary study of which the student-learner was aware, other studies have tested indirect means of stimulating vocabulary acquisition where no conscious

method was apparent to the subjects. Writing of the intentions of his own studies, Walter Burchard Johns comments that he attempted

to discover whether a procedure can be set up in a university class and administered in a way that will secure an amount of vocabulary learning beyond that which normally ensues when no especial attention is given to the matter.<sup>18</sup>

Johns wished to see what growth in vocabulary would occur under usual classroom conditions in the progress of a course when new words were introduced organically through the regular activities of the class.

During the study, Johns asked students enrolled in an upper-division educational psychology course to turn in lists of unknown words they encountered in their reading of the text. In addition, he asked that they look up and write out the definitions of each word before turning in the lists. This procedure ultimately produced a working list of 502 words. Johns made no attempt to teach these words to the class as a whole; however, he cautioned them that he would test them over some of the master list of words periodically. Once a month for four months, he administered a test of twenty words randomly-chosen from his master list. At the end of the semester he administered a test of forty-one words. Of the 1107 responses on these tests, 858 were correct, a percent score of 77.5. From this study, Johns concludes that

under ordinary class procedure where no particular stress is placed on learning vocabulary, there may be a resultant amount of mastery of about 53 percent of the words more or less peculiar to the subject.<sup>19</sup>

During the following year, Johns began preparation to conduct a second experiment; this time he utilized a class of freshmen enrolled in educational orientation. He asked students in this class to make lists of unknown words they encountered in their reading of the text. From

the fifteen-chapter text, Johns obtained a list of 1350 words. The following year in the same class and using the same text, Johns gave students a list of ten vocabulary words for each of the fifteen chapters, a total of 150 words. These he asked them to look up and return the definitions found to him for comment and correction. During the semester, there were no tests over these words and no suggestion that they would ever be tested over them. At the end of the semester, the students were tested over half of the words randomly-selected from Johns' master list. The average gain fell short of that made by the first experimental group two years earlier. While his experimental design could not substantiate his opinions, Johns concluded that probably the difference in age and educational levels of the two groups made a difference. Also lacking in this group, yet inherently a part of the previous experimental group, was the element of motivation provided by testing the first group periodically.

Both of these studies were designed to test indirect means of stimulating vocabulary acquisition whereby new words were introduced organically through regular classroom activities. While one could question whether either actually places "no especial attention" on learning vocabulary, as Johns purports to do, a third experiment he conducted with freshmen at the University of Nebraska comes closer to realizing this goal. In this study the student participants are neither enrolled in his courses, nor exposed to the words tested in any other way. Thus, this study seeks to test whether there is an appreciable enlargement of general vocabulary as a result of mere "first semester's studentship."<sup>20</sup>

At the beginning of the school year, 520 freshmen enrolled in the Arts and Science College and 245 freshmen enrolled in the Teachers College (both of the University of Nebraska) were given the Ohio State University Psychological Test, Form 17. One part of the test is an eighty-item vocabulary test. At the end of the semester, those 400 Arts and Science freshmen and 197 Teachers College freshmen who were enrolled in English classes, were given a second administration of the vocabulary section of the Ohio State test. Since these 597 freshmen were enrolled in three levels of composition courses (ranging from remedial to honors classes), the resulting data was able to be analyzed according to ability levels. On the basis of his experiment, Johns concluded that there was measurable gain in vocabulary in all groups tested; however, the highest gain was evidenced in the 14.83 gain of those students having the highest level of ability.<sup>21</sup>

From all three studies he conducted, Johns was able to conclude that advanced college students acquire about half of the vocabulary of their subjects under ordinary class procedure and may acquire three-fourths with added motivation to learn new words. He also concluded that freshmen in the ordinary course of their college work do increase their vocabularies, perhaps upward to 2000 words a semester. He further concluded that the higher the native ability of college students and the higher the initial vocabulary levels, the greater the gains which result from studentship. Thus, his experimental work supports the theory that word-mastery can be stimulated by indirect means and with no conscious effort being evident in the educational setting to stimulate its growth.

Thus far the experimental studies discussed have sought to evaluate the effectiveness of instructional methods of vocabulary teaching which

either expose student-learners directly to new words through inorganically-designed means, or those which expose student-learners indirectly through organically-designed educational activities. A third category of the experimental studies in vocabulary instruction concerns methods of instruction which incorporate variations of both previously-discussed methods. Among those researchers testing methods which combine these techniques are the following: Glenn M. Blair (1941), Richard Braddock and Sidney Kraus (1958), W. S. Gray and E. Holmes (1958), J. R. Shannon and Marian A. Kittle (1942), and Alfred Westfall (1951).

The most recent of these studies on the college level is the experiment conducted by Braddock and Kraus with low-ability freshmen at the State University of Iowa. Citing conclusions from other studies that "vocabulary ability is 'a centrally determined function' acquired independently of the mode of presentation"<sup>22</sup> and that "a student's vocabulary grows whether or not he gives the matter much attention, but . . . twice as fast if he gives it specific attention,"<sup>23</sup> Braddock and Kraus set out to determine whether or not supplementary study of vocabulary would actually accelerate growth in vocabulary. For the experiment, they chose two classes of a four-hour remedial communication skills course which is composed of entering freshmen placed in the lowest decile by placement tests. One group was given extensive vocabulary study by the direct method of word-lists and drill. Periodically they were tested over groups of words, and twice during the semester all words studied up to that point were reviewed and retested as a whole. To test the results of their experiment, they compared the placement and final vocabulary scores of the experimental group actively taught vocabulary with the control group having had no vocabulary study. They

found from an analysis of the data that there was no significant difference between the vocabulary acquisition of the experimental group and the control group.

The following year, Braddock and Kraus conducted a second test with the same population sampling. This time instead of instructor-prepared word-lists presented directly to the students, they allowed the students to prepare lists of words they had encountered in their reading and/or class discussion. This experiment would focus, then, on a method which presented words indirectly through the organically-designed materials and/or activities of the class as a whole. Each week the students were asked to turn in for instructor comment and correction their lists of unknown words for which they had looked up the definitions. At the end of the semester, the same type of measurements and data analysis was applied to this experimental group as had been applied to those of the earlier study. Again, they found no significant difference between the vocabulary acquisition of the experimental group and the control group. On the basis of these two studies, the researchers concluded that "acceleration of vocabulary development is associated with general academic strength" and that "the more intelligent the student, the more his vocabulary development will be accelerated." They further suggest that perhaps "special vocabulary study is wasted on the lowest ten percent or so of entering freshmen in colleges with unselective admission policies."<sup>24</sup> While such conclusions may seem ill-founded on the basis of rather limited study, their implications for the study of vocabulary in areas of higher education with open admissions, such as the two-year college, are striking.

An experiment similar to the second study of Braddock and Kraus was conducted by Glenn M. Blair with junior and senior students at the University of Illinois. While the two population samplings are, of course, quite different, the experimental findings, although dissimilar, may have similar implications. For his experiment, Blair used two sections of secondary education classes and two sections of educational psychology classes. The control groups were enrolled in equivalent sections of the same classes. All groups in the experiment were given the Nelson-Denny Reading Test, Form A, as a pretest and Form B of the same test as a posttest measurement. The control groups received no further instruction in vocabulary, but carried on their regular class activities. The experimental groups, however, were actively engaged in vocabulary study. Each time the class met, students in the experimental group were asked to hand in lists of unfamiliar words which they had encountered since the last class meeting. These words were to be defined both on the lists handed in and in notebooks which the students would keep until the end of the semester.

At the end of the semester, scores on the Form A Nelson-Denny pretest and those on Form B were subjected to an analysis of variance. Blair found that the experimental group actively studying words as they appeared in the context of reading assignments made an average percentile gain of 3.6. The control group, reading relatively the same materials and yet not receiving any attention to vocabulary study, made an average percentile gain of only 1.0. Thus, Blair concludes that attention given to the acquisition of vocabulary produces results which would not be normally secured as the outgrowth of a semester's work in the university.<sup>25</sup> Blair's study, then, produced positive results in vocabulary instruction

which using indirect methods of student-prepared word lists and dictionary study; yet the difference in population sampling (upper-classmen of presumably average to high mental ability) does not nullify the conclusions of Braddock and Kraus' study utilizing low-ability students in the freshman year. Thus, the methods themselves are not proven totally ineffective.

Two experimental studies with secondary and elementary students were conducted by William S. Gray and Eleanor Holmes (1958) and by J. R. Shannon and Marian A. Kittle (1942). While these studies utilize a population sample dissimilar from that of concern in the present study, the design of their studies and the similarity of their purposes to the present study lend them to inclusion in this review.

Gray and Holmes' study of fourth grade pupils sought to determine whether it was more effective to focus vocabulary instruction directly on the words taught, or to rely on the indirect impetus vocabulary growth gained while study was directed to other ends. Pupils chosen for the study were enrolled in the University Elementary School of the University of Chicago. Preceding the experiment, all subjects were tested to establish their mental age, mental alertness, general vocabulary mastery, and specific mastery of words selected for study during the experiment. The students were then assigned to one of three groups: those of higher ability were then assigned to one of three groups: those of higher ability were placed in one experimental group; those of lower ability were placed in a second experimental group. A third group was composed of students from all ability levels; these students became the control group for the study.



Up to a point, the instructional procedures for all three groups were the same: they were assigned a unit of study consisting of several selections and questions to answer over each selection. No effort was made to encourage vocabulary acquisition. Following the initial period, however, the control group was given no further guidance in completing the unit. Yet in the two experimental groups, the teacher provided elaborate assistance in vocabulary acquisition. Students were encouraged to discuss unknown words from the readings; the teacher wrote the words on the board, pronounced them, and defined them thoroughly; and the teacher encouraged as much as possible the creation of a contextual relationship for each word discussed. Upon completion of the experimental unit, a retest was made of the vocabulary words selected for study. Results indicated that while specific guidance in vocabulary acquisition is of some value to students of lower ability, those of higher ability achieved higher gains than both those receiving treatment and those receiving none. Generally, those students who received direct vocabulary instruction gained twice as much as those who had received indirect, or no instruction. Thus, Gray and Holmes concluded that the direct teaching of vocabulary is of great value and importance, but that even incidental emphasis on the meanings of words is productive in promoting vocabulary growth.<sup>26</sup>

Unquestionably the most complex study of using a variety of direct and indirect methods of exposing student-learners to words for study was conducted by J. R. Shannon and Marian A. Kittle. Essentially, their study sought to determine whether students increase their vocabularies more through direct means of exposure to new words, such as word-lists, or through indirect means, such as reading and discussion. The

population sample for their study was taken from students enrolled in the Laboratory School of Indiana State Teachers College in grades eight through twelve. On the basis of similar performance on standardized vocabulary pretests, these students were grouped into seven groups. Each of these seven groups was taught by different methods the same group of vocabulary words. The methods used for testing were the following:

1. Group 1 was taught the words directly through the use of mimeographed lists of words they looked up on their own in the dictionary.
2. Group 2 was taught the words directly through the use of mimeographed lists of words the teacher discussed and defined for the students.
3. Group 3 was taught the words indirectly through the use of reading assignments containing the sampling words. They received no help except for being cautioned to look up all unknown words they encountered.
4. Group 4 was taught the words indirectly through the use of reading assignments containing these words. They were allowed to use no dictionaries, but were required, rather, to ask the teacher to define for them individually the unknown words they encountered.
5. Group 5 was taught the words through both direct and indirect means. Similar to Group 3, this group was given reading assignments containing the sampling words; yet for this group the words were underlined. These words they looked up for themselves in the dictionary.

6. Group 6 was taught the words through both direct and indirect means. Similar to Group 5, this group was given reading assignments with the sampling words underlined. However, they were required to ask the teacher to define for them individually all unknown words.
7. Group 7 was taught the words through both direct and indirect means. They received the same reading assignments with the words underlined; yet they were required to look up all unknown words in a glossary given them along with the reading assignments. These glossaries contained the definitions of the sampling words as they appeared on the pretest.

Upon completion of the instructional phase of the experiment, all students were administered the same specific vocabulary test used as a pretest. The data resulting was subjected to analysis and supported the following results: the pretest-posttest change scores for Group 7 were significantly higher than all groups except Group 2, in which case they were only slightly higher. Group 2 produced scores distinctly higher than all the remaining groups. Groups 1 and 3 produced scores lower than any of the other groups. From these results, the researchers were led to few reliable conclusions: students who are taught the meanings of words directly by their teachers or indirectly/directly exposed to and taught the meanings of words through the use of reading/glossary-reference learn more than those presented the same words directly and told to look up their definitions. Generally, their study supports the view that attempting to expose students to large numbers of words indirectly through organic means has no advantage over the direct introduction/definition of those same words.<sup>27</sup>

Thus, within the large body of literature dealing with experimental research into the preferability of various instructional methods for stimulating the acquisition of vocabulary, one finds many conclusions, but few consenses. Those conclusions and further research implications discerned by this researcher are contained in the following section.

#### Conclusions: Implications for Further Research

It is evident from the preceding discussion that there is wide divergence in the findings of the studies in vocabulary as well as in the methods, techniques, and criteria used. The studies discussed have ranged from those dealing with methods organically-designed to introduce new words indirectly into educational activities, to those which expose student-learners directly to new words through inorganically-designed means. Several studies have even sought to test methods which utilize a combination of these two approaches.

None of these studies, however, adequately satisfies the needs which have precipitated the present study. While those studies of Alexander and Bernard, Eurich, and Curoe offer evidence that direct means of vocabulary instruction can produce satisfactory results with adult students, they tell us little more than that the specific methods tested were more successful in stimulating vocabulary than the absence of any type of instruction would be. Similarly, while those studies of Young, Rauch, and Johns offer evidence that indirect means of vocabulary instruction can produce results with adult students, they also tell us that adult students generally increase their vocabularies automatically through the educational process itself--while this increase is somewhat greater when some conscious effort is directed toward that end. Testing

the indirect means of promoting growth in vocabulary, Blair, Braddock, and Kraus conclude that those of higher mental ability increase their recognition vocabularies better than those of lower ability; however, they also tell us that higher ability students also increase their vocabularies as a result of merely becoming educated and at a faster rate than those of lower ability. Those studies by Gray and Holmes and by Shannon and Kittle, while comprehensive in the methods they test and yet perhaps no more conclusive than the other studies, are valid only with adolescent and early-adolescent populations.

Thus, one can only conclude from this review of the literature of vocabulary instruction and research that no definitive indications of the preferability of methods for promoting the growth of vocabulary currently exist. Certainly when one considers that fewer than a half dozen studies are concerned with vocabulary acquisition/instruction in the two-year college, the need for further study in this area of higher education becomes obvious. While future research could well build upon the foundations these studies have laid, however inadequate they may be, the contribution this study could make to future researchers and instructors is unquestionable.

## ENDNOTES

<sup>1</sup>This section of Feinstein's book is reproduced in "Latin and Greek in the Freshman Vocabulary," College English, XI (January, 1950), 218-220.

<sup>2</sup>For a more detailed discussion of these techniques, see the following source: Techniques of Teaching Vocabulary, Palo Alto: Field Education Publications, Inc., 1971; or "Techniques in Teaching Vocabulary," Reading Improvement, VII (Spring, 1970), 3-7.

<sup>3</sup>Willard Wynn, "Words, Words, Words," College English, II (December, 1940), 257-260.

<sup>4</sup>Clarence Schneider, "Word Study for College Freshmen," California Journal of Secondary Education, XXV (April, 1950), 232-237.

<sup>5</sup>Wynn, pp. 261-262.

<sup>6</sup>Alan Snyder, "Open-Book Vocabulary Test," College English, XIII (May, 1952), 458-460.

<sup>7</sup>Mary Kay Dodson, "A Context Approach to Vocabulary Study," Reading Improvement, VIII (Fall, 1971), 49-51.

<sup>8</sup>Katherine Buxbaum, "Double-Barreled Vocabulary Test," College English, IV (April, 1943), p. 436.

<sup>9</sup>Julia Sherbourne, "Handle With Care," College English, XV (March, 1954), 355-356.

<sup>10</sup>Regina Heavey, "Vocabulary Development for the College Bound," Journal of Developmental Reading, XI (Summer, 1963), 281-283.

<sup>11</sup>Anthony Manzo, Teaching Strategies and Exercises for Vocabulary Development. ERIC Report No. ED 092 892. 1973.

<sup>12</sup>J. Estill Alexander and Harry V. Barnard, "A Programmed vs. a Dictionary Approach in Vocabulary Improvement," Improving College and University Teaching, XIX (Spring, 1971), 106-109.

<sup>13</sup>Alvin C. Eurich, "Enlarging Vocabularies," Journal of Higher Education, III (1932), 317.

<sup>14</sup>Philip R. V. Curoe, "An Experiment in Enriching the Active Vocabularies of College Seniors," School and Society, XLIX (April, 1939), 522-524. For a discussion of Curoe's second study, see Philip R. V. Curoe and William G. Wixted, "A Continuing Experiment in Enriching the Active Vocabularies of College Seniors," School and Society, LIII (October, 1940), 372-376.

<sup>15</sup>James Douglas Young, "An Experimental Comparison of Vocabulary Growth by Means of Oral Reading, Silent Reading, and Listening. (Unpub. Doctoral Dissertation, University of Southern California, 1951.)

<sup>16</sup>Shirley Aaronson, "A Novel Approach to Vocabulary Instruction," Journal of Reading, XIV (April, 1971), 476-479.

<sup>17</sup>Sidney J. Rauch, "Improving Vocabulary Skills at the College Level," Reading World, XI (December, 1971), 120-129.

<sup>18</sup>Walter Burchard Johns, "The Growth of Vocabulary Among University Students With Some Considerations of Methods of Fostering It," Journal of Experimental Education, VIII (September, 1939), 92.

<sup>19</sup>Johns, p. 93.

<sup>20</sup>Johns, p. 95.

<sup>21</sup>For a similar experimental study done on a smaller scale with freshman psychology students, see: C. L. Harlan, "The Technical Vocabulary of Psychology," Journal of Educational Psychology, XVII (November, 1926), 554-557.

<sup>22</sup>Irving H. Anderson and Grant Fairbanks, "Common and Differential Factors in Reading Vocabulary and Hearing Vocabulary," Journal of Educational Research, XXX (1937), 317-324. As quoted in Richard Braddock and Sidney Kraus, "An Experiment in Accelerating the Vocabulary Growth of Remedial Students," College Composition and Communication, IX (December, 1958), 216.

<sup>23</sup>Harold W. Bernard, "An Experiment in Vocabulary Building," School and Society, LIII (1941), 742-743. As quoted in: Braddock and Kraus, 216.

<sup>24</sup>Braddock and Kraus, p. 219.

<sup>25</sup>Glenn M. Blair, "An Experiment in Vocabulary Building," Journal of Higher Education, XII (February, 1941), 99-101.

<sup>26</sup>William S. Gray and Eleanor Holmes, "Should Vocabulary Be Taught Directly or Incidentally?" in Research in the Three R's. (Eds.) C. W. Hunnicut and W. J. Iverson. New York: Harper and Bros., 1958. 147-153.

<sup>27</sup>J. R. Shannon and Marian A. Kittle, "An Experiment in Teaching Vocabulary," Teachers' College Journal, XI (March, 1954), 1-6.

## CHAPTER III

### EXPERIMENTAL METHODS AND PROCEDURES

In the present study, various experimental procedures were followed to determine whether vocabulary acquisition in adult students is greater when words are taught organically within an instructional situation out of which a contextual relationship for the words develops or inorganically introduced outside a given situation and without a contextual relationship for the word developing. The experiment was conducted twice (once during the fall semester of 1975 and again during the spring semester of 1976) with classes of English Composition I at an urban two-year college. The experiment included one hundred thirty-four (N=134) adult students, ninety-eight (N=98) of whom were taught using contrasting methods of vocabulary instruction. Pretest-posttest-change scores of their performances were compared to test four null hypotheses.

This chapter contains an explanation of the methods and procedures used in the experiment. These methods and procedures were classified as (1) Pre-Experimental Procedures, (2) Experimental Instructional Procedures, and (3) Data Collection and Analysis Procedures. Each of these areas is discussed in the following chapter.

#### Pre-Experimental Procedures

The pre-experimental procedures included all those tasks which were completed precedent to the experimental instructional phase and which



were done in order to implement the projected research design. The most important of these tasks are described in the following sections.

### Choice of Research Design

The initial pre-experimental task was to create a research design capable of testing the assumption which precipitated this study: that in teaching vocabulary to adult students the use of word lists to define and memorize is as effective a method of instruction as exposing the students to new words in the process of reading, writing, or other class assignments or activities.

The design chosen for this experiment involved the administration of standardized vocabulary tests to two comparable classes of freshmen adults enrolled in English Composition I on the two-year college level. Record of their general performance on these tests would be made. Then from these tests a sampling of words would be randomly-selected which would be taught to the two classes using varying methods of instruction. Record would be also made of their performance on the sampling of words from each test. Upon completion of the treatment phase of the experiment, the same tests would be administered a second time, and the variance in both general and sampling performances would be noted. By comparing the amount of gain shown by each class, the researcher hoped some indication would become evident of which instructional method produced the greater vocabulary acquisition. In order to perform more detailed comparison of the data, the researcher would group the student participants for comparison by general ability level, age, and sex. It was upon this general research design that the following decisions were made concerning the choice of testing instruments and experimental

instructional strategies to be employed.

### Selection of Testing Instruments

In order to compare the pretest-posttest-change scores by general mental abilities and to provide a controlled sampling of words to utilize in the study, the experimenter chose three vocabulary-based measurements.

#### Selection of an Instrument For Measuring General Mental Ability.

The experimenter selected one group test of general mental ability for use in the study. The test chosen was the Quick Word Test (QWT), Level I, Form BM, designed by Borgatta and Corsini in 1964. The QWT is composed of one hundred words of varying difficulty. The examinee chooses one of four words which best defines the stimulus word.

The primary purpose of the QWT is to provide a substitute measure (or an estimate of performance) for longer and more time-consuming measures of general mental ability. This test yields scores which correlate highly with other measures of general mental ability and measurable intelligence. The correlation of the QWT with other intelligence measures is as follows: (1) Otis-Lennon Mental Abilities Test --  $r = 0.892$ ; (2) Wechsler Intelligence Scale for Children (revised) --  $r = 0.862$ ; (3) Wechsler Adult Intelligence Scale --  $r = 0.844$ ; (4) Stanford-Binet Intelligence Scale (Form L-M) --  $r = 0.813$ .

In the seventh edition of his Mental Measurements Yearbook, Buros reports the concurrent validity of the QWT as ranging from 0.738 to 0.914. The test-retest reliability is reported as varying from 0.931 to 0.962. These validity and reliability indices are more than sufficient

for the present study. A copy of the QWT which was used in this study is presented in the appendices.

#### Selection of an Instrument for Measuring Vocabulary Achievement

Gain. The Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B, were chosen for the pre- and posttest measures of vocabulary achievement. These tests are designed primarily to determine the extent of vocabulary development among high school students and college freshmen. Each test is composed of fifty ( $N = 50$ ) sentences or clauses which contain an underlined word. The respondent is asked to choose one of five words which best defines the underlined word.

Buros reports the concurrent validity of these tests as ranging from 0.793 to 0.822, while the publishers of the tests report validity indices ranging from 0.750 to 0.880. Buros reports the reliability of these tests as ranging from 0.883 to 0.997. The test publishers report test reliability indices ranging from 0.903 to 0.963. These reliability and validity indices are more than sufficient for the present study. Copies of Forms A and B of these tests are presented in Appendix A.

#### Selection of Vocabulary Sampling

In order to isolate a body of vocabulary words to incorporate into the instructional phase of the experiment, it was necessary to abstract a sampling of test items from the vocabulary premeasures administered to each group. A sampling of twenty-five ( $N = 25$ ) words was taken from each Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B, by randomly-selecting words from each instrument.

The original test number of each word was also used in recording items on both pre- and posttest measurements. This sampling became the core of words used in the instructional strategies employed in both Group A and Group B. Complete lists of those words contained on each form of the test are presented in Appendix A; the fifty (N = 50) words randomly-selected from both forms of the test are presented below.

#### Experimental Sampling Core Words

The following are lists of words chosen at random from the Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B. The numbers preceding each word identify that word on the Sampling Results Sheet on which the words missed on pre- and post-test measurements are recorded (see Appendix A). Numbers in parentheses following each word indicate the numerical order assigned that item on the Bobbs-Merrill standardized tests.

<u>Form A</u>	<u>Form B</u>
1. affable (33)	1. bravado (47)
2. annihilation (27)	2. candid (24)
3. banter (45)	3. chaste (34)
4. bicker (4)	4. cogent (50)
5. consecutive (9)	5. cudgel (37)
6. criterion (36)	6. drudgery (10)
7. deviate (24)	7. firmament (46)
8. excursive (50)	8. foray (41)
9. feasible (20)	9. improvise (33)
10. gore (47)	10. inscrutable (45)
11. grimace (23)	11. kiln (11)
12. homage (8)	12. malign (49)
13. infinitesimal (41)	13. memoir (27)

- |                      |                      |
|----------------------|----------------------|
| 14. lithe (49)       | 14. nocturnal (25)   |
| 15. lunacy (30)      | 15. odium (42)       |
| 16. meanders (39)    | 16. perjury (18)     |
| 17. momentous (29)   | 17. pittance (48)    |
| 18. pacify (17)      | 18. repugnant (38)   |
| 19. plentitude (11)  | 19. rudimentary (30) |
| 20. precipitous (48) | 20. seductive (28)   |
| 21. rogue (32)       | 21. scepticism (32)  |
| 22. scrutinize (35)  | 22. sparse (19)      |
| 23. stalwart (34)    | 23. spree (21)       |
| 24. unanimity (40)   | 24. stipulate (38)   |
| 25. vexatious (43)   | 25. veer (31)        |

Devising Instructional Materials for  
Treatment Design

Having defined the basic research design, selected the testing instruments and identified the sampling core words, the final pre-experimental procedure involved devising those materials necessary to execute the instructional strategies required for the treatment design of the experiment. While the treatment design required no materials for Group C (the control group), a variety of materials was necessary to carry out the projected treatments for Groups A and B (the two experimental groups). This section discusses the devising of those materials.

The only materials necessary for Group A were lists of general vocabulary words into which the sampling core words could be inserted

for introduction to the group. For this purpose, the experimenter chose an existing sheet of word lists he used to teach vocabulary during previous semesters. For the most part, these words had been taken from widely-available lists of words on standardized tests, composition book word lists, and other basic word study lists. Approximately four of the fifty sample core words were inserted in alphabetical order into each of the eight existing lists, the following word being dropped on the original list in order to retain the total number of words as the original list. (See Appendix B for a sample of the final sheet of word lists.)

For Group B a larger number of materials had to be devised previous to the experiment in order to execute the instructional treatment design projected for that group. For example, in order to introduce the sampling core words organically within the various reading, writing, and speaking activities of the class, the experimenter had either to locate or in some cases to create instructional materials which incorporated these words. Consequently, the experimenter located some essays within the adopted text for the course, within Freshman Composition I rhetoric books, within student samples of writing, and/or within other published sources which utilized some of the sampling core words. In some cases, the experimenter had to write compositions and consciously incorporate some sampling core words. Those words utilized in compositions outside the class text had to be copied for distribution. Moreover, the experimenter had to locate a variety of shorter compositions and/or grammar tests utilizing these words which could be used to introduce the sampling words through these instructional strategies. In some cases, these materials also had to be created especially to meet these needs.

The experimenter also had to frame a number of topics for writing assignments in such a manner that some of these words were placed in conspicuous positions in the assigned writing topics. Similarly, he had to become quite familiar with each word from the sampling core in order that he might utilize every available opportunity to use and/or cause to be used as many as possible of these words in class discussion or lecture. In short, both the format for the class and the incorporation of these vital materials required considerable preplanning. In fact, in order to introduce the sample core words organically into the basically routine class activities and thereby to encourage the development of a contextual relationship for each word, the experimenter anticipated it would require his almost constant and vigilant attention to virtually every detail of the class and its activities throughout the semester.

In executing the experimental procedures of the study, the experimenter found that the majority of the materials devised earlier were adequate for the purposes for which they were designed. The class procedures utilizing these materials are discussed in the following section.

#### Experimental Instructional Procedures

The experimental instructional procedures used in this study included those techniques and instructional strategies which were executed during the treatment phase of the experiment. Since the treatments employed in Group A and Group B markedly differ, a separate detailed discussion of the strategies tested within the two groups follows. First, however, some insight is given into how the status of each group involved was determined.

### Assignment of Group Status to Classes

As stated earlier, the three experimental groups utilized in this study were three classes of freshman enrolled in an English Composition I course. No attempt was made to determine the composition of the classes; they were accepted on the basis of the institution's random enrollment of students into these classes and they were chosen from among those assigned to the experimenter's teaching load. However, some control was exercised by the experimenter over which of these classes were chosen to receive the desired type of experimental treatment. In assigning group status to each of these classes, at least two features of each class were highly operative: the class size and the time of day it met. Due to the characteristically high attrition rate among students in the two-year college, the two classes with the largest enrollment were designated Group A or Group B status. A larger number of subjects participating in these two groups was deemed more important to the study than the number participating in Group C. The A and B groups would test the hypotheses of the study, while the C group would only provide data as a control group. Moreover, in order to minimize the possible effect of the time variable on the experiment (students presumably respond differently to instruction at different times of the day), the time of day the class was scheduled was taken into consideration. On the basis, then, of these two independent variables, of the largest two classes scheduled between nine o'clock and noon, Group A status was assigned to the earlier class and Group B status was assigned to the later. From among those classes scheduled after noon, Group C status was assigned to the earliest. Thus, on the basis of the schedule given the experimenter, the Group A class met three days per week at 9:50 A.M.; the Group B



class met three days per week at 11:00 A.M.; and the Group C class met three days per week at 1:20 P.M. This same schedule was followed during the tenure of both sixteen-week experiments.

#### Instructional Procedures for Group A

During the first week of the sixteen-week experiment, Group A was given the Quick Word Test, Level 1, Form BM, and the Bobbs-Merrill Vocabulary Test for High School and College Freshmen Students, Forms A and B. While their test papers were not returned to them, their performance on the test was discussed and their scores noted. Generally, this procedure was followed in order to stimulate thinking in the group about vocabulary and to provide some indication of their comparative range of vocabulary level. While the Bobbs-Merrill tests are not nationally-normed, the students could compare their scores with the class average, those of the other classes whose average class scores were provided, and with those of their own peers. In both Group A and Group B, this initial procedure provided a degree of motivation for individual vocabulary improvement through the succeeding course. From this point, the experimental treatment of Group A was markedly different from that of Group B. The following week Group A was given xeroxed sheets containing eight lists of fifteen words each. (See Appendix A for a sample of this sheet.) Fifty of these one hundred and twenty words were taken from the two Bobbs-Merrill vocabulary tests; yet the subjects were not apprised of this fact. The group was told that approximately every two weeks during the following semester, they would be tested over one of the eight lists of words. They would be expected to look the words up in a dictionary, memorize the definitions, learn to

spell and to pronounce the words, and be able to identify the part of speech of each word. After the definitions were clarified in class the day preceding the test, they would be tested over each group. Then they would proceed to the next list until all eight lists were covered. The average of their scores on these tests would be reflected in approximately one-fourth of their final grade.

The subjects were tested over these words in a variety of ways. Sometimes they were asked to pick out ten words from a list of fifteen and to write out the definitions and indicate the part of speech. Sometimes the experimenter would indicate the words they were to spell and define in sentences and those for which they were to provide examples or illustrations and indicate the part of speech. At other times the subjects were given the dictionary definition of the word and asked to spell correctly the word being defined orally. This variety was included in order to minimize the chance of boredom with the activity and to minimize as much as possible the rote memorization of dictionary definitions without at least some degree of critical thinking on the subject's part. During the conduct of this experiment, no attempt was made, however, during the classroom instruction to develop a contextual relationship for any of the words. They were discussed in relatively abstract terms (similar to a dictionary entry) and not related to any class word or activity currently engaged in by the class. No attempt was made to use these words in class discussion, lecture, or assignments; they remained as far as possible in isolation, void of any organic connection with the remainder of the class. The study of these words was not cumulative or repetitive in nature; they were discussed once the day before the test, tested once, and then ignored within the context of

the class.

By the end of the fifteenth week of the experiment, the group had completed the eight lists of words. At that time they were given a second administration of the Bobbs-Merrill vocabulary tests. The participants had not been aware that they would retake these tests and no special preparation was made before the tests. Their performances on these tests were recorded for comparison with the earlier pretest performances.

#### Instructional Procedures for Group B

During the first week of the sixteen-week experiment, Group B was given the same treatment as Group A and for the same basic reasons. They were administered the Quick Word Test, Level 1, Form BM, and the Bobbs-Merrill Vocabulary Tests for High School and College Freshmen Students, Forms A and B; they were apprised of their performance on these measurements and told the class average for their and other classes taking the same tests; yet they were not shown their tests, nor was mention made of their having further vocabulary instruction or their having to take a posttest at the end of the semester. Hopefully, as with Group A, the activities of the first week motivated the subjects to some degree to think about their language and to be more sensitive to their vocabulary needs.

Beginning with the second week, the experimenter continued to conduct the presumably typical activities of a Freshman Composition I class: reading and discussing essays, writing expository prose paragraphs and themes, studying grammar and language usage. Yet the experimenter introduced each of the fifty words from the Experimental Sampling

Core of Words through the process of executing those activities. Generally, each word was introduced organically into the classwork during one or more of the following activities: writing activities; reading activities; and oral activities, such as speaking and/or listening to discussion or lecture. A detailed explanation of these three general activities follows.

Introduction of Words Through Oral Activities. The most predominate means of introducing the sampling of words organically into the classwork was by using, and/or by causing them to be used in class discussion and/or lecture, hence through the processes of speaking and listening. Virtually all of the words chosen for the experimental treatment phase were introduced through these processes.

During the opening weeks of the semester, several words were introduced through the experimenter's lecturing about course expectations and making various introductory comments; and through discussing with the class the policies and grading practices the course should follow. Through these activities such words as momentous, drudgery, odium, affable, banter, bicker, cudgel, deviate, candid, criterion, unanimity, excursive, meanders, veer, cogent, improvise, and scrutinize were used as they grew organically out of their need in the activity. For instance, in the experimenter's comments about course expectations, mention was made that some students regard Freshman Composition with odium and as drudgery. However, the experimenter expressed the desire that the course become a momentous event in their lives, and that during the class everyone should remain affable and avoid the tendency to bicker during class discussion. However, as an example of the type banter he

enjoyed engaging in at times, he assured them if necessary, he would use a cudgel to restore order should the need arise. Upon using each of these words, their definitions were clarified and they were written on the board.

In similar fashion, other words were introduced through various lecture/discussions of the grading standards and the projected activities for the course. On the fourth and fifth class meetings, the experimenter engaged the class in a discussion of "good writing." On this occasion he asked each student to indicate a criterion he would like to have used to judge his own writing. He stressed that the class be able to achieve unanimity of the choices, and he encouraged them to be candid in their comments. Typically, the discussion moved to the need for organization and controlling ideas in writing. Through such discussion, words such as excursive, meanders, deviate, and veer organically emerged as the group turned to matters of purpose and focus in writing. In lecture style, the experimenter assured the class that in order to develop cogent argumentative prose, the skill of organization was essential. He encouraged them to scrutinize their writing before they handed it in to see if they actually developed their ideas or if they tended to deviate from the original point.

Thus, in the span of the first few weeks of the experiment, the experimenter introduced a large number of the sample core words into the instructional setting by causing them to emerge organically through oral activities. Throughout the semester, all the other words from the sampling core were introduced in similar ways, but by far the majority of these words received a second introduction through reading and/or writing activities. The following section discusses their introduction

through reading activities.

Introduction of Words Through Reading Activities. Twenty-nine of the fifty sampling core words were introduced a second time through various reading activities in which the subjects were involved. In utilizing reading activities to introduce words organically into the classwork, the experimenter employed three basic means: reading assignments designed to generate class discussion; reading assignments designed to illustrate rhetorical modes of writing and/or to be graded by the students as learning exercises; and reading assignments designed primarily to teach grammatical/stylistic principles. Each of these utilizations is discussed in the following section.

In the normal course of the semester, various reading assignments were made and used as catalysts for class discussion and analysis. Some of these readings contained words drawn from the sampling core words. Among those words introduced through these types of readings were the following: seductive, chaste, lunacy, repugnant, infinitesimal, scepticism, drudgery, and pittance. For example, in an essay by Ernest Gordon entitled "A New Case for Chastity," the word chaste is used in thesis position of the argument; an article in a 1969 Newsweek entitled "The Drug Generation" includes a drug profile which refers to the seductive appeal of marijuana; in "Man and the Machine" Robert Cubbedge discusses the physical drudgery machines have relieved us of today. Moreover, a student explication of the Arthur Guilarman poem "Strictly Germ-Proof" refers to the odium with which the Sterilized Pup regarded the Germ-laden Bunny; another student composition copied and given to the class compares salaries of professional people and refers to the

pittance some college instructors receive and the infinitesimal amount of money public school teachers often are paid; and an essay published by the experimenter discusses the lunacy of required participation in class and some of the other repugnant prerequisites often necessary for "getting an A." These types of compositions were assigned reading for the group; when discussed in class, the experimenter clarified the meanings of each of the sampling core words used and brought each of them to the attention of the group.

Also throughout the semester, various reading assignments were made which were designed to illustrate rhetorical modes of writing the students would imitate. Often these samples would be graded by the students for practice in grammar and other stylistic principles. Several of these compositions contained words drawn from the sampling core words. Among those words introduced through these types of readings were the following: affable, bravado, inscrutable, gore, kiln, foray, and nocturnal. For example, a sample of a descriptive paragraph illustrating sequential coherence concerned a bull fight in which the inscrutable matador gradually wore down the bull's endurance. The paragraph graphically describes the gore that was left on the sand. A sample of paragraph development through the use of facts and details discussed the habits of a nocturnal animal called a cat and described in detail a typical nightly foray through the neighborhood garbage cans and the bravado with which he received the unwelcomed attentions of a hostile dog. A definition paragraph defined a writer's concept of an affable teacher, and a process theme outlined the steps in glazing a ceramic pot, including the necessity of a kiln for baking it. Using these reading assignments to provide helpful illustration of assignments the

students would be required to imitate and giving them the detailed attention that grading compositions should necessitate, the experimenter hoped to lend greater importance and recognition to the sampling core words introduced organically through reading, analysis, and discussion of these compositions.

A final way in which words from the sampling core were introduced organically through reading assignments involved those compositions, usually short, often a single sentence, which taught grammatical or stylistic principles. Some of the words introduced through these assignments were the following: banter, bicker, stalwart, precipitous, plentitude, firmament, deviate, veer, lithe, grimace, perjury, and sparse. For example, in short compositions designed to teach grammar by having the students recognize the grammatical errors of comma splices and fused sentences, the following sentences were included:

There is a plentitude of sun in the southwest United States, however the vegetation is still sparse.

Racing down the highway, the car began to veer from the lane suddenly it plunged down the pre-cipitous cliff.

In sentences which were a part of lists of those sentences most typically found in freshmen writing, several of the sampling core words were introduced. One sentence illustrating the error of a misplaced modifier read, "Floating through the firmament, the wise men saw a host of angels!" Another sentence illustrative of faulty pronoun reference read, "When the doctor gave the child a shot, he made a grimace." These and other words from the sample core were introduced through the process of reading sample compositions within the context of writing-improvement exercises. While this method did provide a means for the experimenter to introduce



words organically within the process of classwork for which there were no other appropriate reading materials, it also drew attention to those words by introducing them in a relatively high-attention-getting activity.

Introduction of Words Through Writing Activities. Sixteen of the fifty words from the sampling core were integrated directly during the semester into required topics for three types of writing assignments: letters, paragraphs, and themes. Thus, in completing these assignments, the student's involvement with these words grew out of their necessity to complete these writing activities.

In the early part of the semester, the students were engaged in various types of letter-writing activities. Among those sample core words introduced through required topics for these activities were the following: cogent, homage, and pacify. For example, during the third week of class, the students were asked to locate a published letter (such as those to a magazine, Ann Landers, or to a newspaper forum) in which the writer was upset over a perceived problem. Then they were to write a response letter to that person and attempt to pacify him through logical cogent argument. Similarly, the students were asked in a second assigned letter to write a person who had done something outstanding (a political leader or former teacher, for example) and pay homage to him for his accomplishment or service.

During the middle part of the semester, the students were engaged in a variety of paragraph-writing assignments. Some of the sample core words incorporated into topics for these activities were spree, rogue, vexatious, consecutive, and scrutinize. For instance, the students were

asked to scrutinize a person or object and then to write descriptive paragraphs about what they saw. In another paragraph-writing assignment, the students were asked to write narrative paragraphs outlining in consecutive order the events that occurred on a spree they recently engaged in. In a definition paragraph, the students were asked to deal with the word rogue and to discuss the various implications that word had in describing a person or animal. Another topic they developed in paragraphs was to discuss a vexatious habit of a person whom they knew. The meaning of each word was discussed in class, and also the students were encouraged to look up the words' dictionary meanings and consider those definitions.

During the last part of the semester, the students were involved in writing longer, more complex essays and themes. Several of the sample core words were incorporated into the topics required for these assignments. Some of those words were the following: annihilation, momentous, feasible, stipulate, criterion, rudimentary, improvise, and memoir. Of these words, the most frequently used was memoir. Throughout the semester, the students were asked to keep a journal of their most significant thoughts and/or activities. These entries were referred to as their memoirs. Mention was made of this continuing writing activity several times each month. Also on a continuing basis, the students were often asked during the semester to write short essay responses to subjects not prepared in advance. These assignments required that they improvise the essay since they could make no prior preparation. Other essays, however, were composed from topics given in advance. Several of these topics incorporated words from the sampling core. For instance, one topic required that they discuss the

most momentous decision they had made in recent years; another required that they present a feasible solution to a problem they recognized on campus; another topic required that they discuss the rudimentary principles of completing a process of their choice. Toward the end of the semester, the students were asked to stipulate in an essay a criterion which they felt should be most operative in deciding their final grade for the course. In the process of engaging in a role-playing activity often referred to as the "Bomb Shelter Game," each student was asked to assume that the earth would soon experience annihilation. On that assumption, each student was asked to pretend he were the type of person he considered most vital to a "new world" and to construct a written defense of why he should be saved from annihilation. These and other of the writing assignments were read in class, but each of the sample words introduced through these activities grew organically out of the required activities for writing.

Thus, Group B was introduced to a large number of the sample core words through regular class activities. No special stress was placed on these words; their introduction was organically-motivated and incorporated indirectly into discussion and/or other class activities. They remained integral parts of the instructional processes of the class, and thus the exposure to the majority of these words was cumulative and repetitive in nature. In short, the instructional strategies for the introduction of the sample core words were for Group B designed to develop contextual relationships within each of the participants in this group.

By the end of the fifteenth week of the experiment, the group had been exposed to all fifty words. At that time they were given a second

administration of the Bobbs-Merrill vocabulary tests. As with Group A, Group B had not been aware that they would retake these tests, and no special preparation was made before the test. Their performances on these tests were also recorded for comparison with the earlier pretest performances.

#### Functional Procedures for Group C

Acting as a control group for the experiment, this group was not involved in the instructional phase of the experiment. This group took the same pre- and posttests as Groups A and B. It received, however, no treatment or any further exposure to the sampling core words. Thus, the pretest-posttest-change scores on these tests provided some indication of the level of test contamination introduced by using the same measuring instruments at the end of the experiment.

## CHAPTER IV

### RESULTS OF DATA ANALYSIS

Pretest-posttest change scores of language-acquisition for one-hundred thirty-four college freshmen were analyzed to compare two methods of vocabulary instruction in two-year college English classes. One group of students (Group A; N = 49) was taught vocabulary words which were introduced directly through instructor-prepared word lists. Another group (Group B; N = 49) was taught the same vocabulary words indirectly through organically-designed activities. A third group (Group C; N = 36) served as a control group; it received no instruction in vocabulary but was given the same tests and subjected to the same statistical analyses as Groups A and B. All participants completed Forms A and B of the Bobbs-Merrill Vocabulary Tests for High School and College Freshmen Students as pretest and posttest measurements. The Quick Word Test was used to determine the students' general ability levels. A one-way analysis of variance testing statistic was used to compare the vocabulary-acquisition change scores of all students (N = 134) participating according to their sex, age level, and general ability level.

This chapter contains the results of the data analysis and hypotheses testing. The format used in presenting the results derived from testing each null hypothesis is as follows: (1) a statement of the null hypothesis, (2) the means and standard deviations of the groups being tested, (3) the statistical results derived from testing the

hypothesis, and (4) the results of post-hoc comparisons which followed significant F-values. After the hypotheses are tested and presented, the chapter ends with a brief summary of all results obtained in the study.

#### Preliminary Analysis of the Data

The Analysis of Variance (ANOVA) testing statistic is based on an assumption of homogeneity of sample variances (Hays, 1975). Before the four hypotheses were tested, it was necessary to conduct preliminary comparisons among the sample variances to determine whether this assumption were being violated. The F-Maximum Test for Homogeneity of Sample Variances was used to make the statistical comparison (Bruning and Kintz, 1968). The highest and lowest sample variances included in all four hypotheses tested are shown in Table I. This table also contains the results of the F-Maximum Test.

From the statistical results presented in Table I one can conclude that the sample variances were statistically homogeneous (equal), the assumptions underlying the ANOVA testing statistic were met, and the analysis of variance technique was appropriate for analyzing the data.

TABLE I  
A COMPARISON OF THE SAMPLE VARIANCES INVOLVED IN  
TESTING THE FOUR HYPOTHESES

Analysis of Variance Comparison	Greatest Sample Variance	Smallest Sample Variance	F-Value	Significance Level
*Ho <sub>1</sub> Type of Teaching Technique	S <sup>2</sup> = 332.01 (Group A; N = 49)	S <sup>2</sup> = 76.11 (Group C; N = 36)	4.364	P > .05
**Ho <sub>2</sub> Sex	S <sup>2</sup> = 272.97 (Females; N = 90)	S <sup>2</sup> = 220.65 (Males; N = 44)	1.237	P > .05
***Ho <sub>3</sub> Age	S <sup>2</sup> = 272.49 (18-22 yrs; N = 79)	S <sup>2</sup> = 237.41 (23-49 yrs; N = 55)	1.148	P > .05
****Ho <sub>4</sub> Mental Ability	S <sup>2</sup> = 308.16 (Average; N = 80)	S <sup>2</sup> = 80.60 (Low; N = 24)	3.823	P > .05

\* The first hypothesis states there is no statistically-significant difference in the language-acquisition change scores of adult students when new words are introduced organically through indirect methods or when they are introduced inorganically through direct methods.

\*\* The second hypothesis states there is no statistically-significant difference in the language-acquisition change scores of adult females and those of adult males when new words are introduced organically through indirect methods or when they are introduced inorganically through direct methods.

\*\*\* The third hypothesis states there is no statistically-significant difference in the language-acquisition change scores of adult students 18-22 years of age and those of adult students 23-49 years of age when new words are introduced organically through indirect methods or when they are introduced inorganically through direct methods.

\*\*\*\* The fourth hypothesis states there is no statistically-significant difference in the language-acquisition change scores of adult students who have been classified as having high general mental ability, average general mental ability, and low general mental ability when new words are introduced organically through indirect methods or when they are introduced inorganically through direct methods.

## Results of Testing Hypothesis One

The null proposition of the first hypothesis was tested as follows:

HO<sub>1</sub> There is no statistically-significant difference between the language-acquisition change scores of adult students when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.

The first null hypothesis was tested by comparing the language-acquisition change scores of Groups A, B, and C. A one-way analysis of variance (ANOVA) was used to make the initial comparison. Means and standard deviations of each treatment group's change scores are presented in Table II. Results of the statistical comparisons are presented in Table III.

From the data presented in Table III it was evident that there was a significant difference among the mean change scores recorded for the three treatment groups ( $F = 57.63$ ,  $df = 2/266$ ;  $p < .001$ ). These results allowed the researcher to reject the first null hypothesis.

Additional pair-wise comparisons were made among the three groups' mean change scores, in an attempt to locate specific differences. A Newman-Keuls Test was used to make these additional comparisons. The results are presented in Table IV. The results presented show that students in Groups A and B made significantly greater gains in language acquisition than students in Group C. Further comparisons showed that students in Group A made significantly greater gains in language acquisition than students in Group B.



TABLE II  
MEANS AND STANDARD DEVIATIONS OF THE THREE TREATMENT  
GROUPS' PERCENTILE CHANGE SCORES

Group	Mean	Standard Deviation
Group A (N=49)	21.16	18.22
Group B (N=49)	4.88	10.54
Group C (N=36)	0.86	8.72

TABLE III

ANALYSIS OF VARIANCE RESULTS COMPARING PERCENTILE CHANGE SCORES OF THE THREE TREATMENT GROUPS

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Square	F-Value	Significance Level
Between Groups	20,781	2	10,390.5	57.632	<.001
Within Groups	48,855	266	180.29		
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Total	69,636	268			

TABLE IV

SUMMARY TABLE FOR THE NEWMAN-KUELS TEST AMONG THE MEAN CHANGE  
SCORES OF THE THREE TREATMENT GROUPS

Rank-Order Means	Group C	Group B	Group A
Group C $\bar{X} = 0.861$	---	4.017*	20.299**
Group B $\bar{X} = 4.878$		---	16.282**
Group A $\bar{X} = 21.160$			---

M.S. error = 180.29

\*p < .05

\*\*p < .001

## Results of Testing Hypothesis Two

The null proposition of the second hypothesis was tested as follows:

HO<sub>2</sub> There is no statistically-significant difference between the female adults' language-acquisition change scores and the adult males' language-acquisition change scores when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.

The second null hypothesis was tested by comparing the language-acquisition change scores of males and females in Groups A, B, and C. A one-way analysis of variance (ANOVA) was used to make the comparison. Means and standard deviations of each group's change scores are presented in Table V. Results of the statistical comparisons are presented in Table VI.

From the data presented in Table VI it was evident that there was a significant difference among the mean change scores recorded for the two groups ( $F = 4.567$ ,  $df = 2/266$ ;  $p < .05$ ). These results allowed the researcher to reject the second null hypothesis. Examination of the two groups' means led to the conclusion that the females made significantly greater gains in their language-acquisition scores than the males.

TABLE V  
MEANS AND STANDARD DEVIATIONS OF THE MALES'  
AND FEMALES' PERCENTILE GAIN SCORES

Group	Mean	Standard Deviation
Females (N=90)	11.35	16.52
Males (N=44)	6.89	14.85

TABLE VI

ANALYSIS OF VARIANCE RESULTS COMPARING THE PERCENTILE GAIN SCORES OF MALES AND FEMALES

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Square	F-Value	Significance Level
Between Sexes	1,177	1	1,177	4.567	<.05
Within Groups	68,552	266	257.71	--	
-----					
Total	69,729	267			

## Results of Testing Hypothesis Three

The null proposition of the third hypothesis was tested as follows:

HO<sub>3</sub> There is no statistically-significant difference between the language-acquisition change scores of adult students 18-22 years of age and the language-acquisition change scores of adult students 23-49 years of age when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.

The third null hypothesis was tested by comparing the language-acquisition change scores of students 18-22 years of age with the language-acquisition change scores of students 23-49 years of age in Groups A, B, and C. A one-way analysis of variance (ANOVA) was used to make the comparison. Means and standard deviations of each age group's change scores are presented in Table VII. Results of the statistical comparison are presented in Table VIII.

From the data presented in Table VIII it was evident that there was not a significant difference between the mean change scores recorded for the two age groups ( $F = 1.626$ ,  $df = 2/266$ ;  $p > .05$ ). These results would not allow the researcher to reject the third hypothesis.

TABLE VII  
MEANS AND STANDARD DEVIATIONS OF THE TWO AGE GROUPS'  
PERCENTILE GAIN SCORES

Group	Mean	Standard Deviation
18-22 yrs. group (N=79)	8.71	16.51
23 yrs. and older (N=55)	11.26	15.41



TABLE VIII

ANALYSIS OF VARIANCE RESULTS COMPARING THE PERCENTILE GAIN SCORES OF THE TWO AGE GROUPS

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Square	F-Value	Significance Level
Between Groups	423	1	423	1.626	>.05
Within Groups	69,178	266	260.07		
-----					
Total	69,601	267			

### Results of Testing Hypothesis Four

The null proposition of the fourth hypothesis was tested as follows:

HO<sub>4</sub> There is no statistically-significant difference among the language-acquisition change scores of adult students who have been classified as having high general mental ability, average general mental ability, and low general mental ability when new words are introduced organically within an instructional situation out of which a contextual relationship develops, or inorganically outside a given situation and without a contextual relationship for the word.

The fourth null hypothesis was tested by comparing the language-acquisition change scores of students in the high, average, and low general mental-ability groups in Groups A, B, and C. A one-way analysis of variance (ANOVA) was used to make the initial comparison. Means and standard deviations of each mental-ability group's change scores are presented in Table XI. Results of the statistical comparisons are presented in Table X.

From the data presented in Table X it was evident that there was a significant difference among the mean change scores recorded for the three general mental-ability groups ( $F = 3.06$ ,  $df = 2/266$ ;  $p < .05$ ). These results allowed the researcher to reject the fourth null hypothesis.

Additional pair-wise comparisons were made among the three groups' change scores, in an attempt to locate specific differences. A Newman-Keuls Test was used to make these additional comparisons. The results are presented in Table XI. These results show that students with average general mental ability and students with high general mental ability made significantly greater gains in language acquisition than students with low mental ability.

TABLE IX  
MEANS AND STANDARD DEVIATIONS OF THE THREE ABILITY  
GROUPS' PERCENTILE GAIN SCORES

Group	Mean	Standard Deviation
High Ability Group (N=30)	10.43	15.15
Average Ability Group (N=80)	11.35	17.55
Low Ability Group (N=24)	4.98	8.98

TABLE X

ANALYSIS OF VARIANCE RESULTS COMPARING THE PERCENTILE GAIN SCORES OF THE THREE ABILITY GROUPS

Source of Variation	Sums of Squares	Degrees of Freedom	Mean Square	F-Value	Significance Level
Between Groups	1,513	2	756.5	3.06	<.05
Within Groups	66,946	266	251.68		
-----					
Total	68,459	268			

TABLE XI  
 SUMMARY TABLE FOR NEWMAN-KEULS TEST AMONG THE MEAN GAIN  
 SCORES OF THE THREE ABILITY GROUPS

Rank-Ordered Means	Low-Ability Group	High-Ability Group	Average-Ability Group
Low-Ability Group $\bar{X} = 4.98$	---	5.45**	6.37***
High-Ability Group $\bar{X} = 10.43$		---	0.92
Average-Ability Group $\bar{X} = 11.35$			---

\*\*p < .01

\*\*\*p < .001

### Summary of Results

The results of testing the four null hypotheses showed that there were significant differences among the vocabulary-acquisition change scores of the three treatment groups. Students taught by the direct/inorganic methods (Group A) showed greater vocabulary gains than those students taught by the indirect/organic methods (Group B). Both Group A and Group B showed greater gains than Group C which received no treatment/instruction in vocabulary development.

Further results showed that the females made greater vocabulary gains than the males and that high general ability and average general ability students made greater gains than students of low general ability. There was no difference between the language-acquisition gain scores of different age groups.

The conclusions drawn from these results are presented in Chapter V. The final chapter also contains a summary of the study and some suggestions for further research.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND SUGGESTIONS

#### Summary of the Study

The adult student's success or failure in higher education is heavily dependent upon his verbal and thinking skills. However, little formal instruction in vocabulary is evident in higher education, even in the freshman English core. The reasons this situation exists are not easily discerned. Even if the college instructor assumes the need for vocabulary instruction and determines to incorporate it into his class, he is often either stymied by the popular attitude that students increase their vocabularies naturally without instruction or by the plethora of methods for vocabulary instruction he could employ.

Thus, a pressing need exists for research into the area of vocabulary instruction on the college level; this need is especially evident in the two-year college where low entrance standards typically produce large populations of low mental ability students. The purpose of this study, then, has been to investigate the preferability of teaching vocabulary formally, using direct means, or informally, using indirect means of instruction. Essentially, it investigates the necessity of developing a contextual relationship for new words precedent to their acquisition by adult students.

This study utilized a population sampling of adult students

enrolled in English Composition I at an urban two-year college. For purposes of comparison, these students were divided into three distinct groups: one group was taught a sampling of new words directly, with no attention being given to developing a contextual relationship for these words; a second group was taught the same sampling of words indirectly, with special attention being given to developing contextual relationship for each word; a third group received no instruction in vocabulary. These groups were further divided for statistical analysis of percentile gain scores into categories reflecting age, sex, and general mental ability levels.

From the statistical analysis of resultant data, the researcher concluded that students in the two-year college do not require the development of a contextual relationship for new words precedent to their acquisition. The group taught new words directly showed greater percentile gain than that of the other groups. Moreover, while the variable of age did not reveal significantly different scores, the researcher concluded that female adults and those adults with average and high general mental ability levels produce greater acquisition scores when taught vocabulary directly and without the development of contextual relationships for the words.

The researcher suggests that further study be done using other populations in higher education, especially those containing more minority representation. He further suggests that similar studies be conducted utilizing different samplings of words and/or testing different methods of vocabulary instruction.



### Conclusions Drawn From the Study

Several conclusions were drawn from the results of this experimental study. These conclusions are as follows:

- (1) The results of testing the first hypothesis led to the conclusion that the direct method of exposing adult students to new words inorganically and outside a given instructional situation is more effective in stimulating acquisition of those words than the indirect method whereby new words are introduced organically within the instructional situation. Thus, the creation of a contextual relationship precedent to the acquisition of a word does not appear necessary in the attempt to increase the recognition vocabularies of adult students.
- (2) The results of testing the second hypothesis led to the conclusion that adult female students acquire new words more readily through direct means of instruction than do adult male students. Thus, the various direct means of vocabulary instruction are especially desirable in areas of higher education with predominately female populations.
- (3) The results of testing the third hypothesis led to the conclusion that there is no statistically-significant difference between the effectiveness of the direct or indirect method of introducing new words for acquisition with respect to the age of the adult student.
- (4) The results of testing the fourth hypothesis led to the conclusion that adult students of average and high general

mental ability levels respond better to the direct means of introducing words for acquisition than adult students of low general mental ability levels. Thus, while the variety of direct methods available to stimulate vocabulary growth may prove effective with a large part of the two-year college population, a perhaps larger number of students enrolled would not benefit from these approaches.

#### Suggestions for Further Research

During the conduct of this study, many indications have arisen implying the need for further research. While this study was generally satisfying in its limited scope, the area of vocabulary acquisition in adult education deserves further exploration. Some major implications indicating the need for further research are discussed in the following section.

First, a study could be conducted similar to the present study, but with a different population sampling. This experiment was limited to adult students (of widely differing age levels) enrolled in traditional English classes for freshmen students in the two-year college. While this population is perhaps most typical of an area in higher education where intensive instruction in vocabulary expansion is most desirable, a sampling of adults from other populations of higher education might provide quite different and interesting results. For example, a number of adults (over the traditional college age) are enrolled in vocational-technical colleges and institutes, programs of continuing education in both large and small universities, and a variety

of training programs developed by industries and/or the military which would provide a seemingly inexhaustible array of samplings with which to carry out this type of research. Each of these samplings would emphasize more limited age variances, more homogeneous groupings by ability range, and more commonality of background and/or cultural heritage. While these "types" are represented in the two-year college population, more controlled and intense study of larger, more inherently homogeneous samplings could produce experimental data within a larger context than the present study.

Similarly, a study employing the same methods as this experiment could be done, but by using a different sampling of words in the treatment phase of the study. Of course, each group would need to study the same sampling of words in order to measure precisely the variation in achievement level, but a greater variety of words could produce interesting results. For example, the present study used a sampling of words composed of twenty adjectives, twenty-one nouns, and nine verbs. Eighty-two percent (82%) of these words was of three syllables or less in length. Other studies could concentrate on only verbs, or nouns; other studies could emphasize words of greater or lesser syllabic variety. The combinations would seem infinite, and a rationale for each focus equally justifiable.

While testing the same hypotheses as the present study, further studies utilizing words closer to the experience of the students' daily activities might yield quite different results. It may prove that students do not acquire words through artificially-created contextual relationships as readily as they do the highly personal relationships words develop when one can use them to define his immediate reality outside

the instructional environment. In the present study, for instance, words such as kiln, nocturnal, or firmament may be too remote from the daily communication needs of the students to be acquired in the relatively brief existence of the learning situation and the contextual relationships it creates. Conversely, such words as candid, perjury, repugnant or stipulate may be more typical of and necessary in the "real world" of the students and thus account in large measure for their acquisition into the students' vocabularies. Certainly, no experiment dealing with as an intensely personal area of human knowledge as one's language can yield definitive results on the processes of language acquisition. Thus, standardizing the treatment but varying the sampling of words taught might provide insight into the strengths and weaknesses inherent in the attempt to teach language.

A final and rather obvious implication for future study which arises from this experiment grows out of the necessary control placed on the methods tested. Limiting the present experiment to two methods of instruction of necessity limited the results obtainable from the experiment. A variety of future experiments is needed to test other, equally valid and popular methods on stimulating vocabulary acquisition. As in considering the instructional strategies possible for teaching any skill on any level, the researcher of language-acquisition is limited only by his own imagination and initiative.

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## APPENDIXES

APPENDIX A

THE INSTRUMENTS

Form A  
M 1230

VOCABULARY TEST FOR  
HIGH SCHOOL STUDENTS AND COLLEGE FRESHMEN

by  
Arthur E. Traxler -- Educational Records Bureau  
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Subsidiary of Howard W. Sams & Co., Inc.  
Indianapolis, Indiana

SCORE	PERCENTILE

ME \_\_\_\_\_ GRADE \_\_\_\_\_ SEX \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_  
LAST FIRST MIDDLE M O R F YEAR MO DAY

DATE \_\_\_\_\_ AGE \_\_\_\_\_ SCHOOL \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_

**Directions** - In each of the following exercises there is a sentence or expression which contains an underlined word and is followed by five words or phrases numbered from (1) to (5). You should read the given sentence or expression, then read the five words or phrases following it, and select the one whose meaning is most nearly like the meaning of the word which is underlined in the sentence or expression. Blacken the response position corresponding to the number of your answer. Make your marks heavy and black.

Example: They will exhibit the picture today.

(1) finish (2) buy (3) find (4) show (5) sell      1 = 2 = 3 = 4 = 5 =

Proceed as rapidly as you can work accurately. Your score will be the number of right answers reduced by one fourth of your wrong answers. You can expect to make your best score if you do not guess wildly but attempt as many questions as you think you know, even though you may not be entirely sure of the right answer. Do not spend too much time on any one question. Wait for the signal to begin.

1. A distant elevation. (1) tall building (2) cliff (3) plain  
(4) raised place (5) floating cloud  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
2. A cluttered room. (1) disordered (2) shabby (3) dirty  
(4) bright and gay (5) poorly furnished  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
3. A legitimate act. (1) good (2) lawful (3) warlike  
(4) court (5) disobedient  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
- Neighbors sometimes bicker. (1) gossip (2) visit  
(3) quarrel (4) borrow (5) help one another  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
- This man was naturalized last year. (1) drafted  
(2) brought into court (3) admitted to  
citizenship (4) allowed to vote (5) freed  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
6. A gusty day. (1) cold (2) rainy (3) windy  
(4) cloudy (5) gloomy  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
7. The plan will entail hard work. (1) avoid (2) request  
(3) spare (4) seek (5) involve  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
8. They paid homage to their leader. (1) honor  
(2) taxes (3) special levies (4) passage home  
(5) interest  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
9. The numbers were arranged in consecutive order.  
(1) reverse (2) agreed upon (3) special  
(4) successive (5) descending  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
10. Brutish behavior (1) inhuman (2) silly  
(3) courageous (4) fawning (5) shy and reserved  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
- A great plentitude of flowers (1) garden  
(2) scarcity (3) bouquet (4) abundance (5) plot  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
- We sought the origin of the stream. (1) location  
(2) source (3) mouth (4) shallows (5) tributary  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
13. The room was flecked with light. (1) flooded (2) covered  
(3) barely lit (4) gaily outlined (5) spotted  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
14. The spinster was a librarian. (1) young girl (2) bachelor  
(3) sister (4) grandmother (5) unmarried woman  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
15. There is little nutriment in this soup. (1) seasoning  
(2) taste (3) nourishment (4) value (5) vegetable  
matter  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
16. An involuntary movement. (1) unintentional (2) urgent  
(3) unnoticed (4) extremely sudden (5) unexpected  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
17. Try to pacify the crowd. (1) satisfy (2) speak to  
(3) dispense (4) calm (5) stir up  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
18. Fragmentary evidence. (1) poor (2) worthless  
(3) incomplete (4) damaging (5) dangerous  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
19. There was a rupture in their friendship. (1) break  
(2) lessening (3) deepening (4) restraint (5) renewal  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
20. It is a feasible plan. (1) practicable (2) far-sighted  
(3) exceptional (4) successful (5) time-tested  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
21. The dog slinks along. (1) slips (2) trots  
(3) dashes (4) sneaks (5) limps  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
22. It is decidedly warm. (1) somewhat (2) rather  
(3) unmistakably (4) agreeably (5) unbelievably  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
23. The boy made a grimace. (1) friendly gesture  
(2) quick smile (3) mask (4) wry face  
(5) broad grin  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....
24. To deviate from the rule. (1) learn (2) turn aside  
(3) refrain (4) retract (5) start again  
1 ..... 2 ..... 3 ..... 4 ..... 5 .....

5. A busy thoroughfare (1) store (2) highway  
(3) room (4) playground (5) railroad station  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
6. A dignified old gentleman. (1) stately  
(2) stern (3) venerable (4) pompous  
(5) formal 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
7. The annihilation of the village (1) unusual setting  
(2) ancient remains (3) fireswept ruins (4) total  
destruction (5) swift decline  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
8. His demands were relentless. (1) angry  
(2) unyielding (3) sudden (4) overpowering  
(5) unreasonable 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
9. A momentous decision. (1) very important  
(2) momentary (3) moving (4) trifling (5) sudden  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
10. The sanity of the plan was evident. (1) extreme  
folly (2) transparency (3) brilliance  
(4) wickedness (5) great daring  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
11. Her avowal of the truth surprised everyone.  
(1) repetition (2) open declaration (3) firm denial  
(4) scorn (5) loud statement 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
12. A gay rogue. (1) boy (2) color (3) old  
gentleman (4) party (5) rascal  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
13. The affable stranger. (1) stern and aloof  
(2) courteous and pleasant (3) lonely and tired  
(4) lost and frightened (5) old and worn  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
14. A stalwart character. (1) friendly (2) lonely  
(3) likeable (4) sturdy (5) dull  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
15. Scrutinize the report. (1) destroy (2) scan  
quickly (3) oppose (4) reorganize  
(5) examine closely 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
16. Let us use a criterion of value. (1) standard  
(2) statement (3) conveyance (4) garment  
(5) set rule 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
17. Her patrimony will be received this month. (1) salary  
(2) new dress (3) legal paper (4) complaint  
(5) inheritance 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
18. The ground was sterile. (1) rocky (2) hard  
(3) barren (4) desert-like (5) worn  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
19. The stream meanders through the meadow  
(1) moves slowly (2) cuts (3) curves  
gracefully (4) wanders (5) flows  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
40. There was unanimity in the meeting (1) complete  
agreement (2) amusement (3) serious discussion  
(4) dissension (5) quick action  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
41. The amount was infinitesimal. (1) indefinite  
(2) rather small (3) finite (4) very large  
(5) exceedingly small  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
42. The news will stupefy him. (1) perplex (2) worry  
(3) astound (4) surprise (5) overcome  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
43. The vexatious discovery. (1) bad (2) unfortunate  
(3) sad (4) amazing (5) annoying  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
44. A harlequin of the court. (1) buffoon (2) knight  
(3) lady (4) servant (5) ruler  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
45. Loud banter. (1) singing (2) joking (3) laughing  
(4) talking (5) quarreling  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
46. Draw a quadrant. (1) quadrangle (2) rectangle  
(3) quarter of a circle (4) four sided figure  
(5) perimeter 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
47. The floor was covered with gore. (1) wax  
(2) carpeting (3) food (4) blood (5) filth  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
48. It is a precipitous path. (1) charming (2) very steep  
(3) dangerous (4) rocky (5) twisting  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
49. A lithe step. (1) stately (2) quick (3) supple  
(4) hurried (5) firm  
1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
50. His speech was excursive. (1) highly critical  
(2) exciting (3) convincing (4) unexpected  
(5) rambling 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :

Form B  
A 1230

VOCABULARY TEST FOR  
HIGH SCHOOL STUDENTS AND COLLEGE FRESHMEN

by  
Arthur E. Traxler -- Educational Records Bureau  
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Subsidiary of Howard W. Sams & Co., Inc.  
Indianapolis, Indiana

SCORE	PERCENTILE

NAME \_\_\_\_\_ GRADE \_\_\_\_\_ SEX \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_  
LAST FIRST MIDDLE M O R F YEAR MO DAY

STATE \_\_\_\_\_ AGE \_\_\_\_\_ SCHOOL \_\_\_\_\_ CITY \_\_\_\_\_ STATE \_\_\_\_\_

**Directions.** - In each of the following exercises there is a sentence or expression which contains an underlined word and is followed by five words or phrases numbered from (1) to (5). You should read the given sentence or expression, then read the five words or phrases following it, and select the one whose meaning is most nearly like the meaning of the word which is underlined in the sentence or expression. Blacken the response position corresponding to the number of your answer. Make your marks heavy and black.

Example: They will exhibit the picture today.

(1) finish (2) buy (3) find (4) show (5) sell    1 = 2 = 3 = 4 = 5 =

Proceed as rapidly as you can work accurately. Your score will be the number of right answers reduced by one fourth of your wrong answers. You can expect to make your best score if you do not guess wildly but attempt as many questions as you think you know, even though you may not be entirely sure of the right answer. Do not spend too much time on any one question. Wait for the signal to begin.

- |   |   |
|---|---|
| <p>1. A bright <u>pigment</u>. (1) little girl (2) coloring matter<br/>(3) cloud (4) sky (5) baby pig<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>2. Her dress has <u>longitudinal</u> stripes. (1) broad<br/>(2) bright-colored (3) narrow (4) permanent<br/>(5) lengthwise<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>3. You may <u>quote</u> the passage. (1) refer to<br/>(2) summarize (3) repeat exactly (4) give the<br/>thought of (5) copy<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>4. Some <u>combustible</u> material. (1) heavy<br/>(2) inflammable (3) broken up (4) useful<br/>(5) unbreakable<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>5. The <u>celebrity</u> arrived by airplane. (1) valuable cargo<br/>(2) legal paper (3) famous person (4) foreign statesman<br/>(5) movie star<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>6. The <u>cordiality</u> of the host was natural. (1) coldness<br/>(2) easy familiarity (3) haughty greeting<br/>(4) assurance (5) warm friendliness<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>7. She has <u>multitudinous</u> suitors. (1) insistent<br/>(2) numerous (3) likeable (4) wealthy<br/>(5) middle-aged<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>8. That is a <u>symptom</u> of fear. (1) beginning (2) part<br/>(3) result (4) sign (5) removal<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>9. Try to <u>minimize</u> the loss. (1) analyze<br/>(2) itemize (3) reduce (4) explain (5) predict<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>10. Eight hours of <u>drudgery</u>. (1) strict duty<br/>(2) disagreeable work (3) punishment (4) thorough<br/>training (5) disorder<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>11. The <u>kiln</u> was built of brick (1) arched cave<br/>(2) oven (3) garden house (4) summer cottage<br/>(5) roadway<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>12. The <u>immensity</u> of the prairie. (1) shimmering heat<br/>(2) remoteness (3) vastness (4) attraction<br/>(5) mystery<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> | <p>13. He looked up with <u>slumberous</u> eyes. (1) dark<br/>(2) mysterious (3) huge (4) fearful (5) sleepy<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>14. They had <u>halibut</u> for dinner. (1) beef (2) pork<br/>(3) mutton (4) green vegetable (5) fish<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>15. Her <u>competence</u> was unquestioned (1) virtue<br/>(2) understanding (3) ability (4) knowledge<br/>(5) training<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>16. They were in <u>bondage</u> all their lives. (1) debt<br/>(2) service (3) sorrow (4) slavery (5) business<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>17. You should <u>amplify</u> the report. (1) rewrite<br/>(2) expand (3) condense (4) explain (5) publish<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>18. <u>Perjury</u> is a crime. (1) burglary (2) arson<br/>(3) swearing falsely (4) resisting arrest<br/>(5) refusal to testify<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>19. We could see <u>sparse</u> vegetation. (1) scanty<br/>(2) poor (3) tall and thin (4) young<br/>(5) plentiful<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>20. The facts <u>contradict</u> his statement. (1) add to<br/>(2) criticize (3) support (4) supplement (5) deny<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>21. They went on a <u>spree</u>. (1) long trip (2) lively<br/>frolic (3) quiet party (4) fast drive<br/>(5) shopping expedition<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>22. To <u>articulate</u> your words. (1) speak distinctly<br/>(2) run together (3) mumble (4) pause<br/>between (5) emphasize<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>23. His remark was <u>emphatic</u> (1) angry (2) persuasive<br/>(3) revealing (4) forcible (5) truthful<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> <p>24. A <u>condia</u> opinion. (1) frank (2) guarded<br/>(3) confused (4) firm (5) deceitful<br/>1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :</p> |
|---|---|

15. Our cat is a nocturnal prowler. (1) natural  
(2) habitual (3) skillful (4) nightly  
(5) persistent 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
16. Scientific discoveries signalize this century.  
(1) bring about (2) take place in (3) distinguish  
(4) disturb (5) endanger 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
17. Write a memoir. (1) story (2) essay  
(3) poem (4) biography (5) fable 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
18. She has a seductive manner. (1) friendly  
(2) sincere (3) girlish (4) impulsive  
(5) captivating 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
19. His voice is husky. (1) clear and strong  
(2) changing (3) rather low (4) somewhat  
hoarse (5) sharp 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
20. The man's knowledge was rudimentary.  
(1) crude (2) highly regarded (3) elementary  
(4) profound (5) loudly proclaimed 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
1. He should veer to the left. (1) look carefully  
(2) gaze (3) shift (4) rush (5) return 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
2. His scepticism is disappointing. (1) doubt  
(2) coldness (3) disinterest (4) scorn  
(5) disdain 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
3. He will improvise as he speaks. (1) improve  
(2) make gestures (3) extemporize  
(4) emphasize (5) make notes 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
4. A chaste life. (1) long (2) respected  
(3) contented (4) spirited (5) virtuous 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
5. Excellent lineage. (1) family (2) friends  
(3) reputation (4) business connections  
(5) salesmanship 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
6. Try to economize this month. (1) spend nothing  
(2) spend frugally (3) balance the budget  
(4) pay cash (5) borrow less 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
7. A knotty cudgel (1) problem (2) club  
(3) large fist (4) pine board (5) oid  
carriage 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
8. Please stipulate the conditions. (1) specify  
(2) change (3) withdraw completely  
(4) observe (5) follow exactly 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
9. The odor was repugnant. (1) strong  
(2) fragrant (3) exciting (4) objectionable  
(5) persistent 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
40. He used the native parlance. (1) language  
(2) dress (3) weapon (4) customs (5) dance 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
41. A foray upon the enemy. (1) defeat (2) raid  
(3) outlook (4) full-scale attack (5) victory 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
42. He viewed his task with odium. (1) sadness  
(2) great pleasure (3) keen anticipation (4) elation  
(5) intense dislike 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
43. John outstripped the other boys. (1) overtook  
(2) overcame (3) excelled (4) locked out  
(5) repulsed 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
44. Let us waive the privilege. (1) point to  
(2) insist upon (3) observe (4) forego  
(5) ignore 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
45. His face was inscrutable. (1) serene  
(2) unfathomable (3) twisted (4) homely  
(5) uninteresting 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
46. The bright firmament. (1) sky (2) star  
(3) cloud (4) sunshine (5) light 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
47. He approached his adversary with bravado.  
(1) courage (2) great bravery (3) boastful  
defiance (4) confidence (5) anger 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
48. The boy received his pittance. (1) punishment  
(2) unexpected gift (3) rebuke (4) small  
allowance (5) rightful share 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
49. He would malign his friends. (1) protect  
(2) forsake (3) harm (4) deceive (5) slander 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :
50. A cogent remark. (1) sarcastic (2) sly  
(3) brief (4) vague (5) convincing 1 : : : : 2 : : : : 3 : : : : 4 : : : : 5 : : : :

IBM 805  
Test Sheet

## QUICK WORD TEST: Level 1 - Form Bm

Edgar F. Borgatta  
The University of Wisconsin  
Published by Harcourt, Brace & World, Inc.

Raymond J. Corsini  
University of California

Raw Score	%ile Rank	Stanine

Norms  
Group \_\_\_\_\_

**DIRECTIONS:** Fill in the answer space for the word that means the same as the first word. If you do not know, GUESS. Work quickly - ANSWER ALL THE QUESTIONS.  
SAMPLE: happy    dull    seem    glad    fast

Name \_\_\_\_\_ Age \_\_\_\_\_  
Place \_\_\_\_\_ Group \_\_\_\_\_ Sex \_\_\_\_\_  
Date \_\_\_\_\_ 1 \_\_\_\_\_ 2 \_\_\_\_\_

1 nudge	coil	slab	roll	push	26 share	part	meal	coil	land	51 weird	tire	bore	note	eery	76 flunk	fall	bite	drop	dolt
2 quirk	fast	fate	rile	turn	27 feint	mock	weak	pale	fall	52 twist	onto	game	warp	whip	77 vista	call	doze	idle	view
3 tress	hair	robe	iron	hurt	28 tally	sift	glee	aide	mark	53 stern	rear	glum	rage	shop	78 ardor	zeal	iron	gilt	vine
4 grade	shop	curl	sort	fear	29 droop	lota	wilt	down	bite	54 quota	cite	part	read	atom	79 pound	oval	beat	lead	hear
5 crank	auto	tier	line	turn	30 droll	tart	turn	jest	drum	55 flesh	fast	lard	gilt	pulp	80 blank	shot	espy	void	area
6 trial	most	game	type	test	31 sneak	shoe	talk	lurk	ooze	56 greet	vast	live	like	hail	81 padre	rope	peal	boat	monk
7 winch	snub	reel	long	tape	32 rebel	ring	rise	best	hate	57 wrath	veil	mask	race	rage	82 facet	pain	turn	side	easy
8 tract	area	draw	pull	pact	33 stoke	post	poke	bomb	ship	58 irate	rant	lift	ired	like	83 quack	fake	duck	lack	slap
9 scout	risk	kind	male	look	34 blast	toot	holy	lush	gone	59 peace	fear	pact	gain	rule	84 prick	fool	hair	dirt	spur
10 mooch	loaf	much	romp	spry	35 cinch	fast	edge	limp	grip	60 elide	omit	dash	bump	trod	85 murky	fend	gray	scum	dark
11 noble	bill	high	gold	ring	36 stack	pile	pole	bend	nail	61 grime	smut	poem	fool	best	86 tempt	sexy	lead	time	wear
12 affix	gain	post	fire	mend	37 booty	shoe	find	swag	lane	62 draft	draw	wood	reef	hero	87 think	muse	whit	nick	know
13 tunic	song	clan	fish	robe	38 scoff	hurt	jeer	lose	lung	63 abyss	rule	duet	urge	gulf	88 gross	bulk	oily	ream	vile
14 vouch	back	sofa	free	ache	39 quote	root	part	cite	site	64 grave	rant	deep	dirt	tomb	89 primp	look	fuss	dent	evil
15 assay	rant	dolt	test	read	40 awful	load	fear	dire	vast	65 flout	hurt	jeer	fool	drop	90 covet	envy	coat	rill	love
16 tooth	fang	ease	smug	twin	41 shrub	wash	rasp	bush	tree	66 canal	duck	duct	rear	wade	91 panic	race	fear	save	tine
17 picot	soda	loop	jerk	atom	42 stuff	lout	hard	cram	junk	67 count	rich	main	rely	faze	92 parry	gala	hunt	fend	bear
18 tweak	lame	fall	jerk	wick	43 still	lean	pole	long	cane	68 inane	loco	pert	void	wise	93 exude	ooze	oust	lead	rule
19 stunt	feat	crag	jump	joke	44 model	chic	type	poem	rook	69 wharf	dock	bark	warp	blow	94 slope	ride	fall	slip	ramp
20 eject	stop	oust	vote	pull	45 smart	chic	good	nice	mode	70 caper	romp	ness	wrap	roll	95 yield	stop	save	rush	cede
21 agony	harm	away	pain	eral	46 humor	plus	boil	mood	play	71 cease	bend	open	stop	hire	96 proof	atop	eave	test	most
22 phase	side	hunt	word	spar	47 slink	join	lurk	dark	murk	72 waver	sway	disk	abet	abut	97 parch	heat	burn	buff	lawn
23 haunt	best	game	bulb	nest	48 screw	bray	iron	rift	turn	73 storm	wild	wash	dead	rave	98 evict	evil	base	oust	mean
24 brisk	bold	fast	tidy	neat	49 pivot	turf	golf	turn	bone	74 petal	foot	leaf	hike	tend	99 annex	to me	join	rent	omit
25 image	dull	pate	icon	sire	50 dummy	joke	good	copy	slow	75 cloud	gray	haze	rain	soft	100 datum	food	time	trap	fact

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APPENDIX B

EXPERIMENTAL MATERIALS



GROUP A

## General Vocabulary Lists

I.	II.	III.	IV.
1. circumlocution	1. actuary	1. affluence	*1. affable
2. debilitate	2. coalesce	*2. bicker	2. agnostic
*3. deviate (v)	*3. candid	3. carte blanche	*3. banter
4. doldrum	*4. excursive	4. catharsis	4. fornication
5. eschew	5. flibbertigibbet	*5. cogent	5. heterogeneous
*6. feasible	6. formidable	6. expurgate	6. nomenclature
*7. kiln	7. gregarious	7. ignominy	7. inedible
8. masochist	*8. grimace	8. inexorable	*8. malign
9. meticulous	9. impede	9. loquacious	9. officious
10. moribund	10. inestimable	*10. plentitude	*10. precipitous
*11. rogue	*11. momentous	*11. rudimentary	*11. pittance
12. retinue	*12. nocturnal	*12. spree	12. prurient
*13. seductive	*13. sparse	*13. stalwart	*13. scepticism
*14. perjury	14. vicarious	14. voluptuous	14. unicorn
*15. unanimity	15. vociferous	15. wrought	15. vivacious
V.	VI.	VII.	VIII.
1. altruistic	1. aberration	1. audible	1. aesthetics
2. asymmetrical	*2. consecutive	2. bourgeois	*2. annihilation
3. blase	3. condescend	3. chasm	*3. criterion
*4. bravado	4. eclectic	*4. chasm	4. culinary
*5. cudgel	5. egocentric	*5. drudgery	5. deify
*6. gore	6. emasculate	6. diaphanous	6. derogatory
*7. homage	*7. firmament	7. empathy	7. ersatz
*8. inscrutable	*8. foray	8. emulate	8. enraptured
9. pathos	9. grandiose	*9. improvise	*9. infinitesimal
10. penury	10. implication	10. meretricious	*10. lithe
11. restitution	11. libido	*11. meanders	*11. memoir
*12. scrutinize	*12. lunacy	*12. pacify	*12. repugnant
13. travesty	13. mercenary	13. potable	13. sophisticated
14. unmitigated	*14. odium	*14. vexatious	14. sympathy
15. utilitarian	*15. stipulate	*15. veer	15. wretch

\*These words are the sampling of fifty words randomly-selected from the Bobbs-Merrill vocabulary tests and taught by differing methods to Group A and Group B.

The following listings indicate the various strategies employed by the experimenter in Group B to introduce organically the sampling of vocabulary words identified for the treatment phase of the experiment. While each strategy was broken down into more specific activities (discussed in Chapter III), there were three basic means employed: through writing activities, reading activities, and oral (speaking/listening) activities.

This listing identifies by the letter A or B from which Bobbs-Merrill vocabulary test (Form A or Form B) the word was selected. It also indicates what number is assigned that word on those tests. Hence A10 indicates that the word introduced in the activity designated is the tenth word on the Form A test. Note: Some words are introduced in more than one activity.

#### I. Words Introduced Through Writing Activities

A27	annihilation	B50	cogent
A9	consecutive	B27	memoir
A36	criterion	B30	rudimentary
A20	feasible	B32	scepticism
A8	homage	B21	spree
A29	momentous	B38	stipulate
A17	pacify		
A32	rogue		
A35	scrutinize		
A43	vexatious		

#### II. Words Introduced Through Reading Activities

A27	annihilation	B47	bravado
A33	affable	B34	chaste
A45	banter	B50	cogent
A4	bicker	B10	drudgery
A24	deviate	B46	firmament
A47	gore	B41	foray
A23	grimace	B45	inscrutable
A41	infinitesimal	B11	kiln
A49	lithic	B25	nocturnal
A30	lunacy	B42	odium
A11	plentitude	B18	perjury
A48	precipitous	B48	pittance
A34	stalwart	B38	repugnant
		B28	seductive
		B19	sparse
		B31	veer

### III. Words Introduced Through Oral (speaking/listening) Activities

A33	affable	B47	bravado
A27	annihilation	B24	candid
A45	banter	B34	chaste
A4	bicker	*B50	cogent
A9	consecutive	B37	cudgel
*A36	criterion	*B10	drudgery
*A24	deviate	B46	firmament
*A50	excursive	B41	foray
*A20	feasible	*B33	improvise
A47	gore	B45	inscrutable
A23	grimace	B11	kiln
A8	homage	B49	malign
A41	infinitesimal	B27	memoir
A49	lithe	B25	nocturnal
A30	lunacy	B42	odium
A39	meanders	B18	perjury
*A29	momentous	B48	pittance
A17	pacify	B38	repugnant
A11	plentitude	B30	rudimentary
A48	precipitous	B28	seductive
A32	rogue	*B32	scepticism
*A35	scrutinize	B19	sparse
A34	stalwart	B21	spree
*A40	unanimity	B38	stipulate
A43	vexatious	B31	veer

Note: Virtually all of the words from the vocabulary sampling were introduced to some degree through oral activities. However, those words which received a greater degree of exposure through in-class lecture/discussion through three or more separate activities are indicated with an asterisk.

APPENDIX C

RAW DATA

## VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Overall Results for GROUP A Semester Fall '75

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile	PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile		
8	M	18	W	JR	38	41	63	77	42	42	81	81	+3	+14	
8	M	23	W	GM	44	44	89	89	44	49	89	99	0	0	
7	M	19	W	AW	42	44	81	89	44	44	93	93	+2	+8	
7	M	19	W	DT	37	45	57	93	36	37	52	57	+8	+36	
7	F	19	W	ES	32	42	36	81	35	37	47	57	+10	+45	
6	F	19	W	SC	30	37	28	57	27	39	20	67	+7	+25	
6	M	19	W	SW	31	36	32	52	35	37	47	57	+5	+20	
6	F	25	W	SK	25	37	15	57	27	34	20	43	+12	+42	
													+7	+23	



QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %ile	POST %ile	PRE R-SCORE	POST R-SCORE	PRE %ile	POST %ile		
4	F	25	B	VG	13	18	1	5	16	24	3	13	+5	+4	
4	F	28	W	LH	16	32	3	36	25	35	15	47	+16	+33	
3	M	20	W	JM	20	22	7	9	19	21	6	8	+2	+2	
3	M	19	W	RM	10	5	1	1	6	13	1	1	+5	0	
3	F	19	W	DW	11	32	1	36	5	27	1	20	+21	+35	
2	F	19	B	DL	21	26	8	17	14	29	1	25	+5	+9	
													+15	+24	





QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile	PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile		
6	M	22	W	HW	27	29	20	25	30	34	28	43	+2	+5	
6	F	19	W	KM	26	25	17	15	18	26	5	17	-1	-2	
6	F	18	W	VB	35	41	47	77	30	31	28	32	+6	+30	
6	F	18	W	SW	29	31	25	32	31	32	32	36	+1	+4	
6	M	18	W	KW	31	32	32	36	29	35	25	47	+1	+4	
5	F	43	B	ZT	17	26	4	17	24	32	13	36	+9	+13	
5	F	19	W	VV	25	25	15	15	36	30	52	28	0	0	
4	F	19	B	RC	22	19	9	6	28	30	22	28	-3	-3	
4	F	18	W	MM	18	21	5	8	23	16	11	3	+2	+6	
4	F	18	W	SC	21	12	8	1	21	7	8	1	+3	+3	
													-7	-8	
													-9	-7	
													-14	-7	







## VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Overall Results for GROUP A Semester Spring '76

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile	PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile		
9	F	38	W	VH	37	46	57	96	45	46	93	96	+9	+39	
8	F	29	W	PM	38	44	63	89	40	44	73	89	+6	+26	
8	M	18	W	TH	44	41	89	77	43	46	85	96	-3	-12	
7	F	49	W	JM	34	45	43	93	38	47	63	97	+11	+50	
7	F	26	W	KN	36	41	52	77	39	44	67	89	+5	+25	
7	M	19	W	KR	43	39	85	67	39	44	67	89	-4	-18	
7	F	19	W	KP	33	40	39	73	27	37	20	57	+7	+34	
6	M	28	W	RB	31	46	32	96	28	39	22	67	+15	+64	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %ile	POST %ile	PRE R-SCORE	POST R-SCORE	PRE %ile	POST %ile		
6	F	26	W	KM	39	38	67	63	37	40	57	73	-1	-4	
6	F	26	W	RC	37	42	57	81	38	41	63	77	+3	+24	
6	F	31	W	JC	35	39	47	67	39	45	67	93	+4	+20	
6	F	18	W	CP	39	41	67	77	31	40	32	73	+3	+10	
6	F	20	W	PP	25	39	15	67	30	30	28	28	+14	+52	
6	F	22	B	MR	30	39	28	67	28	29	22	25	+9	+39	
5	M	24	W	KK	22	35	9	47	22	35	9	47	+13	+38	
5	M	20	W	TW	23	29	11	25	34	30	43	28	+6	+14	
5	F	38	W	ER	27	31	20	32	33	29	39	25	-4	-15	
5	F	20	B	DA	24	29	13	25	32	40	36	73	+4	+12	
													+5	+12	
													+8	+36	









QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile	PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile		
5	M	38	W	JS	23	27	11	20	17	23	4	11	+4	+9	
5	F	24	W	SC	15	16	2	3	16	23	3	11	+1	+1	
4	F	18	W	ME	26	27	17	20	24	23	13	11	+1	+3	
4	F	21	B	VJ	16	11	3	1	18	14	5	1	-5	-2	
4	F	18	B	BM	17	20	4	7	29	19	25	6	+3	+3	
4	F	20	W	PZ	13	14	1	1	17	20	4	7	+1	0	
3	F	19	W	NM	12	12	1	1	10	11	1	1	0	0	
2	F	18	B	LE	13	19	1	6	16	20	3	7	+6	+5	
1	M	26	B	KT	12	8	1	1	14	16	1	3	-4	0	

## VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Overall Results for GROUP C Semester Spring '76

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A				FORM B				RAW SCORE VARIATION	PERCENTILE VARIATION
						PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile	PRE R-SCORE	POST R-SCORE	PRE %-ile	POST %-ile		
9	F	48	W	NW	39	40	67	73	45	45	93	93	+1	+6	
8	M	28	W	RB	40	46	73	96	35	40	47	73	+6	+23	
8	F	27	B	MJ	34	36	43	52	34	37	43	57	+2	+9	
8	F	40	W	BI	41	45	77	93	48	46	98	96	+4	+16	
8	F	28	W	JL	36	39	52	67	40	40	73	73	-2	-2	
7	F	28	W	LM	34	36	43	52	40	39	73	67	+3	+15	
6	F	28	W	ET	31	31	32	32	32	32	36	36	0	0	
6	F	31	W	DS	34	35	43	47	33	36	39	52	0	0	
													+1	+4	
													+3	+13	





VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP A Semester Fall '75

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
8	M	18	W	JR	3	1	4	1	3, 20, 25 20 1, 4, 7, 12 4	7		
8	M	23	W	GM	4	1	3	0	3, 8, 20, 25 3 1, 4, 19	2	+10	
7	M	19	W	AW	2	2	2	3	16, 20 14, 20 12, 19 4, 7, 19	7	+12	
7	M	19	W	DT	4	1	7	4	10, 17, 20, 25 3 3, 4, 8, 9, 12, 15, 19 4, 8, 12, 19	4	- 2	
7	F	19	W	ES	11	3	9	8	3, 6, 8, 10, 13, 14, 16, 20, 21, 23, 25 6, 20, 23 4, 8, 10, 12, 15, 17, 19, 23, 24 1, 4, 8, 12, 15, 17, 19, 20	5	+12	
										20		
										11	+18	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
6	F	19	W	SC	9	2	11	4	6, 7, 8, 13, 15, 16, 17, 18, 21 3, 7, 8, 16 1, 4, 5, 8, 9, 10, 12, 15, 18, 19, 23 1, 10, 15, 18	20 6	+28	
6	M	19	W	SW	11	2	9	8	3, 6, 7, 8, 14, 15, 16, 20, 21, 23, 25 3, 15 1, 4, 5, 7, 8, 10, 12, 15, 19 1, 4, 7, 8, 10, 12, 15, 21	20 10	+20	
6	F	25	W	SK	16	4	12	9	2, 3, 6, 7, 8, 10, 11, 14, 16, 17, 18, 20, 21, 22, 23, 25 3, 5, 20, 22 1, 2, 3, 4, 5, 7, 9, 10, 17, 18, 19, 25 1, 3, 4, 9, 10, 12, 17, 18, 24	28 13	+30	
6	F	41	W	MH	14	5	10	4	1, 2, 3, 8, 10, 13, 15, 16, 17, 18, 20, 22, 23, 25 2, 14, 15, 17, 23 1, 4, 5, 8, 9, 12, 14, 15, 17, 19 4, 9, 15, 20	24 9	+30	
6	F	19	W	NC	13	2	14	3	3, 7, 8, 11, 13, 14, 15, 17, 19, 23, 24, 25 3, 22 1, 3, 4, 5, 8, 9, 10, 13, 15, 17, 19, 23, 24, 25 4, 9, 10	27 5	+44	
6	M	18	W	BH	14	8	13	4	1, 2, 3, 11, 13, 14, 15, 17, 20, 21, 22, 23, 24, 25 3, 8, 12, 16, 17, 21, 22, 25 1, 3, 4, 5, 7, 9, 10, 11, 12, 13, 15, 17, 21 4, 7, 19, 21	27 12	+30	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTEST			
6	F	18	W	JC	13	7	11	5	2, 3, 6, 8, 10, 13, 14, 15, 20, 21, 23, 24, 25 3, 6, 13, 20, 21, 22, 25 1, 3, 4, 5, 7, 8, 10, 12, 15, 19, 23 4, 9, 10, 15, 19	24	+24	
5	F	33	W	SS	9	3	10	5	1, 2, 3, 8, 10, 14, 15, 20, 25 3, 4, 20 4, 5, 7, 8, 9, 10, 12, 14, 15, 24 4, 12, 16, 19, 20	19	+22	
5	F	33	B	MW	6	6	9	5	3, 6, 10, 13, 14, 16 3, 5, 6, 10, 13, 24 1, 4, 5, 7, 8, 9, 14, 19, 24 4, 7, 8, 9, 20	15	+8	
5	F	18	W	PH	12	2	9	1	1, 3, 8, 10, 13, 14, 15, 16, 17, 20, 23, 25 3, 23 1, 2, 3, 5, 7, 8, 12, 17, 19 8	21	+36	
5	F	18	W	SH	11	6	10	5	1, 3, 7, 8, 10, 13, 14, 16, 20, 21, 25 1, 3, 14, 16, 21, 25 1, 4, 5, 7, 9, 10, 12, 13, 15, 19 1, 4, 10, 12, 15	21	+20	
5	F	19	W	VS	12	4	8	5	1, 2, 3, 6, 10, 17, 20, 21, 22, 24, 25, 39 3, 15, 16, 20 5, 7, 8, 12, 15, 17, 18, 19 4, 10, 12, 19, 24	20	+22	



QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
5	F	18	W	LA	12	4	10	7	1, 3, 8, 13, 14, 16, 17, 18, 21, 23, 24, 25 3, 16, 18, 23 1, 4, 5, 8, 11, 12, 17, 19, 23, 24 1, 4, 15, 17, 19, 20, 24	22	11	+22
4	F	25	B	VG	20	13	21	11	1, 2, 3, 7, 8, 10, 11, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 16 1, 3, 8, 11, 14, 15, 16, 17, 20, 21, 22, 23, 25 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 21, 22, 25 1, 4, 7, 9, 10, 12, 15, 17, 18, 22, 21	41	24	+34
4	F	28	W	LH	13	5	12	6	2, 3, 7, 8, 14, 15, 16, 17, 20, 21, 22, 23, 25 3, 15, 17, 21, 25 1, 3, 4, 5, 7, 8, 9, 10, 12, 19, 21, 25 1, 4, 8, 10, 12, 15	25	11	+28
3	M	20	W	JM	14	6	18	13	1, 6, 7, 8, 9, 10, 11, 14, 15, 20, 21, 22, 24, 25 3, 8, 13, 14, 24, 25 1, 2, 3, 4, 5, 9, 10, 11, 13, 12, 14, 15, 17, 18, 19, 21, 24, 25 1, 3, 4, 5, 10, 12, 9, 15, 18, 19, 21, 24, 25	32	19	+26
3	M	19	W	RM	17	9	23	15	1, 2, 3, 6, 7, 8, 9, 12, 13, 15, 16, 17, 19, 21, 22, 23, 25 3, 8, 10, 13, 15, 20, 21, 24, 25 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, 11, 12, 13, 15, 17, 18, 19, 20, 21, 23, 24, 25, 22 1, 2, 3, 4, 5, 7, 8, 9, 10, 15, 17, 18, 19, 20, 24	40	24	+32

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
3	F	19	W	DW	19					1, 2, 3, 5, 6, 9, 10, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25		
						6				5, 8, 11, 17, 20, 21		
							23			1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25	42	
								5		1, 4, 10, 18, 19	11	+62
2	F	19	B	DL	11					6, 7, 10, 13, 14, 15, 16, 17, 18, 23, 25		
						7				2, 3, 5, 14, 18, 22, 23		
							19			1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 15, 17, 18, 19, 22, 23, 25	30	
								11		1, 4, 6, 10, 15, 18, 19, 20, 21, 23, 12	18	+24

VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP B Semester FALL '75

QWT	STANLINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST		TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
9	F	19	W	DR	0	1	8	4	8	1, 4, 5, 7, 8, 12, 19, 25	8	
										4, 5, 8, 12	5	+6
8	F	18	W	DC	4	2	6	4	6, 8, 13, 20	13, 20	10	
										1, 4, 5, 7, .., 15, 19	6	+8
										4, 8, 15, 19		
7	M	18	W	RB	9	5	12	11	3, 8, 10, 13, 14, 15, 17, 20, 21	1, 3, 8, 14, 20	21	
										1, 3, 4, 5, 7, 8, 9, 10, 12, 15, 19, 24	16	+10
										1, 3, 4, 7, 8, 9, 10, 15, 17, 22, 12		
7	M	19	W	KR	6	6	4	4	3, 13, 15, 16, 20, 25	3, 4, 10, 16, 20, 25	10	
										3, 4, 5, 14	10	0
										3, 4, 14, 19		
7	M	22	W	SD	9	6	11	8	1, 3, 8, 11, 13, 14, 18, 20, 25	3, 8, 14, 18, 10, 25	20	
										1, 2, 4, 5, 8, 10, 13, 15, 17, 19, 25	14	+12
										1, 4, 8, 10, 15, 17, 19, 9		

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
6	F	18	W	SB	16					1, 3, 7, 8, 9, 10, 11, 12, 14, 13, 16, 20, 21, 22, 25, 24		
						16				1, 3, 8, 10, 11, 12, 13, 14, 15, 16, 18, 20, 21, 22, 23, 25		
							11			1, 3, 5, 8, 9, 10, 12, 15, 19, 20, 17	27	
								13		1, 3, 4, 5, 8, 9, 10, 12, 15, 19, 20, 21, 17	29	-4
6	F	24	W	PS	12					2, 3, 6, 7, 8, 15, 16, 17, 20, 23, 25, 13		
						11				2, 3, 6, 8, 10, 13, 14, 16, 17, 20, 25		
							11			4, 5, 7, 9, 10, 12, 17, 19, 21, 22, 23	23	
								8		1, 4, 7, 9, 12, 15, 17, 18	19	+8
6	M	29	B	GK	14					1, 3, 6, 8, 10, 13, 14, 16, 17, 18, 20, 21, 23, 25		
						11				6, 8, 10, 14, 16, 17, 18, 20, 21, 23, 25		
							16			1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19,		
								14		1, 4, 5, 9, 7, 8, 10, 12, 13, 14, 18, 19, 21, 23	30	
											25	+10
6	M	22	W	HW	12					1, 3, 7, 8, 10, 13, 14, 16, 17, 20, 21, 25		
						12				1, 3, 7, 8, 13, 14, 16, 17, 18, 20, 21, 25		
							16			1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 17, 18, 19, 24, 25		
								10		1, 3, 5, 7, 8, 10, 15, 17, 18, 21	28	
											22	+12
6	F	19	W	KM	13					3, 6, 8, 10, 13, 14, 16, 17, 20, 21, 22, 23, 24		
						14				1, 3, 6, 8, 10, 11, 13, 14, 16, 17, 15, 20, 21, 22		
							18			1, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24		
								13		1, 3, 4, 6, 7, 8, 9, 10, 12, 13, 19, 20, 16	31	
											27	+8

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
6	F	18	W	VB	8	4	14	12	1, 3, 8, 13, 14, 18, 20, 25 8, 13, 20, 25 1, 3, 4, 5, 7, 8, 9, 13, 12, 15, 17, 19, 21, 24 1, 3, 4, 5, 8, 10, 12, 17, 19, 22, 24, 25	22	16	+12
6	F	18	W	SW	11	11	9	8	3, 6, 7, 8, 10, 13, 17, 18, 22, 23, 25 3, 7, 8, 10, 13, 16, 18, 21, 22, 23, 25 1, 4, 5, 6, 7, 8, .. 10, 12, 15 1, 4, 5, 7, 9, 10, 12, 15	20	19	+2
6	M	18	W	KW	12	10	12	8	1, 3, 8, 9, 12, 13, 14, 16, 17, 20, 21, 25 3, 6, 7, 10, 13, 14, 16, 17, 20, 25 1, 4, 5, 7, 9, 10, 13, 15, 17, 18, 19, 20 1, 4, 5, 7, 9, 10, 12, 15.	24	18	+12
5	F	43	B	ZT	17	11	14	10	1, 3, 6, 8, 9, 10, 11, 14, 16, 17, 18, 21, 22, 23, 25, 20, 15 2, 8, 9, 10, 14, 16, 17, 18, 20, 21, 23 1, 2, 4, 5, 7, 9, 10, 12, 15, 16, 17, 19, 23, 25 1, 2, 4, 9, 10, 12, ... 16, 17, 19, 23	31	21	+20
5	F	19	W	VV	14	15	9	13	2, 3, 8, 9, 10, 13, 14, 16, 20, 21, 22, 23, 24, 25 2, 3, 5, 6, 9, 10, 13, 14, 16, 20, 21, 23, 24, 25, 8 1, 4, 5, 6, 8, 15, 17, 18, 19 1, 4, 5, 7, 8, 12, 15, 16, 14, 17, 18, 19, 24	23	28	-10
4	F	19	B	RC	14	16	13	11	1, 2, 3, 8, 10, 13, 14, 15, 16, 18, 20, 23, 24, 25 2, 3, 6, 7, 8, 10, 14, 15, 16, 18, 20, 21, 22, 23, 24, 25 1, 3, 4, 5, 7, 8, 9, 10, 13, 15, 22, 25, 17 1, 3, 4, 5, 7, 9, 10, 12, 15, 22, 23	27	27	0

QWT	STAININE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE	
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST				
4	F	18	W	MM	17					1, 2, 3, 6, 7, 8, 10, 11, 13, 14, 15, 17, 20, 21, 22, 23, 25			
						16				1, 2, 3, 6, 7, 8, 10, 11, 13, 14, 15, 18, 20, 21, 22, 23, 25			
							15			1, 3, 4, 5, 9, 10, 12, 13, 14, 15, 19, 21, 25, 8, 17		32	
								17		1, 3, 4, 5, 7, 9, 10, 13, 12, 14, 15, 19, 21, 22, 17, 25, 24		33	-2
4	F	18	W	SC	14					1, 3, 6, 7, 8, 9, 10, 11, 13, 14, 17, 18, 20, 25			
						18				1, 2, 3, 4, 7, 9, 10, 11, 13, 14, 15, 16, 17, 20, 21, 22, 24, 25			
							18			1, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 21, 23, 24, 25		32	
								20		1, 3, 4, 5, 7, 9, 10, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25		38	-12
3	M	19	W	RR	17					1, 2, 3, 6, 7, 8, 10, 11, 14, 15, 17, 18, 20, 21, 22, 23, 24			
						13				1, 7, 8, 9, 10, 11, 14, 17, 18, 21, 23, 24, 25			
							19			1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 18, 19, 20, 23, 12		36	
								17		1, 3, 4, 5, 7, 8, 9, 11, 13, 14, 15, 17, 18, 19, 20, 22, 23		30	+12
2	M	19	W	JR	14					2, 3, 8, 9, 10, 11, 13, 14, 15, 16, 20, 22, 24, 25			
						16				2, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 20, 22, 23, 25			
							14			1, 2, 8, 9, 10, 12, 13, 15, 17, 19, 23, 3, 4, 5		28	
								15		1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 17, 19, 23, 24		31	-6

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
1	F	39	B	EH	19					2, 3, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25		
						23				2, 3, 7, 8, 9, 10, 11, 13, 1, 5, 6, 18, 19, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25		
							23			1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25	42	
								21		1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24	44	-4
1	M	19	W	RC	17					1, 2, 5, 7, 8, 9, 11, 13, 14, 15, 16, 18, 19, 20, 21, 24, 25		
						19				1, 2, 3, 5, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24		
							21			1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25	38	
								18		1, 3, 4, 5, 6, 7, 9, 11, 13, 14, 16, 17, 19, 20, 21, 22, 24, 25	37	+2

VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP C Semester FALL '75

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
7	M	18	W	RS	10	7	7	10	3, 7, 8, 10, 13, 14, 17, 18, 20, 22 3, 7, 8, 10, 13, 21, 23 1, 4, 7, 10, 12, 15, 23 1, 4, 5, 7, 8, 10, 12, 28, 29, 25	17	17	0
7	M	19	W	DS	17	17	15	22	1, 2, 3, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 20, 21, 22, 25 1, 2, 3, 7, 8, 9, 10, 13, 14, 15, 17, 18, 20, 21, 22, 24, 25 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 20, 21 1, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25	32	39	-14
7	M	18	W	DT	19	12	15	14	1, 3, 6, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25 1, 3, 13, 14, 16, 17, 20, 21, 22, 23, 24, 25 1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 17, 19, 24 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 15, 17, 19, 23, 24	34	26	+16
6	M	20	W	JD	7	8	9	10	1, 3, 8, 13, 14, 20, 23 3, 5, 8, 11, 14, 20, 23, 25 1, 4, 5, 7, 10, 12, 15, 17, 19 1, 2, 4, 5, 10, 12, 15, 19, 22, 23	16	18	-4



QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
5	M	18	W	RP	15	14	17	13	1, 2, 3, 6, 7, 8, 10, 11, 13, 14, 16, 22, 23, 25, 20 1, 2, 3, 6, 7, 10, 13, 14, 16, 17, 22, 23, 24, 25 1, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 22, 25 1, 3, 4, 5, 9, 10, 11, 12, 13, 15, 17, 18, 19	32 27	+10	
5	M	18	B	RT	9	8	14	13	3, 6, 8, 13, 18, 20, 23, 24, 25 3, 8, 9, 13, 18, 16, 20, 25 1, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17, 18, 19, 25 1, 4, 5, 6, 7, 8, 10, 12, 15, 17, 19, 21, 23	23 21	+4	
5	M	23	W	GB	13	12	10	11	1, 3, 8, 10, 13, 15, 16, 20, 21, 22, 23, 24, 25 3, 6, 8, 10, 13, 15, 16, 20, 21, 23, 24, 25 1, 3, 4, 5, 7, 8, 9, 10, 12, 20 1, 4, 5, 7, 8, 9, 10, 12, 15, 19, 23	23 22	+2	
4	M	20	W	TM	17	16	15	16	3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 24, 25 1, 2, 3, 7, 10, 11, 12, 13, 14, 15, 17, 18, 22, 23, 24, 16 1, 2, 6, 7, 9, 10, 11, 12, 17, 18, 19, 20, 23, 5, 25 1, 2, 4, 3, 5, 9, 10, 12, 13, 14, 17, 18, 19, 20, 23, 15	32 32	0	
4	M	20	W	JR	17	13	14	13	3, 4, 6, 7, 8, 10, 11, 13, 14, 16, 17, 20, 22, 23, 24, 25, 21 2, 3, 4, 7, 8, 11, 14, 16, 20, 21, 22, 23, 25 1, 2, 3, 4, 5, 6, 7, 9, 10, 15, 17, 22, 24, 25 1, 3, 4, 7, 9, 10, 11, 15, 17, 18, 22, 24, 25	31 26	+10	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B		VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST				
4	F	18	W	RP	20					1, 3, 6, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25			
						17				3, 5, 6, 8, 9, 10, 11, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25			
							18			1, 2, 4, 5, 7, 8, 9, 10, 12, 13, 15, 17, 19, 20, 21, 22, 23, 24		38	
								14		1, 2, 3, 4, 5, 7, 8, 9, 10, 15, 17, 18, 19, 21		31	+14
4	M	18	B	RD	17					1, 2, 3, 7, 8, 9, 10, 12, 13, 14, 15, 17, 20, 22, 23, 24, 25			
						18				1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 20, 22, 24			
							19			2, 3, 4, 5, 7, 8, 10, 9, 12, 13, 14, 15, 17, 18, 20, 23, 24, 25, 22		36	
								19		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 19, 23, 25, 21		37	-2
3	F	18	W	PR	21					2, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 25, 16			
						20				1, 2, 3, 5, 7, 8, 9, 10, 11, 13, 14, 15, 16, 19, 20, 21, 23, 24, 25, 17			
							18			1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 17, 18, 20, 22, 24, 25, 19		39	
								21		1, 2, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 24, 25		41	-4

QWT	STAININE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
2	F	33	B	AB	21					1, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25		
						21				1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25		
							19			1, 2, 3, 5, 6, 9, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24	40	
								19		1, 2, 3, 4, 5, 6, 7, 9, 10, 11, 12, 13, 14, 15, 18, 20, 21, 23, 25	40	0
1	F	18	B	SO	22					1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 22, 23, 24, 25		
						18				1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 13, 14, 15, 17, 19, 21, 24, 25		
							23			1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25	45	
								19		1, 4, 5, 6, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25	37	+16
1	F	20	W	MM	19					2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 24, 25, 19		
						19				2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 20, 21, 22, 24, 25		
							14			1, 2, 3, 4, 5, 10, 11, 13, 17, 18, 19, 21, 23, 25	33	
								19		1, 2, 3, 4, 5, 8, 9, 10, 12, 15, 17, 18, 20, 21, 22, 23, 24, 25, 16	38	-10

VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP A Semester Spring '76

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
9	F	38	W	VH	7	2	2	1	8, 14, 20, 3, 25, 16, 21 8, 14 4, 19 4	9	3	+12
8	F	29	W	PM	6	1	4	2	14, 20, 3, 25, 22, 17 3 4, 12, 1, 7, 4, 10	10	3	+14
8	M	18	W	TH	3	2	3	0	8, 14, 3, 8, 3, 23, 11, 4	5	2	+6
7	F	49	W	JM	8	2	8	2	8, 14, 20, 10, 3, 13, 16, 17 10, 16 2, 22, 4, 1, 15, 8, 5, 9 1, 9	16	4	+24
7	F	26	W	KN	9	3	8	3	18, 8, 14, 20, 10, 25, 13, 6, 17 14, 22, 21 4, 12, 1, 10, 15, 8, 5, 19 12, 10, 19	17	6	+22

QWT	STAININE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
7	M	19	W	KR	3	5	4	2	3, 15, 16 4, 10, 3, 13, 16 4, 5, 3, 14 6, 4	7	0	
7	F	19	W	KP	9	3	13	4	7, 8, 14, 20, 13, 22, 23, 1, 2 12, 25, 22 2, 23, 4, 17, 1, 10, 15, 8, 5, 3, 9, 19, 14 4, 1, 5, 19	22	+30	
6	M	28	W	RB	10	1	10	4	8, 14, 20, 10, 3, 25, 13, 24, 23, 17 3 4, 12, 1, 7, 10, 8, 24, 5, 3, 9 4, 12, 10, 9	20	+30	
6	F	26	W	KM	7	6	9	4	8, 14, 20, 3, 25, 13, 1 18, 8, 14, 20, 3, 25 4, 17, 1, 10, 15, 8, 5, 9, 13 1, 15, 8, 9	16	+12	
6	F	26	W	RC	5	4	7	4	20, 3, 25, 13, 16 18, 13, 16, 22 23, 4, 1, 7, 10, 15, 5 1, 10, 15, 9	12	+8	
6	F	31	W	JC	8	4	7	3	8, 14, 20, 3, 25, 13, 16, 23 8, 14, 25, 23 4, 12, 15, 7, 8, 9, 19 4, 10, 15	15	+16	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
6	F	18	W	CP	8	4	13	5	18, 8, 14, 20, 10, 3, 23, 21 14, 3, 16, 23 4, 12, 17, 1, 7, 10, 15, 8, 5, 25, 19, 20, 14 4, 12, 7, 10, 19	21 9	+24	
6	F	20	W	PP	17	5	13	8	11, 12, 8, 14, 20, 10, 3, 25, 13, 24, 16, 6, 23, 1, 21, 15, 2 11, 18, 14, 25, 16 4, 12, 17, 1, 7, 10, 15, 8, 18, 5, 3, 9, 19 22, 4, 12, 1, 10, 18, 24, 3,	30 13	+34	
6	F	22	B	MR	11	4	12	7	7, 8, 14, 10, 3, 13, 16, 6, 1, 21, 17 12, 3, 16, 17 4, 12, 1, 7, 10, 15, 8, 18, 5, 9, 19, 13 4, 12, 1, 10, 18, 3, 9	23 11	+24	
5	M	24	W	KK	12	7	11	4	11, 9, 8, 20, 3, 25, 13, 24, 16, 6, 22, 17 7, 11, 20, 13, 6, 22, 15 2, 17, 10, 1, 24, 9, 21, 19, 20, 13, 14 24, 9, 25, 19	23 11	+24	
5	M	20	W	TW	15	5	11	7	7, 9, 8, 14, 20, 3, 25, 13, 16, 22, 23, 1, 21, 15, 17 7, 8, 14, 13, 16 2, 4, 12, 17, 1, 7, 10, 15, 5, 3, 9 2, 4, 10, 8, 3, 9, 13	26 12	+28	
5	F	38	W	ER	13	9	11	10	7, 12, 8, 14, 20, 25, 13, 16, 6, 22, 23, 21, 17 8, 14, 3, 13, 16, 22, 23, 1, 15 4, 12, 17, 1, 7, 10, 15, 8, 5, 9, 19 23, 4, 12, 17, 1, 10, 15, 8, 5, 9	24 19	+10	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B		VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST		TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE	
5	F	20	B	DA	14	13	12	5	7, 8, 14, 10, 3, 25, 13, 24, 16, 22, 23, 21, 15, 2 7, 11, 8, 14, 20, 10, 3, 25, 13, 22, 23, 15, 2 23, 11, 4, 1, 7, 10, 15, 8, 18, 5, 3, 19 12, 1, 7, 10, 3	26 18	+16		
4	M	18	W	CE	17	9	15	10	7, 11, 18, 5, 8, 14, 20, 10, 3, 25, 13, 24, 6, 23, 1, 15, 17 14, 3, 25, 13, 24, 16, 23, 1, 15 23, 22, 6, 4, 17, 1, 7, 15, 8, 3, 9, 21, 19, 20, 14 22, 16, 4, 1, 10, 8, 5, 3, 9, 19	32 19	+26		
4	F	23	B	BC	16	13	13	8	11, 2, 8, 14, 20, 10, 3, 13, 16, 6, 22, 23, 21, 15, 17, 2 12, 8, 14, 20, 10, 3, 13, 16, 6, 22, 1, 17, 2 2, 23, 17, 1, 7, 10, 5, 3, 9, 25, 19, 13, 14 6, 12, 17, 1, 10, 5, 3, 9	29 21	+16		
3	M	21	B	JW	15	6	17	11	7, 9, 19, 4, 8, 14, 20, 10, 3, 13, 24, 16, 23, 1, 17 9, 8, 14, 3, 16, 1 23, 11, 6, 4, 12, 17, 1, 10, 8, 18, 24, 5, 3, 9, 21, 25, 20 2, 23, 6, 4, 12, 17, 1, 10, 18, 24, 3,	32 17	+30		
3	M	18	W	LB	16	10	16	11	7, 11, 18, 5, 8, 14, 10, 3, 25, 13, 24, 22, 21, 15, 17, 2 7, 11, 8, 14, 25, 16, 6, 22, 21, 17 23, 22, 11, 6, 12, 7, 10, 15, 8, 18, 5, 3, 9, 19, 13, 14 4, 12, 7, 10, 15, 18, 5, 3, 9, 19, 14	32 21	+22		

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
2	F	24	B	MK	16					9, 18, 19, 5, 8, 14, 10, 3, 16, 6, 22, 23, 1, 21, 15, 2		
						12				9, 18, 8, 14, 20, 13, 16, 22, 23, 1, 15, 2		
							10			23, 6, 4, 12, 1, 7, 24, 9, 19, 13	26	
								8		2, 23, 16, 4, 17, 1, 8, 9	20	+12
2	F	26	B	SM	20					7, 11, 9, 5, 12, 8, 14, 20, 10, 3, 25, 13, 24, 16, 6, 23, 1, 21, 15, 17		
						16				7, 11, 18, 5, 8, 14, 20, 10, 25, 13, 6, 22, 23, 21, 15, 17		
							20			23, 22, 11, 6, 12, 17, 1, 7, 10, 15, 8, 18, 24, 5, 3, 9, 21, 25, 19, 20	40	
								18		23, 22, 4, 12, 17, 1, 10, 15, 8, 18, 19, 24, 5, 3, 9, 21, 20, 14	34	+12
1	F	20	B	JC	23					7, 11, 9, 18, 19, 5, 4, 8, 14, 20, 10, 3, 25, 13, 24, 16, 22, 23, 1, 21, 15, 17, 2		
						19				11, 9, 18, 19, 5, 12, 8, 14, 20, 3, 25, 13, 24, 22, 23, 1, 21, 15, 2		
							19			2, 23, 22, 16, 11, 4, 12, 1, 7, 10, 15, 8, 18, 24, 3, 9, 19, 20, 13	42	
								14		2, 23, 22, 6, 12, 1, 10, 15, 18, 24, 3, 21, 19, 20	33	+18



VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP B Semester Spring, 1976

QWT	STAININE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
9	M	40	W	CI	2	0			10, 16			
							4		5, 7, 15, 23	6		
								2	7, 15	2	+8	
8	F	32	W	LS	2	2			8, 22			
							1		8, 16			
								1	1	3		
								1	1	3	0	
8	F	37	W	JS	5	4			6, 8, 10, 13, 17			
							1		8, 16, 13, 25			
								2	21	6		
									1, 4	6	0	
7	F	33	W	BL	6	7			3, 6, 8, 13, 14, 20			
							5		1, 6, 8, 13, 14, 20, 18			
								4	4, 5, 7, 8, 13	11		
									1, 4, 15, 18	11	0	
6	F	39	W	RS	11	9			1, 3, 6, 8, 13, 14, 16, 18, 20, 25, 24			
							10		3, 8, 9, 13, 14, 16, 18, 20, 25			
								7	1, 4, 5, 7, 8, 10, 12, 15, 19, 25	21		
									7, 8, 10, 12, 15, 19, 21	16	+10	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
6	F	21	W	LB	13	13	13	10	3, 6, 7, 8, 9, 10, 13, 14, 15, 17, 20, 21, 25 1, 2, 3, 6, 8, 10, 13, 14, 15, 16, 17, 20, 21 1, 3, 4, 5, 6, 8, 9, 10, 12, 15, 17, 19, 21 1, 4, 5, 8, 9, 10, 12, 15, 17, 19	26 23	+6	
6	F	18	W	LL	13	13	14	10	1, 2, 3, 7, 8, 10, 13, 14, 20, 21, 22, 25, 17 1, 2, 3, 8, 13, 14, 16, 17, 20, 21, 22, 23, 25 1, 3, 4, 5, 7, 8, 9, 10, 12, 15, 17, 19, 20, 23 1, 4, 5, 7, 9, 10, 12, 17, 19, 23	27 23	+8	
6	M	47	W	HM	7	3	8	7	1, 3, 10, 15, 17, 20, 25 3, 10, 17 4, 7, 8, 9, 10, 12, 15, 19 1, 2, 5, 4, 7, 12, 20	15 10	+10	
6	F	26	B	LP	15	14	15	14	1, 2, 3, 4, 7, 8, 10, 14, 15, 17, 18, 20, 24, 25, 16 2, 3, 7, 8, 10, 13, 14, 15, 16, 17, 20, 22, 24, 24 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 17, 18, 19, 21 2, 4, 5, 6, 7, 8, 9, 10, 12, 14, 15, 17, 18, 24	30 28	+4	
6	F	29	W	LR	11	9	14	14	1, 2, 3, 8, 10, 13, 14, 16, 20, 21, 25 1, 3, 8, 14, 20, 21, 22, 23, 25 1, 2, 4, 5, 7, 8, 10, 12, 15, 17, 19, 23, 25, 11 1, 4, 5, 7, 8, 9, 10, 11, 12, 15, 17, 19, 23, 25	25 23	+4	
6	F	18	W	JM	8	11	11	10	1, 3, 8, 10, 13, 23, 25, 18 1, 3, 5, 8, 11, 13, 18, 20, 22, 23, 25 1, 3, 4, 5, 7, 12, 15, 17, 19, 23, 9 4, 5, 6, 7, 12, 15, 17, 19, 21, 23	19 21	-4	
5	M	19	W	FA	13	11	13	11	1, 3, 6, 7, 8, 11, 13, 14, 20, 21, 22, 24, 25 3, 6, 7, 8, 13, 14, 20, 21, 22, 24, 25 1, 2, 3, 4, 5, 7, 9, 10, 12, 15, 18, 19, 24 1, 2, 3, 4, 5, 7, 8, 9, 15, 19, 12	26 22	+8	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
5	F	21	B	GJ	10	7	14	12	1, 3, 6, 10, 11, 13, 14, 20, 25, 8 3, 13, 14, 20, 25, 8, 24 1, 2, 4, 5, 7, 8, 9, 12, 13, 15, 17, 18, 19, 22 1, 2, 4, 5, 9, 10, 12, 13, 18, 19, 23, 6	24	19	+10
5	F	30	W	MS	13	9	10	10	1, 3, 6, 7, 8, 10, 13, 14, 16, 18, 20, 23, 25 3, 8, 13, 14, 16, 18, 20, 22, 25 1, 4, 5, 8, 10, 12, 15, 17, 18, 19 1, 4, 5, 7, 10, 12, 15, 17, 18, 9	23	19	+8
5	M	20	W	JK	10	13	12	12	3, 6, 10, 11, 14, 17, 20, 24, 25, 21 1, 3, 8, 11, 13, 14, 16, 20, 18, 21, 24, 25, 10 3, 4, 5, 7, 8, 9, 10, 12, 13, 15, 17, 19 1, 3, 4, 5, 7, 9, 10, 12, 13, 18, 19, 25	22	25	-6
5	F	25	W	JS	14	7	9	10	1, 2, 3, 7, 8, 9, 10, 13, 14, 16, 20, 23, 25, 24 1, 3, 8, 13, 14, 23, 24 2, 4, 5, 7, 12, 18, 19, 23, 25 2, 4, 5, 10, 12, 18, 19, 23, 25, 7	23	17	+12
5	F	18	W	CS	16	12	16	13	1, 2, 3, 8, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25 1, 3, 8, 13, 14, 15, 17, 20, 21, 22, 23, 25 1, 4, 5, 7, 8, 10, 12, 13, 14, 15, 16, 17, 19, 22, 23, 24 1, 4, 5, 7, 8, 10, 12, 13, 14, 15, 17, 19, 24	32	25	+14
5	F	26	W	AW	17	14	14	10	1, 2, 3, 6, 7, 8, 10, 11, 13, 14, 16, 20, 18, 22, 23, 24, 25 2, 3, 8, 10, 13, 14, 16, 17, 18, 20, 22, 23, 24, 25 4, 5, 7, 8, 9, 10, 12, 14, 15, 16, 17, 18, 23, 1 4, 5, 7, 8, 10, 12, 14, 15, 19, 23	31	24	+14

QFT	SEANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTEST			
5	M	38	W	JS	14	15	18	13	1, 3, 8, 10, 13, 14, 15, 11, 17, 18, 20, 21, 23, 25 1, 2, 3, 5, 8, 10, 11, 13, 14, 15, 18, 20, 21, 23, 25 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17, 18, 19, 22, 23, 24 1, 3, 4, 5, 7, 8, 9, 10, 12, 14, 17, 19, 23	32 28	+8	
5	F	24	W	SC	20	18	18	17	1, 2, 3, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25 1, 2, 3, 6, 7, 8, 11, 12, 13, 14, 15, 16, 20, 21, 22, 23, 24, 25 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 14, 15, 17, 19, 21, 22, 23, 24 1, 2, 3, 4, 5, 7, 8, 9, 10, 12, 15, 17, 18, 19, 22, 23, 24	38 35	+6	
4	F	18	W	ME	15	13	15	14	2, 3, 5, 6, 7, 8, 9, 10, 16, 17, 20, 21, 22, 24, 25 2, 3, 5, 7, 9, 13, 17, 20, 21, 22, 23, 24, 25 1, 3, 8, 10, 12, 14, 15, 18, 17, 19, 20, 21, 22, 23, 24 1, 3, 4, 7, 8, 10, 12, 14, 15, 17, 19, 20, 21, 24	30 27	+6	
4	F	21	B	VJ	18	21	18	17	1, 2, 3, 5, 6, 8, 9, 10, 13, 14, 15, 16, 20, 21, 22, 23, 24, 25 1, 2, 3, 5, 6, 7, 8, 9, 10, 13, 14, 15, 16, 18, 17, 20, 21, 22, 23, 24, 25 1, 2, 3, 4, 5, 6, 7, 9, 10, 12, 13, 14, 15, 17, 19, 22, 24, 25 1, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, 21, 24, 25	36 38	-4	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
4	F	18	B	BM	15	15	12	20	2, 3, 5, 7, 9, 10, 13, 15, 16, 20, 22, 23, 24, 25, 11 2, 3, 5, 7, 10, 11, 13, 15, 16, 17, 20, 22, 24, 25, 8 3, 4, 5, 9, 11, 13, 14, 15, 18, 19, 24, 25 1, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 19, 20, 21, 23, 24, 25	27	35	-16
4	F	20	W	PZ	15	18	16	16	2, 3, 7, 8, 10, 12, 13, 14, 15, 16, 20, 21, 23, 24, 25 2, 3, 6, 7, 8, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 17, 18, 19, 20, 23, 1, 3, 4, 5, 7, 8, 9, 10, 12, 15, 17, 18, 19, 20, 22, 23	31	34	-6
3	F	19	W	NM	20	21	18	19	1, 2, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 17, 18, 20, 21, 22, 23, 24, 25 1, 2, 3, 5, 6, 7, 9, 11, 12, 13, 14, 17, 18, 20, 21, 22, 23, 24, 25, 15, 16 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 19, 21, 22 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 17, 18, 21, 22, 24	38	40	-4
2	F	18	B	LE	20	15	19	13	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 20, 21, 22, 23, 25 5, 11, 2, 17, 15, 21, 22, 23, 3, 8, 10, 14, 20, 25, 13 6, 11, 22, 18, 5, 3, 9, 21, 25, 19, 13, 14, 8, 15, 10, 7, 1, 4, 12 6, 22, 18, 5, 9, 21, 13, 14, 12, 1, 7, 10, 8	39	28	22

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
1	M	26	B	KT	18					4, 7, 9, 16, 22, 23, 1, 21, 15, 17, 24, 13, 25, 3, 10, 20, 14, 8		
						19				4, 5, 19, 11, 92, 17, 15, 21, 1, 23, 22, 6, 16, 14, 20, 10, 3, 24, 25		
							20			6, 11, 22, 23, 4, 12, 17, 1, 7, 15, 10, 8, 13, 14, 20, 19, 9, 3, 5, 18	38	
							19			6, 11, 2, 6, 13, 14, 19, 20, 9, 5, 18, 4, 12, 17, 1, 7, 10, 15, 8	38	0

VOCABULARY TESTS FOR HIGH SCHOOL AND COLLEGE FRESHMEN STUDENTS

Sampling Results for GROUP C Semester Spring '76

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B VARIATION IN PERCENTAGE	
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST		TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
9	F	48	W	NW	7	4	4	3	9, 20, 10, 3, 13, 24, 16, 14, 20, 3, 16, 2, 4, 19, 14, 4, 5, 19	11	7	+8
8	M	28	W	RB	6	2	8	4	20, 25, 13, 16, 6, 1, 14, 13, 2, 4, 12, 1, 7, 15, 5, 25, 4, 7, 15, 5	14	6	+16
8	F	27	B	MJ	9	9	10	7	18, 8, 20, 25, 13, 24, 16, 6, 23, 8, 14, 20, 10, 3, 25, 16, 6, 23, 2, 4, 17, 1, 7, 8, 5, 21, 19, 14, 22, 4, 1, 7, 5, 21, 14	19	17	+4
8	F	40	W	BI	5	3	1	2	5, 8, 20, 16, 17, 5, 16, 17, 4, 23, 4	6	5	+2
8	F	28	W	JL	9	6	5	4	8, 14, 20, 10, 25, 13, 16, 1, 15, 8, 14, 20, 10, 15, 17, 4, 1, 7, 15, 13, 4, 12, 7, 8, 9	14	10	+8

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
7	F	28	W	LM	8	6	6	7	8, 14, 20, 10, 3, 13, 23, 15 18, 14, 20, 10, 3, 6 4, 7, 5, 19, 12, 23 4, 1, 7, 5, 18, 12, 15	14 13	+2	
6	F	28	W	ET	11	11	8	8	7, 18, 8, 14, 20, 12, 3, 13, 24, 16, 6 18, 8, 14, 10, 20, 3, 25, 13, 24, 16, 6 4, 12, 17, 1, 7, 15, 5, 19 4, 12, 17, 1, 7, 5, 9, 19	19 19	0	
6	F	31	W	DS	6	6	11	8	14, 10, 3, 16, 17, 2 8, 10, 3, 6, 1, 2 2, 23, 4, 12, 1, 15, 8, 24, 5, 9, 19 2, 23, 4, 1, 7, 5, 9, 19	17 14	+6	
6	F	20	W	PD	7	6	10	9	7, 11, 8, 14, 20, 12, 3, 11, 8, 14, 10, 6, 1 12, 17, 1, 7, 10, 15, 8, 5, 9, 14 4, 12, 17, 1, 10, 15, 9, 13, 14	17 15	+4	
5	F	30	W	SB	6	5	8	7	11, 8, 14, 20, 12, 6 11, 14, 20, 16, 23 2, 4, 1, 7, 8, 5, 21, 19 2, 4, 1, 7, 5, 9, 19	14 12	+4	
5	F	19	W	KA	6	8	6	6	8, 20, 10, 24, 16, 22 18, 8, 20, 10, 13, 6, 22, 1 4, 1, 10, 15, 5, 9 4, 12, 1, 15, 8, 5	12 14	-4	



QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
5	F	29	W	PK	16					11, 18, 12, 8, 14, 20, 10, 3, 25, 13, 16, 22, 23, 21, 17, 2		
							15			7, 11, 18, 8, 14, 20, 12, 3, 25, 6, 22, 1, 21, 17, 2		
								13		2, 23, 4, 12, 1, 7, 10, 15, 8, 18, 5, 19, 13	29	
									14	2, 23, 4, 12, 17, 1, 7, 10, 15, 8, 5, 2, 9, 13	29	0
5	F	38	W	NB	11					8, 14, 20, 10, 3, 25, 13, 16, 6, 22, 15		
							10			18, 8, 14, 10, 25, 13, 16, 6, 22, 15		
								5		4, 12, 1, 7, 5	16	
									4	4, 1, 7, 5	14	+4
4	F	22	W	CB	13					9, 18, 8, 14, 20, 10, 3, 25, 24, 16, 22, 23, 2		
							13			18, 8, 14, 20, 10, 3, 13, 16, 22, 23, 1, 17, 2		
								11		11, 4, 12, 17, 1, 10, 5, 3, 9, 19, 14	24	
									14	2, 23, 4, 12, 17, 1, 10, 15, 8, 5, 3, 9, 13, 14	27	-6
4	F	19	W	RL	13					7, 11, 8, 14, 20, 10, 3, 25, 13, 6, 23, 1, 21		
							13			7, 11, 12, 14, 20, 10, 25, 13, 6, 23, 1, 21, 17		
								14		2, 4, 12, 1, 7, 10, 15, 8, 18, 24, 5, 3, 9, 19	27	
									14	23, 4, 12, 1, 7, 10, 15, 8, 18, 5, 3, 9, 25, 19	27	0
4	M	18	W	RC	11					7, 5, 14, 20, 3, 25, 13, 23, 1, 21, 17		
							11			19, 12, 8, 20, 3, 25, 13, 24, 16, 21, 2		
								18		2, 22, 16, 4, 12, 17, 1, 7, 10, 15, 8, 24, 5, 3,		
										21, 25, 19, 14	29	
									14	22, 16, 6, 4, 12, 17, 1, 7, 10, 15, 5, 3, 9, 25,	25	+8
										14		

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
4	M	22	W	AF	15	16	13	17	11, 19, 5, 8, 20, 10, 3, 25, 13, 24, 23, 21, 15, 17, 2 7, 11, 8, 14, 20, 10, 25, 13, 24, 6, 22, 23, 1, 21, 15, 17 22, 11, 6, 4, 12, 17, 1, 7, 15, 18, 3, 9, 14	28		
									22, 11, 6, 4, 12, 17, 1, 7, 15, 8, 18, 24, 5, 3, 21, 25, 19, 14	33	-10	
2	F	42	B	GW	17	17	12	14	18, 5, 12, 8, 14, 20, 10, 3, 13, 24, 6, 22, 1, 21, 15, 17, 2 7, 11, 18, 19, 12, 8, 14, 10, 3, 13, 24, 16, 6, 23, 1, 15, 17 6, 4, 17, 1, 15, 8, 18, 9, 25, 20, 13, 14	29		
									2, 23, 22, 4, 12, 17, 1, 10, 15, 8, 18, 9, 20, 14	31	-4	
2	F	27	W	KL	17	19	16	20	7, 11, 19, 8, 14, 10, 3, 25, 13, 16, 6, 22, 23, 21, 15, 17, 2 7, 11, 9, 19, 8, 14, 10, 3, 25, 13, 24, 16, 22, 23, 1, 21, 15, 17, 2 23, 22, 16, 4, 12, 7, 1, 10, 5, 8, 18, 5, 3, 9, 21, 19	33		
									2, 23, 22, 16, 6, 4, 12, 17, 1, 7, 10, 15, 8, 24, 5, 3, 21, 19, 13, 14	39	-12	
2	F	41	B	TT	21	16	17	13	7, 11, 9, 18, 19, 5, 8, 14, 20, 10, 3, 25, 13, 24, 16, 22, 23, 1, 21, 15, 2 7, 11, 9, 18, 5, 12, 8, 14, 20, 10, 25, 13, 6, 23, 1, 15 2, 22, 16, 6, 4, 12, 17, 1, 7, 10, 15, 18, 3, 21, 20, 13, 14	38		
									22, 16, 6, 4, 12, 17, 1, 7, 10, 15, 18, 19, 13	29	+22	

QWT	STANINE	SEX	AGE	RACE	SUBJECT	FORM A		FORM B		WORDS MISSED FROM SAMPLINGS BY NUMBER	TOTAL MISSED ON SAMPLINGS A+B	VARIATION IN PERCENTAGE
						TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST	TOTAL MISSED ON PRE-TEST	TOTAL MISSED ON POSTTEST			
1	F	18	B	MA	20					7, 11, 9, 18, 19, 5, 4, 8, 14, 20, 10, 3, 25, 13, 16, 22, 23, 21, 15, 2		
						19				7, 11, 9, 18, 19, 5, 4, 8, 14, 20, 10, 3, 13, 16, 22, 23, 1, 21, 15		
							22			2, 23, 22, 16, 11, 6, 4, 12, 17, 1, 7, 10, 15, 8, 18, 24, 3, 9, 25, 19, 20, 13	42	
							18			23, 16, 11, 6, 4, 12, 17, 1, 19, 10, 15, 8, 18, 5, 3, 9, 20, 13	37	+10

VITA 2

Robert Charles Brown

Candidate for the Degree of

Doctor of Education

Thesis: VOCABULARY ACQUISITION IN THE TWO-YEAR COLLEGE: A COMPARISON OF CONTEXTUAL AND ACONTEXTUAL INSTRUCTIONAL APPROACHES

Major Field: Higher Education

Minor Field: English

Biographical:

Personal Data: Born in Memphis, Tennessee, January 28, 1940, the son of Mr. and Mrs. W. L. Brown, Sr.

Education: Graduated from Messick High School, Memphis, Tennessee, in May, 1958; received Bachelor of Arts degree in English from Memphis State University in 1963; received the Master of Arts degree in English from Memphis State University in 1964; enrolled in doctoral program at Oklahoma University, 1966-70; completed requirements for the Doctor of Education degree at Oklahoma State University in December, 1976.

Professional Experience: English Instructor, Arkansas State University, 1964-66; Teaching Assistant in English, Oklahoma University, 1966-70; English Instructor, Oscar Rose Junior College, 1970-present.

Professional Membership: National Council of Teachers of English, 1970-present; Oklahoma Council of Teachers of English, 1970-present, President (1976); Higher Education Alumni Council of Oklahoma, 1970-present; Southwest Regional Conference on English in the Two-Year College, 1972-present, Representative to the National Junior College Committee (1976-79); Faculties of Oklahoma College and University System, 1974-present; Conference on College Composition and Communication, 1970-present, member of the Executive Committee (1976-1979).