

**,SHORT AND LONG TERM  
LEARNING OF VOCABULARY  
IN THE COOPERATIVE LEARNING SETTING  
AT GRADE FIVE  
AS A FUNCTION OF  
KEYWORD MNEMONIC STRATEGY  
AIDED BY  
STUDENT-PRODUCED VISUALS,  
MASTER'S PROJECT**

Submitted to the School of Education  
University of Dayton, in Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Education

by

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Dayton, Ohio

April, 1992

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## DEDICATION

I Dedicate this project to

my family...

To Tom, my husband

and to my sons Jeremy and Eric.

Thank you

for being so understanding

during the many hours and days

of research and hard work

that was necessary to compile

this Master's Project.

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## CHAPTER I

### INTRODUCTION

#### The Statement of the Problem

The purpose of this study is to compare and evaluate the retention of vocabulary of fifth grade students when presented in a cooperative learning setting as a function of keyword mnemonic strategy aided by student-produced visuals.

#### The Significance of the Problem

In experimental conditions, the keyword mnemonic strategy has shown that subjects learn the meanings of substantially more vocabulary items than other methods. In this research, the added features of the experiment are student-generated pictures as opposed to examiner-produced pictures and the use of the cooperative learning setting.

This research attempts to discover if the recall of the vocabulary can be enhanced with the use of student-generated pictures. Since student-generated pictures can be considered organizing devices, can they also be responsible for producing more retrievable memory representations of the definitions?

#### Rationale for the Study

Because I am a reading specialist and teach remedial reading students, I am always looking for a novel way to teach. The Open Court reading series is utilized in the Ohio County School System, Wheeling, West Virginia. This

series stresses the acquisition of the sometimes difficult, but always numerous vocabulary in the literature-based series.

During research in another graduate class, I read a research article describing the keyword mnemonic strategy. I liked the philosophy and thought immediately of my remedial reading students who always have difficulty learning their vocabulary words. At that point I decided to engage in a study with fifth grade students.

### The Scope of the Project

This vocabulary project will begin with a pretest of thirty words, from which twenty words will be chosen to be used in the study. The control and experimental groups will study each group of words and on the fourth day will be given a quiz over the words studied. A post test to evaluate the retention of the definitions will be administered two weeks after each of the two quizzes.

### The Hypotheses

The research hypothesis is that the student-generated picture strategy will facilitate greater retention of vocabulary.

The null hypothesis will be rejected when it is proved that any difference between groups is not due to chance and if the difference is in the predicted direction.

### The Definitions of Terms

Cooperative learning - an educational strategy using four or five students who assist the other group members to learn the task at hand.



Student-generated pictures – sketches students draw to teach the vocabulary definitions assigned to them.

Individual's own learning strategy – the self-perceived learning method the child uses to learn.

Retention – recall after a length of two weeks from the time of initial instruction.

Keyword – a phonetic link using a familiar English word acoustically similar to some part of the to-be-learned vocabulary item.

Keyword mnemonic strategy – a technique which involves associating phonetic and visual imagery components of a word with its definition in order to recall the meaning.

### Assumptions

The first assumption – the same teacher will instruct both the control group and the experimental group.

The second assumption – the words presented each week will be the same for both groups.

The third assumption – although the instruction relative to each instructional condition is different, the amount of time spent learning the words will remain constant. Students in each condition will receive thirty minutes of training three days a week for two weeks.

### The Limitations

This study will focus on the vocabulary retention of only two fifth grade reading classes and will not necessarily be generalizable to students of other grade levels.

This study uses a relatively short instructional time. Only two sets of vocabulary words are used during the two

week period. Caution should be exercised in the generalization of the results.

## CHAPTER II

### THE REVIEW OF THE RELATED LITERATURE

Recent research on the acquisition of new vocabulary has been focused on the comparisons of different instructional conditions, one of which is the keyword mnemonic strategy. The keyword method is a mnemonically based technique whereby the learner or teacher selects an acoustically similar word (keyword) whose meaning is known. The learner then forms an interactive image of the meaning of the keyword with the meaning of the new vocabulary item.

#### A Historical Overview

The keyword mnemonic was introduced to academic psychology by Atkinson (1975), who proposed it as a supplementary technique for foreign language vocabulary study. Based on the foreign language keyword studies with children, it was observed that similar success would occur when adapting the method to children's learning of new vocabulary words in their own language (Levin, McCormick, Miller & Berry, 1982).

This study utilizes the keyword mnemonic strategy

which has been compared with such semantic alternatives as: (a) presenting vocabulary in clarifying sentences (Levin et al., 1982); (b) having the learner generate sentences that incorporate the vocabulary items (Pressley, Levin, & Miller, 1982); or make judgements about the appropriateness of vocabulary usage (Pressley et al., 1982); or conduct conceptual analyses of the vocabulary items (Levin et al., 1984); (c) providing "semantic maps" that relate vocabulary items both to the learner's prior knowledge and to each other (Levin et al., 1984); or (d) making simultaneously available a rich variety of semantic aids - synonyms, illustrations, concept elaborations, and sentence contexts (Pressley, Levin, Kuiper, Bryant, & Michener, 1982).

### Knowing a Word

What does knowing a word really mean? Vygotsky (1972) believes that insight into the acquisition of word meaning can be provided by reviewing relevant aspects of his language learning theories.

Of primary importance is the arbitrary, abstract nature of the symbol system of oral language. The child's meaning of a word evolves as he matures and stores away varied experiences with reality represented by the word. The meaning continues to evolve from one dependent on physical characteristics to one involving generalizations necessary to form a concept.

The adult gives the child the definition of a word, but it is something that must dually evolve within the child as he matures intellectually. Vygotsky feels true conceptual meaning is arrived at only after years of

dynamic interplay between thought; shaped by experience, and the word, as the individual struggles to separate the name of an object from its attributes.

The evolution of word meaning is unique to each individual but can be even more difficult to students with perceptual processing problems. Vygotsky feels that self-produced associative images are potent enough to generate meaning from within which then can be transferred to the written word.

### Retention Factors

Once a word's meaning is acquired, does the method of acquisition influence how well the definition is retained?

This paper is research comparing the effectiveness of the keyword mnemonic method to other methods over a period of time. The approach assumes that vocabulary learning involves many skills including being able to recall the meaning of a presented vocabulary item, being able to retain that definition for some time, and being able to use the vocabulary item correctly.

There are several reasons for expecting the students using the keyword method to remember more. The keyword method aids learners in forming a direct link between a new word and its definition, and this direct link provides a straightforward retrieval path from the vocabulary word to the definition. The method incorporates both auditory and visual cues to enhance meaningfulness of the information to-be-learned and to promote strong associations between questions and answers. The method can be taught to students using

the steps of recoding, relating, and retrieving (Mastropieri, 1988).

Mastropieri, Scruggs, and Levin (1985b) suggest that learning and retention by learning disabled students can be enhanced by using mnemonic strategy. Other researchers suggest that the pictures used in keyword mnemonic strategy may have an inhibiting effect by drawing attention away from the central information. Careful training in task appropriate learning strategies can compensate for the learning disabled student's failure to produce the correct strategy. Although few untrained learners spontaneously produce keyword strategies, training would be expected to bring about the proper effect.

### Function of Images

Imagery is now well established as playing an important role in human verbal learning and memory. Some researchers believe that during the encoding of a word, an image representing that word is formed, and this constructed image is a part of the later retrieval process involving that word.

Pavio's (1972) view of the position is represented by his "dual-coding" theory. This theory is that a word having an image representation is stored with both a verbal and an image code and that the word can be retrieved using either code.

Another view of the relationship between forming images to words and the learning-memory situation is that the process by which images are formed aids the retrievability of words, but the image per se is not

directly involved.

Groninger and Groninger (1982) state their position with respect to the memory process: (a) the recognition probability increases between the stimulus plus context at encoding and the stimulus plus context at testing, and (b) recognition is a function of the number of attributes that the presentation and test encodings have in common.

Lesgold, McCormick and Golinkoff (1975) found that the effects of imagery training were in the organization and storage of information. The imagery instruction is an integral part of improving the memory of facts since without the training there is no effect of imagery instruction on recall performances. The need for direct imagery instructions in order to get the effect is consistent with general paired-associate findings that even adults show substantially better performances when given explicit imagery instructions than when left to their own devices.

Lesgold, McCormick, and Golinkoff concluded that the imagery effect had at least two causes. One is the use of imagery as an organizing device that produces a more retrievable memory representation of the content. The other possibility of that they were providing training on attention to details.

Smith (1987) investigated whether a visual image had an additive effect on the recall of definitions of previously unknown English words. College students were used in the research and it was discovered that the group which received the visual images as part of

their learning strategy performed significantly better than the other two no-imagery groups.

### Foundations of Mnemonic Strategy

Raugh & Atkinson (1975) stated the extreme importance of preselection of appropriate keywords before instruction began and offered three criteria. First, the keyword must sound as much as possible like a part, but not necessarily all, of the word to-be-learned. Second, it must be unique – different from the other keywords used in the test vocabulary. Last, it must be easy to form a memorable imagery link connecting the keyword and the definition. Mastropieri, Scruggs, and Levin (1987) found that the illustrations used in the keyword mnemonic would be detrimental if certain conditions were not met. First, the pictures must be well-matched to the text. The students must also possess adequate decoding and word recognition skills, or the pictures would not complement what is being read. Consequently, to enhance learning, the pictures should be directly related to the content, transform it in a meaningful way, and be familiar to the students.

### Challenging Mnemonics

Many critics of the keyword mnemonic strategy have pointed to the “bias” of researchers in this field. The critics have complained that some studies used items to-be-learned which had “keyword hospitality”. In order



to avoid possible keyword advantage, Levin et al (1982), Levin et al. (1984), and McDaniel & Tillman (1987) made special provisions to negate the possibility. McDaniel and Tillman avoided choosing vocabulary items with one- or two-word synonyms and used definitions adapted from dictionary entries. Their research found that even when dictionary definitions of up to nineteen words in length were provided, the keyword method still produced better cued recall than the meaning-discovery context method.

Levin et al. (1984) used items to-be-learned which were screened by the investigators for "keyword hospitality". Levin et al. (1982) used vocabulary items which had been provided by someone who believed the items would create difficulties for the keyword method. The study avoided using easily identifiable, concrete nouns (nouns with picturable referents) and used verbs with more abstract meanings (e.g., intend, resolve), but the pictorial keyword adaptations proved to be extremely successful in terms of improving children's vocabulary learning. The students in the research done by Mastropieri and Peters (1987) were able to recall more feature and also more nonfeature information from a prose passage than students in the other conditions.

### Summary

Although mnemonic strategies are not a universal prescription for facilitating all school-learning outcomes, the time has come to acknowledge that such

strategies can do more than simply assist students acquire verbatim factual associations. Recent evidence suggests that mnemonic strategies can provide the initial building blocks from which higher-level learning outcomes – such as comprehension, application, and problem-solving can develop. It appears as if mnemonic strategies can be valuable facilitators of problem-solving and higher-order thinking skills. This statement can also be applied to vocabulary items that were not selected on the basis of their being particularly well-suited to the keyword method, in the sense of their being associated with salient and easily identifiable keywords.

## CHAPTER III

### THE DESIGN OF THE STUDY

#### Introduction

Recent research has suggested that the keyword mnemonic strategy may be an important instructional tool for teachers to introduce to their learning disabled students. Before such a suggestion can be confirmed, it is necessary to perform some studies and to assess the extent to which children retain knowledge acquired through the use of those strategies. Within that framework, this research uses the experimental method for gathering the data.

#### Sample Population

The subjects of this study are fifth grade students of Middle Creek Elementary School in Triadelphia, West Virginia. The students attending this school live primarily in rural settings and are of middle to low socio-economic status. Thirty-three percent of the 356 students enrolled are eligible to receive free or reduced meals.

Two of the reading groups were used in this study. Both groups were composed of twenty-five students. The heterogeneous groups were formed randomly at the beginning of the year by the homeroom teachers. The groups were compared by a two tailed T-Test of the means on the vocabulary subtest from the Comprehensive Tests of Basic Skills (CTBS). The groups were found to be statistically equal. No systematic bias affects the nature

of either group's ability in relationship to the other.

TABLE 1

Descriptive Statistics of the Control Group

Sample size = 22			
Minimum .....	= 10.00	Sum of scores =	629.00
Maximum .....	= 43.00	Sum of squares =	19787.00
MEASURES OF CENTRAL TENDENCY			
Mean .....	= 28.591	Geom. mean ... =	26.847
Median .....	= 28.000	Harm. mean ... =	24.750
Midrange .....	= 26.500	Quad. mean ... =	29.990
MEASURES OF DISPERSION			
Samp. st. dev. =	9.267	Samp. variance =	85.872
Pop. st. dev. =	9.054	Pop. variance =	81.969
Range .....	= 33.000	Standard error =	1.976
MEASURES OF POSITION - Quartiles			
Q1 =	24.000	Q2 =	28.000
		Q3 =	37.000

TABLE 2

## Descriptive Statistics of the Experimental Group

Sample size = 21			
Minimum .....	= 18.00	Sum of scores =	697.00
Maximum .....	= 43.00	Sum of squares =	24437.00
MEASURES OF CENTRAL TENDENCY			
Mean .....	= 33.191	Geom. mean ... =	32.103
Median .....	= 37.000	Harm. mean ... =	30.873
Midrange .....	= 30.500	Quad. mean ... =	34.113
MEASURES OF DISPERSION			
Samp. st. dev. =	8.072	Samp. variance =	65.162
Pop. st. dev. =	7.878	Pop. variance =	62.059
Range .....	= 25.000	Standard error =	1.762
MEASURES OF POSITION - Quartiles			
Q1 =	25.000	Q2 =	37.000
		Q3 =	39.000

TABLE 3

## T-Test Comparing the Control and Experimental Groups

Test statistic .....	z = -1.73488
Critical value .....	z = -1.96039 , 1.96039
P-value .....	= .08276
Significance level .....	= .05
T Test CONCLUSION: FAIL TO REJECT the null hypothesis	

### The Setting

Middle Creek Elementary School has an active Parent-Teacher Association which has a membership of 124 adults. Students in grades kindergarten through fifth grades are educated in the school. The 1991-1992 school year is the first year for the Educare Program which provides care for the kindergarten students during the half of the day they are not in kindergarten class with a certified teacher.

The school has a staff of thirty-nine employees. The student/teacher ratio ranges from sixteen students to one teacher to twenty-five students to one teacher, depending on the grade level.

All classrooms in grades one through five are arranged in the open classroom situation. Each grade is in a pod of four areas. The desks in the control group are arranged in rows. The experimntal group's instructional area is composed of two students per table. The tables are arranged in a double "U" formation.

### Data Collection

The vocabulary words for this study were taken from the last two units of the fifth grade reading text book. There were a total of thirty words which were identified by the authors as definitions to know in order to understand the stories in those units.

A pretest of all thirty words was prepared and administered to all students in the control and experimental groups. For each word the students were instructed to "Write a short definition". The ten most

familiar words were identified and eliminated from the study, leaving twenty words to be targeted for the study. Ten words would be studied the first week and the remaining ten would be studied the second week.

Students in each condition were given thirty minutes of class time for three consecutive days to learn the ten definitions. Although the instruction relative to each condition was different, the amount of time allotted to learning the words remained constant in both groups.

A quiz would be administered the day after the third day of studying the definitions. This would occur for two consecutive weeks. Two weeks after the first quiz a retention test would be administered. The students were requested to "Write the definition you learned" for the words-to-be-learned. Another retention quiz would be administered two weeks after the second set of words had been studied.

### The Procedures

Five days before the experiment began, the experimenter explained the keyword method of vocabulary study to the experimental group. The key points are to (1) change the vocabulary word into a word that sounds similar and is easy to picture; (2) relate the keyword with its definition by imagining a picture of the keyword and its definition doing something together; and (3) recall the definition.

Also, before the experimentation, the reading teacher worked with the experimenter to group the students into five cooperative learning groups of five students in each group. Then each group was assigned a letter A, B, C, D, or

## E.

In the first session of the first week, the vocabulary words were pronounced by the examiner and displayed on individual large cards at the front of the room. The definitions were read from matching individual large cards.

The A's were grouped together and given the two words and definitions they had to teach. As a group, the five students agreed on the keywords which were to be used to teach the two definitions and drew a quick black-line sketch which incorporated the word-to-be-defined, the definition, and the keyword.

Each of the other four letter groups followed the same procedure except their words were different. The ten pictures were collected after thirty minutes.

During day two, the letter groups met for five to ten minutes to review the word, keyword and the relationship. The letter groups then broke up and joined with their cooperative groups to become the "experts" in their group to teach two words.

The cooperative learning groups met on day three to review the ten words by utilizing the keyword method to recall the definitions.

During the introductory day, the experimenter discussed with the control group different study strategies. Most students decided they wanted to study the definitions with a partner. Day one began with the same word card introduction of words as the experimental group had. Days two and three provided thirty minutes of study time.



## CHAPTER IV

### RESULTS

#### The Control Group

The fifth grade students of the control group were allowed to study the ten words and definitions in any method they preferred. The experimenter did the scoring of the tests. Definitions were considered correct only if the definition which had been studied was used without major omissions or rewording.

On Assessment A, the students were instructed to "write the definition you learned" for each of the first group of ten words. The scores ranged from only three correct to all ten definitions correct. There was a 84.3% accuracy rate on the definitions.

On Posttest A, which was administered two weeks after Assessment A and was to determine the retention of the vocabulary words, the control group students posted scores of zero to ten correct for an accuracy rate of 69.6% on the ten definitions.

One week following Assessment A, the second group of ten words was presented and the students were again allotted three-thirty minute periods in which to study the definitions. At the end of the third period, Assessment B was administered with the directions to "write the definition you learned" for each of the second group of ten words. Scores ranged from zero correct to all ten definitions correct for an accuracy rate of 69.6%.

Two weeks after Assessment B was administered,

Posttest B was given to test for the retention of the last ten words, with directions exactly the same. Again, scores ranged from zero correct to ten correct for an accuracy rate of 43.0%.

### The Experimental Group

The fifth grade students of the experimental group were instructed using the keyword mnemonic strategy in which to study the ten definitions for the two weeks. The experimenter did the scoring of the tests. Definitions were considered correct only if the definitions which had been studied were used without major omissions or rewordings.

On Assessment A, the students were instructed to "write the definition you learned" for each of the first ten words. Scores ranged from zero correct to all ten definitions correct. There was a 63.5% accuracy rate on the definitions.

On Posttest A, which was administered two weeks after Assessment A and was to determine the retention of the vocabulary words, the experimental group students posted scores of zero to ten correct for an accuracy of 50.9% on the ten definitions.

One week following Assessment A, the second group of ten words was presented and the students were again allotted three-thirty minute periods in which to study the definitions. At the end of the third period, Assessment B was administered with the directions to "write the definition you learned" for each of the second group of ten words. Scores ranged from zero to ten definitions correct for an accuracy rate of 76.5%.

Two weeks after Assessment B was administered, Posttest B was given to test for the retention of the last ten words. The directions for completing the test were exactly the same. This time, the student who had not correctly remembered any definitions, accurately recalled two definitions. Therefore, the scores ranged from two correct to all ten correct for an accuracy rate of 61.7%.

### Discussion

A two-tailed T-Test was performed comparing the results of the control and experimental groups on each of the four tests: Assessment A, Posttest A, Assessment B, and Posttest B.

Tables 4 and 5 show the difference between the groups was significant. The results indicate the students in the control group learned and remembered more than the students in the experimental group.

Table 6 shows the two group's scores were essentially the same. The results in Table 7 show the null hypothesis has been rejected and that the experimental group has shown significantly better retention of the vocabulary definitions.

Students who composed the experimental group had numerous new experiences to assimilate. This seemed to have posed an additional obstacle to tackle. First of all, the students were put into cooperative learning groups. This was the first time for that experience, necessitating an additional adjustment for educational achievement. Next, a completely new method of learning was being taught to them. Not only were they being

TABLE 4

## Two-Tailed T-Test of Assessment A

Test statistic .....	z = 2.81707
Critical value .....	z = -1.96039 , 1.96039
P-value .....	= .00487
Significance level .....	= .05

T Test CONCLUSION: REJECT the null hypothesis

TABLE 5

## Two-Tailed T-Test of Posttest A

Test statistic .....	z = 2.38602
Critical value .....	z = -1.96039 , 1.96039
P-value .....	= .01714
Significance level .....	= .05

T Test CONCLUSION: REJECT the null hypothesis

TABLE 6

## Two-Tailed T-Test of Assessment B

Test statistic .....	z = -.879174
Critical value .....	z = -1.96039 , 1.96039
P-value .....	= .37931
Significance level .....	= .05

T Test CONCLUSION: FAIL TO REJECT the null hypothesis

TABLE 7

## Two-Tailed T-Test of Posttest B

Test statistic .....	z = -2.438
Critical value .....	z = -1.96039 , 1.96039
P-value .....	= .01486
Significance level .....	= .05

T Test CONCLUSION: REJECT the null hypothesis

asked to learn a vocabulary definition, come to a consensus on the keyword to the definition, sketch a picture relating the keyword to the definition, teach it to fellow students, but also remember the keyword and the definition.

The time limitation (only two weeks of instructional time) seemed to be a real detriment. Looking at the experimental group's scores from Assessment A to Assessment B (63.5% correct to 76.5% correct) and Posttest A to Posttest B (50.9% correct to 61.7% correct) a definite improvement can be seen. If this study could have been conducted for a longer period of time, perhaps as long as an entire grading period, this experimenter feels the keyword mnemonic method would have been superior to any other method. The time limitations were too confining, therefore not allowing the experimental group students to become comfortable enough with the keyword mnemonic strategy to demonstrate the benefits and superiority of the keyword mnemonic method.

## CHAPTER V

### SUMMARY, CONCLUSIONS, RECOMMENDATIONS

#### Summary.

In this experiment the retention of vocabulary definitions was compared using two different strategies. The experimental group was instructed using the keyword mnemonic strategy. The control group was informed that they should study the definitions in any method they preferred.

The fifth grade reading students in the study were formed heterogeneously at the beginning of the year. The groups were found to be statistically equal when the results of their Comprehensive Tests of Basic Skills vocabulary subtest were compared in a two tailed T-Test of the means.

Each group was given an assessment at the end of the first and second week. Two weeks after each assessment, a posttest was administered to measure the retention of the definitions.

Assessment A and Posttest A showed that the students in the control group (those using any strategy they preferred) outscored the students of the experimental group both on the initial test and the test for retention.

The results of Assessment B showed very little difference in accuracy on the initial test, but Posttest B proved that the experimental group was superior in the

retention of the vocabulary definitions.

### Conclusions

The conclusions which can be drawn from this study are varied and weak. The discrepancy is due to the fact that two different results were evident. The first set of tests proved the student's own strategy was superior to the keyword mnemonic strategy both in short and long-term memory. The final test proved just the opposite - that the keyword mnemonic strategy was superior in the retention. The results are weak because of the extreme time limitation of two weeks of instructional time.

The mnemonic advantage on the cumulative tests as well as the lack of observable deterioration in performance over days and weeks, suggest that mnemonic instructional remains a viable instructional strategy. One explanation for why the mnemonic strategy fares well is that it provides an associated link between the vocabulary word and its referent.

This association was in the beginning stages of being proved by one particular special-education student in the experimental group. Although he did not accurately define any word on Assessment A or Posttest A, he did jot down the keywords for some of the items. Again, on Assessment B he had no correct definitions and only some keywords. But, on Posttest B, he had made the connection and correctly recalled the keywords and definitions for two vocabulary words.

Recent research has shown that the keyword method can be effective in helping retarded learners



(Scruggs, Laufenberg, 1986) and mildly handicapped students acquire new vocabulary. This method has also been adapted to help learning disabled students recall learning single facts (Mastropieri, Scruggs, McLoone, & Levin, 1985).

### Recommendations

The keyword mnemonic strategy provides teachers with an alternative instructional tool which involves relatively little teaching time. This aspect is extremely important because it suggests that the keyword mnemonic method can be used by a variety of teachers within their own classrooms and in different school environments.

The present results suggest that future studies should be made for longer time periods. It became evident that as the experimental group members became more comfortable with the keyword mnemonic strategy, their success with it also increased.

Perhaps future studies could involve the use of colored pictures instead of black-line drawings. Perhaps those prominent educators and administrators who sincerely doubt the effectiveness of mnemonics could be the experts who issue challenges around which the research project would be based.

Finally, this study investigated only one aspect of vocabulary learning. Other aspects such as spelling, pronunciation, and comprehension are clearly worth the investigation.

## Appendix A

## VOCABULARY PRETEST

NAME \_\_\_\_\_

Write a short definition for the words below.

1. aspect \_\_\_\_\_
2. contract \_\_\_\_\_
3. economic \_\_\_\_\_
4. majority \_\_\_\_\_
5. progress \_\_\_\_\_
6. dense \_\_\_\_\_
7. resemblance \_\_\_\_\_
8. deprived \_\_\_\_\_
9. vicinity \_\_\_\_\_
10. nonentity \_\_\_\_\_
11. crisis \_\_\_\_\_
12. aimless \_\_\_\_\_
13. analysis \_\_\_\_\_
14. frustration \_\_\_\_\_
15. sheer \_\_\_\_\_
16. drawn-out \_\_\_\_\_
17. version \_\_\_\_\_
18. acclaimed \_\_\_\_\_
19. feat \_\_\_\_\_
20. relic \_\_\_\_\_
21. span \_\_\_\_\_
22. supreme \_\_\_\_\_
23. moderate \_\_\_\_\_
24. characteristic \_\_\_\_\_
25. exceedingly \_\_\_\_\_
26. vague \_\_\_\_\_
27. casually \_\_\_\_\_
28. eccentricity \_\_\_\_\_
29. ordeal \_\_\_\_\_
30. advantage \_\_\_\_\_

## Appendix B

ASSESSMENT A AND POSTTEST A  
NAME \_\_\_\_\_

WRITE THE DEFINITION YOU LEARNED FOR THE FOLLOWING WORDS:

1. ASPECT \_\_\_\_\_
2. ECONOMIC \_\_\_\_\_
3. DENSE \_\_\_\_\_
4. DEPRIVED \_\_\_\_\_
5. NONENTITY \_\_\_\_\_
6. AIMLESS \_\_\_\_\_
7. ANALYSIS \_\_\_\_\_
8. FRUSTRATION \_\_\_\_\_
9. SHEER \_\_\_\_\_
10. DRAWN-OUT \_\_\_\_\_

ASSESSMENT B AND POSTTEST B  
NAME \_\_\_\_\_

WRITE THE DEFINITION YOU LEARNED FOR THE FOLLOWING WORDS.

1. ACCLAIMED \_\_\_\_\_
2. CHARACTERISTIC \_\_\_\_\_
3. ECCENTRICITY \_\_\_\_\_
4. EXCEEDINGLY \_\_\_\_\_
5. FEAT \_\_\_\_\_
6. MODERATE \_\_\_\_\_
7. ORDEAL \_\_\_\_\_
8. RELIC \_\_\_\_\_
9. SPAN \_\_\_\_\_
10. VAGUE \_\_\_\_\_

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