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Is There Significant Difference in Vocabulary Retention Level By Using Word Webbing?

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IS THERE SIGNIFICANT DIFFERENCE IN VOCABULARY RETENTION

LEVEL BY USING WORD WEBBING ?

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CHAPTER I

STATEMENT OF PROBLEM

From a teacher's point of view, the issue in the content area classroom, as well as the language arts classroom, usually revolves around how to improve the student's reading comprehension. Teachers in middle and high school classrooms are aware that many students continue to struggle with comprehension because of limited vocabulary knowledge and ineffective strategies.

In the Riverside School District, language arts teachers are supposed to incorporate vocabulary acquisition into the curriculum along with grammar, writing, reading skills, and literary analysis. Teachers, therefore, often depend on commercially prepared instructional materials in order to reduce the work load of additional lesson preparation. The commercially prepared material may be either a supplemental component of the adopted literature book or a separate publication that deals strictly with vocabulary acquisition and reinforcement.

The purpose of this study was to see if there was a difference in the vocabulary retention level of 8th grade students between using the commercially packaged vocabulary material as outlined in the teacher's manual and a teacher

adaptation of the same material through the use of word webbing.

SIGNIFICANCE OF THE PROBLEM

The importance of vocabulary knowledge has long been recognized in the development of reading skills by almost all educators. There are two types of vocabulary--oral and print. A reader who encounters a strange word in print can decode the word to speech. If it is in the reader's oral vocabulary, the reader will be able to understand it. If the word is not in the reader's oral vocabulary, the reader will have to determine the meaning by other means, if possible. Consequently, the larger the reader's vocabulary, the easier it is to make sense of the text.

Word knowledge has particular importance in literate societies. It contributes significantly to achievement in the subjects of the school curriculum, as well as in formal and informal speaking and writing. Our American society has also seen a shift to an information-processing orientation. Building knowledge requires more than accumulating facts about specific elements such as word definitions. Also, state and national standards concerning proficiency scores in reading and writing are primary issues concerning education today.

Therefore, teachers must make concentrated efforts to teach vocabulary in their content areas. Some lessons may be intended to help students acquire specific word meanings for selected readings and generally occur as pre-reading activities. Other lessons may be designed to help students develop independent word learning strategies. It is vitally important for language arts teachers to teach the independent strategies, since content area teachers are going to rely heavily on the basic foundations of reading and writing skills.

While Riverside School District's curriculum identified a vocabulary textbook, there was still the need for helping students develop independent word learning strategies. Careful consideration was given to various methods to determine the most effective way to increase student vocabulary acquisition, and at the same time, be the most efficient means of matching the curriculum and the teacher's needs.

QUESTION TO BE INVESTIGATED

1. Is there significant difference in vocabulary retention level of 8th grade language arts students between using a word web adaptation of commercially prepared material and

following the publisher's recommended procedure of
instruction for the material?

DEFINITION OF TERMS

Adapted Material: The vocabulary curriculum material that
has been modified using a word web.

Commercially Packaged: A standardized set of materials
published by a company specializing in educational books
and supplemental resources.

Educators: Anyone involved in the educational system
regardless of function or level.

High School: This comprises Grades 9-12.

Middle School: This comprises Grade 7 & 8.

Teacher: An educator whose primary function is in the K-12
classroom.

Vocabulary Retention: For the purpose of this study,
vocabulary retention is the skill of accurate spelling and
word definition.

Word: Includes the base form and its inflections and
derivatives.

Word Web: Organizing a word and its meaning through a graphic organizer. This was a combination of word mapping and vocabulary acquisition strategies(Appendix A).

ASSUMPTIONS

1. All students will try to complete all homework assignments.
2. All students will try to receive as high a percentage on the assessments as possible.

LIMITATIONS OF THE STUDY

1. Students come from a diverse educational background.
2. Students come from a diverse socioeconomic background.
3. There is no control of the environment outside of the classroom that could have an impact on the quality and/or quantity of student study time.

DELIMITATIONS OF THE STUDY

1. The research was conducted using standardized word lists from a vocabulary workbook. No inquiry was made into the effect of context.
2. The study included only 8th grade students in the normal language arts classroom. This does include special

education students who have been included in regular
classrooms.

3. Students moving out of the school district will be
deleted from this study.

RESEARCH PROCEDURE AND METHODOLOGY

The methodology for this study was in the format of
action research. The procedure for this evaluation project
was to determine the effectiveness of word webbing as
compared with packaged materials in improving vocabulary
acquisition and retention.

All of the words used in the lessons came from the
Vocabulary Workshop textbook. Units 10, 11, and 12 used the
standard workshop format, while Units 14, 15, and 16 used
word webbing in addition to the normal lesson.

All of the lessons were introduced and/or assigned on
Mondays. On Fridays evaluation in the form of spelling
tests and matching definition tests took place. Twenty-five
words were selected at random from the three units to make
up a review spelling test and a definition test.

The test data on the fifth week review tests were
analyzed to determine whether the word webbing increased
vocabulary retention over a five week period of time.

CHAPTER II

REVIEW OF LITERATURE

In order to thoroughly understand a language, students must acquire the meanings of many words. Fluent readers and writers have rich, well-elaborated vocabularies. They know the meanings and functions of many words as well as the conventional way they are used (Elley, 1997). Vocabulary knowledge continues to grow in breadth and depth as students encounter increasingly sophisticated reading and writing experiences in middle-level classrooms.

The amount of independent reading that diverse learners need to reduce the vocabulary gap that separates them from normal achieving peers is extensive (Baker, Simmons, & Kameenui. 1995). However, how can readers learn vocabulary words through extensive reading when they do not know enough words to read well (Hunt & Beglar, 1998)? If the words are not known, then the message cannot be understood. Another question to be answered is: Do good readers acquire rich vocabularies because they read more, or does their reading improve when they acquire more vocabulary?

Expanding and extending vocabulary knowledge is a critical part of the literacy needs of all adolescents (Harmon, 2000). Consequently, expanding and extending

vocabulary acquisition skills are also critical as students encounter new words across a variety of disciplines.

TRADITIONAL METHODS

Many people, inside and out of school, would recognize the terms vocabulary words or spelling words as simply being lists. There is traditionally nothing more educationally universal than the method used to study those words. Generally, this is a group of words arbitrarily grouped together and assigned to students weekly. Instruction and assignments center primarily around looking up the words, writing them in a sentence, and studying the spelling and definitions for a test on Friday (Gunter, Estes, & Schwab, 1999).

A pure-vocabulary approach offers certain advantages for an effective word study (Shostak, 1996). These advantages include but not limited to: obviates the problem of dealing with a literary passage; focuses more directly and more completely on the words themselves; economizes space; and offers the maximum coverage available to a maximum number of words in minimum space and time allotments. Vocabulary texts are divided into grade or ability levels. Each level contains a certain number of target words that may be based on usefulness, frequency, applicability and grade placement

criteria. This is a strategy endorsed primarily by vocabulary textbook companies, but is used frequently by teachers because of the convenience

There are two problems with trying to learn the words in this manner despite the efforts of the teacher and students. First, simply memorizing words affects learning in that words are lost within a few hours or days of the test. Second, the system of English spelling and word meaning is ignored (Gunter, Estes, & Schwab, 1999).

Another method that is closely related to the spelling/vocabulary strategy is the literature-based methodology. Vocabulary strategy building lessons generally emphasize learning about context clues, examining the structure of words, and using reference books such as dictionaries and thesauruses. It has been a given for reading instruction that vocabulary instruction will occupy a central part of the lesson, typically prior to reading. Some teachers believe that direct instruction of vocabulary should only be through the context of reading (Ostrowski, 2000). This pre-instruction has often been justified on the basis of making the passage easier to comprehend by reducing the cognitive load during the subsequent reading (NRP, 1999).

While these lessons work well with average and above average students, many students who struggle with reading continue to have difficulty transferring these strategies to their independent reading (Harmon, 1998).Yet many teachers find strategy instruction difficult to implement. It is far more straightforward to design activities for specified word meanings than it is to create opportunities for students to develop strategic ability for independent reading (Harmon, 2002).

DIRECT AND INDIRECT INSTRUCTION

A comprehensive analysis of research studies by the National Reading Panel (1999) suggested that a variety of direct and indirect methods of vocabulary instruction could be effective(see Appendix B). Effective instructional methods emphasized multimedia aspects of learning, richness of context in which words were to be learned, active student participation, and the number of exposures to words that learners received. It is generally accepted that students learn vocabulary more effectively when they are directly involved in constructing meaning rather than in memorizing definitions or synonyms(Smith, 1997).

Very few educators would deny that vocabulary comprehension is an essential skill needed for proficient

reading. To develop a strong command of vocabulary and improve listening and reading comprehension, students must be provided with enhancing strategic instruction that make vocabulary instruction an interesting and rewarding part of the student's learning experiences (Foil & Abler, 2002). There are several strategies that (a) facilitate linking new words to previous knowledge, (b) provide a personal meaningful context, and (c) present frequent practice opportunities (Baker, et. al., 1995, NRP,1999, Foil & Alber, 2002)

A small, but clear, trend in recent years show computer technology making great headway in literacy and literacy instruction. Various strategic methods incorporate computer and multimedia technology to aid in the instruction of vocabulary words. Examples include CD-ROM, talking software, Hypertext dictionary support, speech prompts, adaptive software, visual representations, and multi-sensory input. Word acquisition computer programs can also be an excellent aid for students learning English as a second language (Groot, 2000).

A mnemonic strategy for elaborating upon an unfamiliar word or concept by making it more meaningful and concrete is the Keyword Method. Three steps for using the Keyword Method are recoding, relating, and retrieving. (Foil &

Abler, 2002). First the students change the unfamiliar new word to a similar sounding familiar word that is easily pictured. Second, they should practice saying the vocabulary and keyword together to establish an association. Finally, students increase the association by forming a visual image or drawing a picture in which the keyword and meaning of the vocabulary word are interacting. A simple variation of the keyword strategy is having students create their own vocabulary picture cards that remind them of the meaning of the vocabulary word. These picture cards are index cards on which students have written the vocabulary word on one side and drawn the picture on the back. The cards are then used to study the vocabulary word meanings (Foil & Abler, 2002).

Semantic Mapping provides students with a visual means of organizing content information. Students are presented a new vocabulary word and hold a group discussion concerning its meaning. Words are then categorized into familiar topics with other known words. A variety of graphic organizers can be utilized for identifying similarities and differences with related words.

Word mapping, which includes several vocabulary methods, involves intertwining the target word with synonyms, brief descriptions, examples and non-examples, rephrasing,

repetition, association, and unique expression. Students must be able to link a new word with a specific definition or single context. They must demonstrate a broad understanding of a word in sentences and be able to use definitional information to classify the word into categories. Also, knowledge is characterized by the ability to produce a response such as an original sentence or a restatement of the definition. The map should be used daily with students requiring them to find interesting words during independent or assigned readings (Rosenbaum, 2001).

The Vocabulary-Acquisition Model, which also incorporates various vocabulary methods, begins with what students know about the words essential to their reading. Next, students decide where these words fit in the English language by discussing synonyms, uses of the roots, and the origin and historical development of the words. Following this discussion, students begin the actual reading and studying of text. Students should be fairly familiar with the basic concepts of their study before the reading begins if this model has been followed (Gunter, Estes, & Schwab, 1999).

WORD WEBBING VERSUS COMMERCIALLY PACKAGED INSTRUCTION

This researcher has personally used two different commercially packaged vocabulary books: *Vocabu-Lit: Reading Your Way to Word Power* published by Perfection Learning Corporation and *Vocabulary Workshop* published by Sadlier-Oxford.

Vocabu-Lit claims to be a unique literature-based program designed to help your students improve their word power. In format and approach, it differs in several ways from the usual vocabulary-building materials. First, *Vocabu-Lit* contains examples of how the vocabulary words have been used by various writers and speakers. This is intended to show students how vocabulary can become an effective writing tool. Second, *Vocabu-Lit* does not ask students to learn a large number of words at one sitting. Students master just ten words at a time and are provided several experiences with those words. Third, Vocabu-Lit capitalizes on students' natural approach to language acquisition by having them study words in context. The is accomplished by using a selection from a book, essay, story, poem, or speech. The workbook has students write the definition, choose a synonym and antonym, complete an analogy, and fit the words into a given sentence. The words are selected from classic and high-interest literature.

According to the author, *Vocabulary Workshop* has become the "classic" program for guiding and stimulating vocabulary growth through grade 12 over the last five decades. The *Vocabulary Workshop* features a 'pure-vocabulary approach' to student word acquisition. This approach focuses on the words themselves, their meanings (both literal and figurative), their ranges of application, and their relationship to other words. The approach differs from a literature-based approach in that it begins each unit with a consideration of the words themselves rather than with a reading selection featuring the words to be studied.

Jerome Shostak (1996) claims that the pure-vocabulary approach offers certain advantages.

a. The pure-vocabulary approach provides unlimited flexibility in the choice and placement of grade-appropriate materials.

b. It obviates the problem of dealing with a literary passage as literature in the midst of trying to teach vocabulary.

c. It focuses more directly and more completely on the words themselves, their meanings, their ranges, and their relationships to other words.

      d. It economizes space, thereby allowing a greater

         range of drill, reinforcement, and enhancement

         materials.

      e. It offers the maximum coverage available to a

         maximum number of target words in minimum space and

         time allotments.

The selection of words for the Vocabulary Workshop program was based on four major criteria:

      1. currency in and usefulness for present-day American

         oral or written communication;

      2. frequency on recognized vocabulary lists;

      3. applicability to standardized tests, especially the

         SAT 1;

      4. current grade-placement research.

Students seemed to soon find the work monotonous and simply go through the motions of filling out the workbook. Words and definitions were memorized as the need arose for a test. An unannounced test would result in questioning how the test grade would affect their overall grade. There seemed to be little or no concern over whether or not they knew the words and definitions. They did not seem to care as long as it didn't lower their grade. Neither packages include much guidance for lesson plans or teaching strategies.

The Word Web used by the researcher is a combination of Word Mapping, Vocabulary Acquisition Model, and other strategic components.

Word mapping takes a new word from the sentence in which the word was found to establish context. The student then copies only the definition that supports the context. While using a dictionary, the student records a synonym and an antonym. In some cases a non-example can substitute for an antonym if no antonym is given. This process entails modeling by the teacher and discussion with peers or a teacher to help define the process and to develop the concept of oppositional thinking.

Structural analysis becomes the focus when the student records another form of the word. Not only does this manipulation help the student tap into background knowledge, but it also extends new learning. Therefore, when the student encounters another word with similar roots or affixes, he/she will already have some knowledge of at least part of the word.

An important element is using a unique expression, association, or example. This helps personalize the word for a student. The final step in the process is when the student creates an original sentence, using the new word independently and appropriately.

The Vocabulary Acquisition Model is the other large component of the Word Web. The first step is to pretest knowledge of words critical to content. An unannounced test is used to give students the opportunity to show what they know. This becomes the place to learn more.

The second step is to elaborate upon and discuss invented spellings and hypothesized meanings. Using various spellings and meanings given by students for each word, words on the pretest are examined and discussed as to the relationships of their sound, their meaning, and their spelling.

The third step is to explore patterns of meaning. Each teacher chooses the words he or she will teach in a particular week. Students are asked to spell and define the target word as best they can. Next, they share their spellings and definitions with a partner or in a small group. The correctly spelled target word is given by the teacher and the students then copy it on a graphic organizer. The teacher then writes the prime dictionary definition on the graphic. Again, after comparison of definitions, students copy the correct one on their graphic. The proposed sentences are examined in the same manner as the spellings and definitions. Words are brainstormed and examined to identify synonyms and related

words. When the root of the target word begins to emerge in the discussion, the teacher shares the dictionary etymology with the students, inserting this in the section of the graphic labeled root(s).

Step four includes reading and studying. Once the target ideas and vocabulary are introduced and discussed, reading and studying may be guided by any companion model such as concept development, classroom discussion, or cooperative learning. Students are encouraged to observe carefully how the words they have studied are used in the text(s) they will read.

Step five is the evaluation and posttest of the targeted words. The model begins with a pretest and ends with a posttest of the spellings and meanings of the same words. Very large differences in the scores on these two tests are expected, considering the intensity of vocabulary study. In this model, mastery is the goal and near perfect scores the intent.

The word web used by this researcher included the combined components of the Word Map and Vocabulary Acquisition Model as well as drawing a visual image of the word. Initial instruction was given on how to complete the web. When each new list was introduced, the correct pronunciation was given to the whole class verbally.

Students worked on the webs independently with one-on-one interaction with the teacher as needed by individual students.

RESEARCH AND ANALYSIS

According to the National Reading Panel, recent research has focused more on overall comprehension than on vocabulary. This appears to be a function of the more inclusive nature of many contemporary comprehension methods, which seem to incorporate at least some vocabulary instruction (NRP, 1999). Lesson formats even in traditional methods of teaching reading include vocabulary instruction.

Many studies have shown that reading ability and vocabulary size are related, but the causal link between increasing vocabulary and an increase in comprehension has not been demonstrated. That is, it has been difficult to demonstrate that teaching vocabulary improves reading ability (NRP, 1999). Vocabulary is generally tied closely to individual words while comprehension is more often thought of in much larger units. To get to the comprehension of larger units requires the requisite processing of the words. Precisely separating the two processes is difficult, if not impossible.

When considering curricular and instructional
implications for diverse learners, most research has been
conducted with students in the late primary-and middle-
school grades, focusing primarily on evaluating the
effectiveness of interventions to increase student learning
of individual words. The evidence indicates that nearly all
intervention methods are successful to some degree.
However, no single method has been demonstrated as
meaningfully reducing the vocabulary gap between students
with poor vocabularies and students with rich vocabularies.
Comprehensive vocabulary programs with the potential to
reduce the vocabulary gap between students have been
proposed in various forms but have not been thoroughly
investigated (Baker, Simmons, & Kameenui, 1995).

Most educators agreed that vocabulary instruction led to
gains in comprehension, but that the methods must be
appropriate to the age and ability of the reader. While
much is known about the importance of vocabulary to success
in reading, there was no consensus on the best methods or
combinations of methods of vocabulary instruction. It is
clear that vocabulary should be taught both directly and
indirectly. Vocabulary instruction should be incorporated
into reading instruction as there is a need for
understanding vocabulary terms required for a specific

text. There is also evidence indicating that making

connections with other reading material or oral language in

other contexts seem to have large effects.

CHAPTER III

GENERAL PROCEDURES AND TIMELINE

Subjects

Riverside School is located in a small rural village of south central Ohio. The school building has only been occupied since August 2002 and has a student population of approximately nine hundred students. The building has an elementary wing and a high school wing. The Junior High is incorporated into the high school.

There are 53 8th grade students in the regular language arts classes, which are comprised of 29 males and 22 females. These students range from ages twelve to fourteen, and come from a large diversity of socio-economic and academic backgrounds. There is very little racial diversity. The students' achievement level comprised a heterogeneous group with four special education students who were included in regular classes.

Instrumentation

All eighth grade students used the Vocabulary Workshop published by Sadlier-Oxford as a vocabulary textbook. The word lists were selected based on four major criteria: *currency in* and *usefulness* for present-day American oral or

.

written communication; *frequency* on recognized vocabulary lists; *applicability* to standardized tests, especially the SAT I; and current *grade-placement research*. Since all the lists are based on a particular skill level, all tests are comparable in difficulty level.

The word web was created by the researcher and is a modified combination of word mapping and vocabulary acquisition strategies (see Appendix A).

The weekly spelling tests were comprised of the 20 words from each lesson of the textbook. The definition tests were 10 word matching test designed by the researcher and taken from the first ten words of the weekly lesson. For the review tests, which is what was used for data correlation, twenty-five words (from each set of three 10-word definition tests) were selected at random.

Procedures

The study was designed to administer, collect, and compare student data from the review assessments before and after a treatment period. The study was conducted in January, February, and March of 2003. Due to students moving in and out of the district and extended illness of two students only 48 students were included in the study.

The researcher stored the data until the completion of the ten-week research period.

The first three lessons (Unit 10, Unit 11, and Unit 12) in this study used the standard Vocabulary Workshop format: writing the word beside the definition, completing a sentence with the correct word, find the synonym, find the antonym, circling the correct word in a sentence. Each unit consisted of twenty words. The fourth lesson reviewed Units 10-12. The fifth lesson reviewed Units 1-12.

The next three lessons (Unit 13, Unit 14, and Unit 15) adapted word webbing in addition to the Vocabulary Workshop workbook. This included deriving a word's meaning from the sentence provided in the book, synonyms, antonym, a picture to form a visual association, an original sentence, the root, prefix, and suffix. The review lessons after these three units included two review lessons as well as the opportunity to study previously completed word webs.

All of the lessons were introduced and/or assigned on Mondays. On Fridays evaluation in the form of spelling tests and matching definition tests took place. All twenty words were used for the spelling test and the first ten words of the list comprised the definition test for each unit. Twenty-five words were selected at random from the three units to make up a review spelling test and a

definition test. The same review test was repeated for each corresponding review week. The researcher rated the students on a possible score of 100%.

Student data was grouped into five grade ranges according to the first semester grade earned by each student(A's-B's-C's-D's-Special Education). A correlation was made between the review test of Units 10-12 (no treatment given)and the review test of Units 13-15 (treatment given) for each of the five grade ranges. A non-independent t-test was used to determine significant difference.

The analysis of the data for this evaluation project was to determine the effectiveness of adapted word webbing in improving vocabulary acquisition and retention. The data was than analyzed to determine whether the word webbing increased vocabulary retention over a five-week period of time through the comparison of the last cumulative test following each set of lessons.

CHAPTER IV

<u>REPORT AND ANALYSIS OF DATA</u>

The primary purpose of this study was to determine if word webbing would increase the vocabulary retention level of the eighth grade students in the Riverside School District.

The study began with a total of 53 eighth grade students, however, only data from 48 students are included in the final analysis. This was due to extended illness of one student and four students moving out of the school district. A comparison was made of student data from the review assessments before and after a treatment period for both spelling and vocabulary.

Student data was grouped into five grade ranges according to the first semester grade earned by each student(A's-B's-C's-D's-F's). The academic levels were based on a 4 point GPA. Finally, all the data was combined for an overall comparison.

During the first five weeks, students worked strictly from their vocabulary textbook, <u>Vocabulary Workshop</u>. The students were then given a twenty word spelling test and a ten word vocabulary test over words from the three

different lessons in the unit. The first set of data were derived from these two tests.

During the next five weeks, students used word webbing in addition to their assignments in Vocabulary Workshop. Word webbing was used for each of the ten words used for the vocabulary test. Again the students were then given a twenty word spelling test and a ten word vocabulary test over words from the three different lessons in this unit. These test results were used for the second set of data.

The two sets of data, spelling and vocabulary, for each group of students were compared using the t test. The t test is a statistical procedure used to determine the significance of an observed difference between two means. It compares the difference between means against the standard error of that difference.

The twenty "A" students had a mean of 98.2% in spelling without treatment, and 95.8% in spelling with treatment. The treatment was significant, t=-1.75, p=.10 (see Table 1). Three students, however, increased their scores with treatment, and seven received 100% on both tests (see Appendix D).

The mean for vocabulary did increase with treatment. The mean without treatment in vocabulary was 35.6%, however, with treatment the mean was 48.2%. The treatment was

significant, t=2.30, p=.05 (see Table 2). Individually, one student increased vocabulary by 48%, while eight students decreased with treatment(see Appendix D).

Table 1

Spelling Retention With & Without Treatment "A" Students

	Without Treatment	With Treatment
n	20	20
Mean	98.20	95.80
t	-1.75	

*p < or = .10

Table 2

Definition Retention With & Without Treatment "A" Students

	Without Treatment	With Treatment
n	20	20
Mean	35.60	48.20
t	2.30	

*p < or = .05

The twelve students in "B" group decreased from a mean of 89% without treatment to a mean of 81.67% with treatment in spelling. The treatment was significant, t=-2.33, p=.05 (see Table 3). Exceptions to this were students #1 and #2 who showed an increase with treatment(see Appendix D).

Vocabulary with treatment showed an increase in the mean of 16.33% up from a 8% mean without treatment. The

treatment was significant, t=1.19, p=.05 (see Table 4).
Student #10 showed the largest increase in vocabulary with
treatment (see Appendix D).

Table 3

Spelling Retention With & Without Treatment "B" Students

	Without Treatment	With Treatment
n	12	12
Mean	89.00	81.67
t	-2.33	

*p < or = .05

Table 4

Definition Retention With & Without Treatment "B" Students

	Without Treatment	With Treatment
n	12	12
Mean	8.00	16.33
t	1.19	

*p < or = .05

The seven students in the "C" group had a mean of 74.29%
without treatment for the spelling tests. With the
treatment, however, they dropped to a mean of 69.14%. The
treatment was not significant, t=1.07, p=.10 (see Table 5).
Student #4 was the only student that individually scored
higher in spelling with the treatment (see Appendix D).

For the vocabulary tests, there was an increase with a mean of 19.43% with treatment compared to 1.14% without treatment. The treatment was not significant, t=1.43, p=.10 (see Table 6). Student # 6 showed the greatest gain by going from 0% to 92% with treatment in vocabulary (see Appendix D).

Table 5

Spelling Retention With & Without Treatment "C" Students

	Without Treatment	With Treatment
n	7	7
Mean	74.29	69.14
t	-1.07	

*p < or = .10

Table 6

Definition Retention With & Without Treatment "C" Students

	Without Treatment	With Treatment
n	7	7
Mean	1.14	19.43
t	1.43	

*p < or = .10

The five "D" students had a decrease in spelling with treatment. Without treatment, the students' mean was 84%, but dropped to 80.80% with treatment. The treatment was not significant, t=-.64, p=.10 (see Table 7). However, students

#3 and #5 increased their scores with treatment(see
Appendix D).

The group also showed a decrease in vocabulary. The mean
without treatment was 28%, but only 10.4% with treatment.
The treatment was not significant, t=-.89, p=.10 (see Table
8). Individually, students #1 and #3 did show a slight
increase with treatment in vocabulary (see Appendix D).

Table 7

Spelling Retention With & Without Treatment "D" Students

	Without Treatment	With Treatment
n	5	5
Mean	84.00	80.80
t	-.64	

*p < or = .10

Table 8

Definition Retention With & Without Treatment "D" Students

	Without Treatment	With Treatment
n	5	5
Mean	28.00	10.40
t	-.89	

*p < or = .10

All four Special Education students improved in spelling
with the treatment. The mean percentage increased from 60%
to 76%. The treatment was significant, t=2.72, p=.01 (see

Table 9). Student #2 showed the biggest improvement with an increase of 32% (see Appendix D).

All students' scores decreased or remained the same in vocabulary with the treatment. The students' mean of 12.5% correct without treatment, but only 4% with treatment. The treatment was significant, t=-2.16, p=.05 (see Table 10). Student #2 showed the biggest increase in spelling, and student #1 showed the biggest decrease in vocabulary (see Appendix D).

Table 9

Spelling Retention With & Without Treatment Special Ed.

	Without Treatment	With Treatment
n	4	4
Mean	60.00	76.00
t	2.72	

*p < or = .01

Table 10

Definition Retention With & Without Treatment Special Ed.

	Without Treatment	With Treatment
n	4	4
Mean	12.50	4.00
t	-2.16	

*p < or = .05

Overall, the 48 students had a mean of 87.75% without any treatment in spelling, but they had only a mean of 85.17% with treatment. The treatment was significant, t=-1.67, p=.10 (see Table 11). Twelve students showed an increase with treatment and twelve students maintained the same score both with and without treatment(see Appendix D).

However, in vocabulary, the mean showed a small increase. Students improved from 20.96% to 28.42%. The treatment was significant, t=2.81, p=.05 (see Table 12). Twenty-five students showed an increase with treatment, and only five students maintained the same score (see Appendix D).

Table 11

Spelling Retention With & Without Treatment Overall

	Without Treatment	With Treatment
n	48	48
Mean	87.75	85.17
t	-1.67	

*p < or = .10

Table 12

Definition Retention With & Without Treatment Overall

	Without Treatment	With Treatment
n	48	48
Mean	20.96	28.42
t	1.81	

*p < or = .05

CHAPTER V

<u>SUMMARY OF FINDINGS</u>

By comparing test scores of spelling and vocabulary with and without treatment for the different academic levels (based on a 4 point GPA), it can be seen that there was a significant difference in seven out of twelve comparisons.

There was significant difference in spelling for the "A", "B", and "Special Education" students, as well as overall. The "Special Education" students had the largest difference with a 2.72 and the "A" students had the lowest with a -1.75. Overall, there was a difference of -1.67. There was no significance difference for the "C" and "D" students.

A significant difference in vocabulary was found in the "A", "B" and "Special Education" students, as well as overall. The "B" students had the lowest difference with a 1.19 increase, while the "A" students had a difference of 2.30 increase. Overall, there was a 1.81 increase. There was no significant difference for the "C" and "D" students.

<u>CONCLUSIONS</u>

Based on the results of this study, the following conclusions was warranted:

1. Word webbing did not significantly improve any individual group's spelling scores.

2. Word webbing did significantly improve "A","B" and "C" students' definition scores.

3. The "D" and "Special Education" students for definition scores were lower after receiving word webbing.

It would appear that word webbing might not be the best teaching strategy to use for teaching spelling. Also, the results of the lower ability students indicate a different method would be more appropriate for teaching definitions. Word webbing does seem to have a positive influence on the upper and middle level students. The "A" students did have a positive increase even though it was not significant.

IMPLICATIONS

Clearly, Riverside School District must find ways to increase the vocabulary retention of all students. Apparently, the methods and strategies used for teaching vocabulary through the elementary years have not been successful. Since word webbing showed potential for upper and middle students, it might have a larger positive effect if started at an earlier grade level. Intervention may be necessary for the lower level students.

A thorough examination and testing of the spelling and definition retention throughout the school would give the researcher a broader data base.

Another factor to consider is student attitude. Until, and unless, they understand the importance of spelling and vocabulary, they will probable see it simply as just another assignment. Telling them is not enough, but how do we make them "feel" it?

RECOMMENDATIONS AND FUTURE RESEARCH

A thorough examination of the spelling and vocabulary program should be examined. This should include the entire school district. Materials, methods, and strategies should be examined for the most effective means, as well as, better consistency of teaching.

The research could be divided at each grade level with one group being a control group, rather than all students receiving lessons with treatment and lessons without treatment. Also, researching for a longer period of time could affect the results.

Another recommendation is to examine different ways of introducing word webbing and maintaining the program. It may need to be more structured and more time may need to be allocated for spelling and vocabulary.

Researching and testing the word webbing procedure in other content areas beyond the language arts program could have some very different results. Students might respond to it better in other subjects.

Appendices
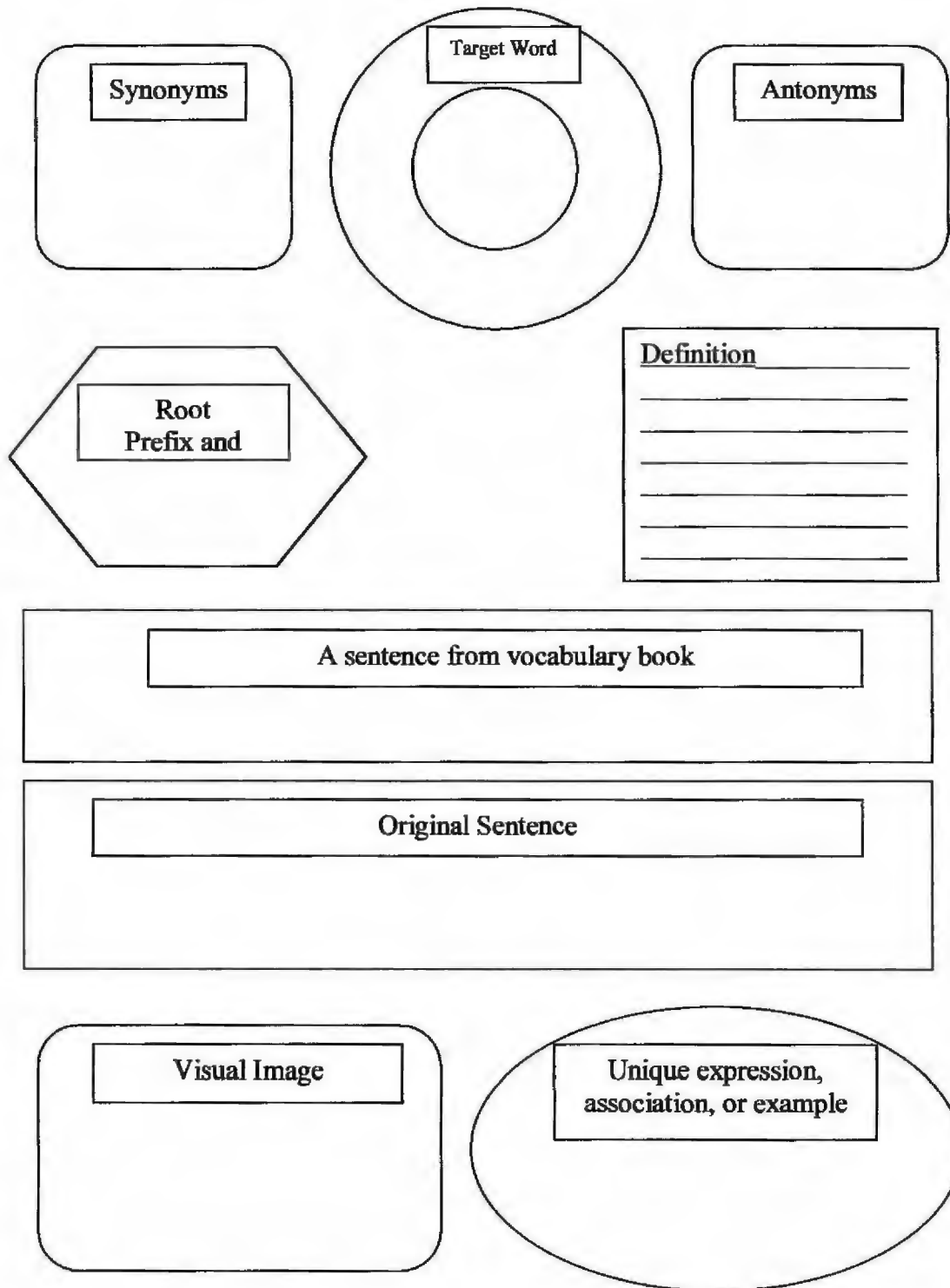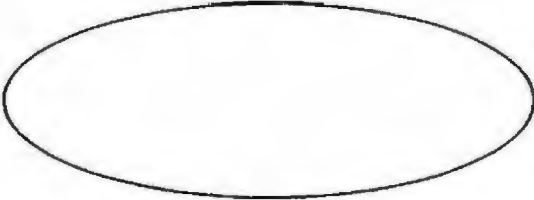
Appendix A

Graphic Organizers

Fig. 1

Word Web

Target Word

Synonyms

Antonyms

Root
Prefix and

Definition

A sentence from vocabulary book

Original Sentence

Visual Image

Unique expression,
association, or example
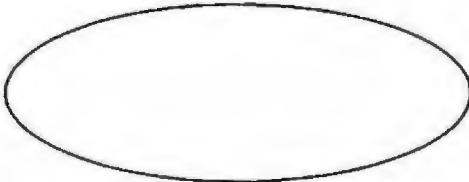
Fig. 2

Word Map

Another	Definition	Synonym

Unique expression, association, or example

New Word and page number

Antonym
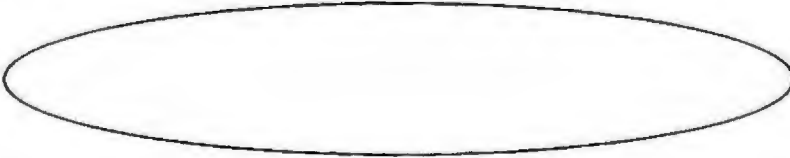
Sentence from the book

My original sentence

Fig. 3

Graphic Organizer For Vocabulary Acquisition Model

Root (s) (Prefixes and Suffixes)	**Synonyms**

(Target Word)

Definition

Related Words

Sentence

Gunter,et.al. (1999)
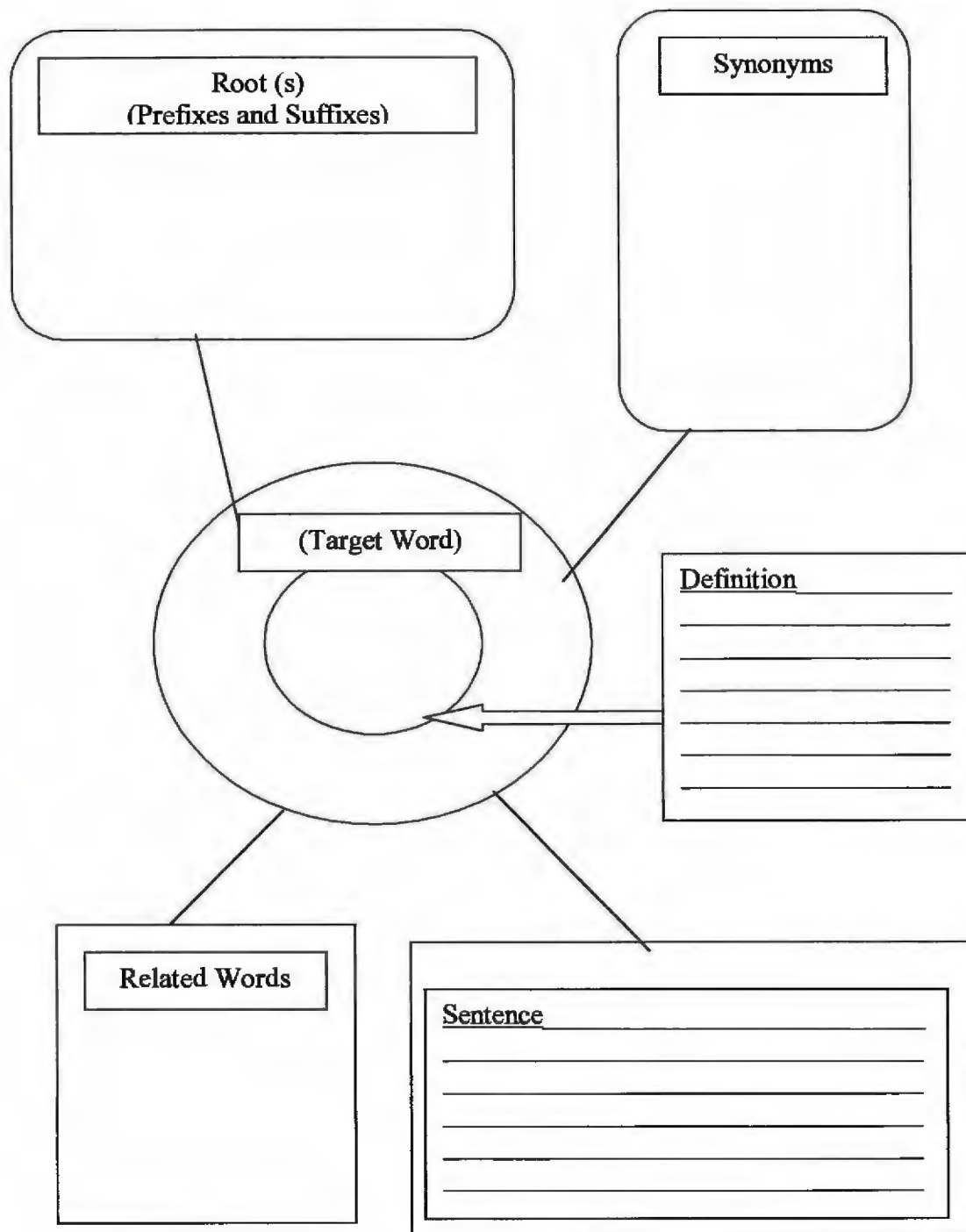
Appendix B

Vocabulary Instruction Methods

Vocabulary Instruction Methods

A SUMMARY OF VOCABULARY INSTRUCTION METHODS

Vocabulary Method:	Description:	Representative Studies:
Keyword Method	Students are instructed to learn the meanings of new words by learning a keyword "word clue" for each vocabulary word. The keywords are usually words acoustically similar to a salient part of the vocabulary word. Sometimes, relational illustrations are shown to students, or students are asked to generate their own images linking the two words.	Levin, Levin, Glassman, & Nordwall, 1992; McCarville, 1993; Levin, Levin, Glassman, & Nordwall, 1992; Levin, Levin, Cotton, Bartholomew, Hasty, Hughes, & Townsend, 1990; Pressley, Levin, Kuiper, Bryant, & Mitchener, 1982; Atkinson, 1975.
Semantic Mapping	Students are taught the meanings of new vocabulary words by categorizing them into familiar topics with other known words. New words are learned by identifying similarities and differences with related, known words. Target words are often introduced in categories, and semantic maps are developed for each set of items.	Levin, Levin, Glassman, & Nordwall, 1992; McCarville, 1993; Levin, Levin, Glassman & Nordwall, 1992; Levin, Levin, Cotton, Bartholomew, Hasty, Hughes, & Townsend, 1990; Pressley, Levin, Kuiper, Bryant, & Mitchener, 1982; Atkinson, 1975.
Contextual Analysis	Students use context clues embedded in paragraphs to help them learn meanings of the target vocabulary words. Usually, the words and definitions are then reviewed.	Buikema & Graves, 1993; Friedl&, 1992; Gifford, 1993.
Sign Language	Enrichment of curriculum with sign language for pre-kindergarten hearing children to improve their receptive English vocabulary.	Daniels, 1994, 1998.
Wide Reading	Listening/reading stories (with or without pre-explanation of target words). Some salient variables to consider include the number of exposures to the words, frequency of book readings, nature of instruction (using questioning, etc.), word redundancy, and time between readings.	Anderson & Nagy, 1992; Riddell, 1988; Elley, 1988; Krashen, 1989.
Deriving Word Meanings	Students are taught strategies for deriving meaning of an unfamiliar word. One example of a strategy is the SCANR method (substitute a word for unknown word; check the context for clues; ask if substitution fits context clues; need a new idea?; revise idea to fit context)	Tomeson, 1998; Jenkins, Matlock, & Slocum, 1989.
Elaborate/Rich Instruction	Students learn to identify the relationship between words, respond to words both affectively and cognitively, and apply words to various contexts. Promotes a student's use of words outside of vocabulary class and elicits prior knowledge.	McKeown, Beck, Omanson, & Pople, 1985; Stanley & Ginther, 1991; Stahl, 1983.
Roots/Affix Analysis	Students use word origin clues and learn the meanings of common roots, prefixes, and affixes to determine vocabulary definitions.	Irwin, 1991; Ryder & Graves, 1994; Levin, Carney, & Pressley, 1988.

A SUMMARY OF VOCABULARY INSTRUCTION METHODS (CONTINUED)

Vocabulary Method:	Description:	Representative Studies:
Dictionary/Glossary	Students are given dictionaries or glossaries to find the definitions of unknown words. Variations of this method include giving students passages to read along with a dictionary or glossary to find the definitions of unknown words, writing new sentences with the words, and completing worksheets and crossword puzzles.	Knight, 1994; Wixson, 1986; Gipe & Arnold, 1979.
Frayer Model	Frayer model (and Grave's modification). A method to teach specific new words using a seven-step model. Basic tenets of the Frayer model include: give word/name and its relevant attributes, eliminate irrelevant attributes, give examples, give nonexamples, and list subordinate, superordinate, and coordinate terms.	Frayer, Frederick, & Klausmeier, 1969; Graves, 1984, 1985; Ryder & Graves, 1994.
Task Clarification	With the premise that students have only a vague notion of what constitutes a definition, vocabulary instruction is designed to clarify the student's knowledge of the task. Students are instructed on ways to gather information from relevant sources to uncover the components of a definition.	Guzzetti, Snyder, Glass, & Gamas, 1993; Haggard, 1982, 1985; Fisher, Blachowicz, & Smith, 1991; Fisher & Danielsen, 1998; Palinscar & Brown, 1984.
Computer/Multimedia Instruction	Various methods incorporate computer and multimedia technology to aid in the instruction of vocabulary words. Examples include CD-ROM, talking software, Hypertext dictionary support, speech prompts, adaptive software, visual representations, and multisensory input.	Terrell & Daniloff, 1996; Reinking & Rickman, 1990.
Text Revision	Students are given revised versions of text passages. Variations include substituting easy for difficult vocabulary words, adding redundant information to facilitate word learning and comprehension, and writing vocabulary words with context information to constrain vocabulary word learning.	Britton, Woodward, & Binkley, 1993; Meyer, 1975.
Interactive Vocabulary Techniques	Various techniques that allow students to get actively involved in word learning. Examples include students acting out word meanings, self-selection of vocabulary words to learn, and allowing students to compare strategies and methods.	Duffelmeyer, 1980; Rekrut, 1993; Pressley & Levin, 1988.
Passage Integration Training	Teachers stop and prompt the students to generate the meanings of the difficult vocabulary words immediately after they encounter them during the passage reading.	Kameenui, Carnine, & Freschi, 1982.
Concept Method	Assists students in learning words as concepts rather than as dictionary definitions. Based on a concept-attainment model, this method relies more heavily on discussion than on independent activities. Students study examples and nonexamples to identify the critical attributes of each word or concept.	Frayer et al., 1969; Klausmeier, 1976,1979; Merrill & Tennyson, 1977.
Pre-Instruction of Vocabulary Words	Students are taught or exposed to the definitions of relevant vocabulary words before reading them in context. In addition to assessing effects on vocabulary acquisition, this is often researched as a way to enhance reading comprehension.	Koury, 1996; Ryder & Graves, 1994; Wixson, 1986.

A SUMMARY OF VOCABULARY INSTRUCTION METHODS (CONTINUED)

Vocabulary Method:	Description:	Representative Studies:
Association Methods	Pairs unknown word with familiar synonym. Students must memorize the pairings to rewrite the original pairs.	Gipe & Arnold 1979; McKeown, Beck, Omanson, & Pople, 1985.
TOAST Program	Students are taught a method of vocabulary instruction by the acronym of TOAST that prompts students to: test, organize words, anchor words, and test target words.	Dana & Rodriguez, 1992.
Basic Mnemonic Techniques	Traditional memory techniques, including vocabulary drills, flash cards, vocabulary games, notebooks, repetitions, and recall tests. An example program is the Reading Racetrack, which uses error correction, timing, and drill and practice procedures to help build sight word acquisition and reading fluency.	McLaughlin, 1997; Rinaldi, Sells, & McLaughlin, 1997.
Decoding Instruction	To enhance reading fluidity with the intention of facilitating vocabulary comprehension, instruction is given in methods such as phonological training, phonemic awareness, or the whole-word approach	Eldredge, Quinn, & Butterfield, 1990.

Appendix C

Word Lists

Word Lists

Unit 10
accord
barter
curt
devise
dexterous
engross
entail
ferret
habituate
impending
personable
rue
scoff
transition
trepidation
upbraid
veritable
vex
vitality
whimsical

Unit 11
appease
belated
calamitous
cite
conventional
decoy
delve
ensue
gallantry
impart
judicious
mediate
milieu
outlandish
overbearing
pert
quirk
regale
shiftless
taint

Unit 12
abdicate
bestow
capacious
caustic
crusade
deface
embargo
fallacy
levity
mendicant
nauseate
negate
pivotal
recipient
ruse
teem
tenet
tractable
ungainly
voracious

Unit 13	Unit 14	Unit 15
adapt	amplify	abyss
attest	armistice	befall
dovetail	arrogant	crucial
enormity	bland	dregs
falter	disclaim	embody
foreboding	epoch	exasperate
forlorn	estrange	fiasco
haughty	gratify	garnish
impediment	infinite	heritage
imperative	irascible	inert
loiter	kindred	mercenary
malinger	naive	negligent
pithy	niche	oblivion
plunder	obliterate	opus
simper	ramshackle	pallid
steadfast	ransack	parable
vaunted	rote	rational
vilify	solvent	reciprocal
waif	tedious	stricture
wry	vendor	veneer

Review Word List
(Used for Data Analysis)

abyss

amplify

armistice

arrogant

attest

befall

crucial

disclaim

dovetail

dregs

embody

estrange

exasperate

falter

fiasco

foreboding

forlorn

garnish

gratify

haughty

impediment

imperative

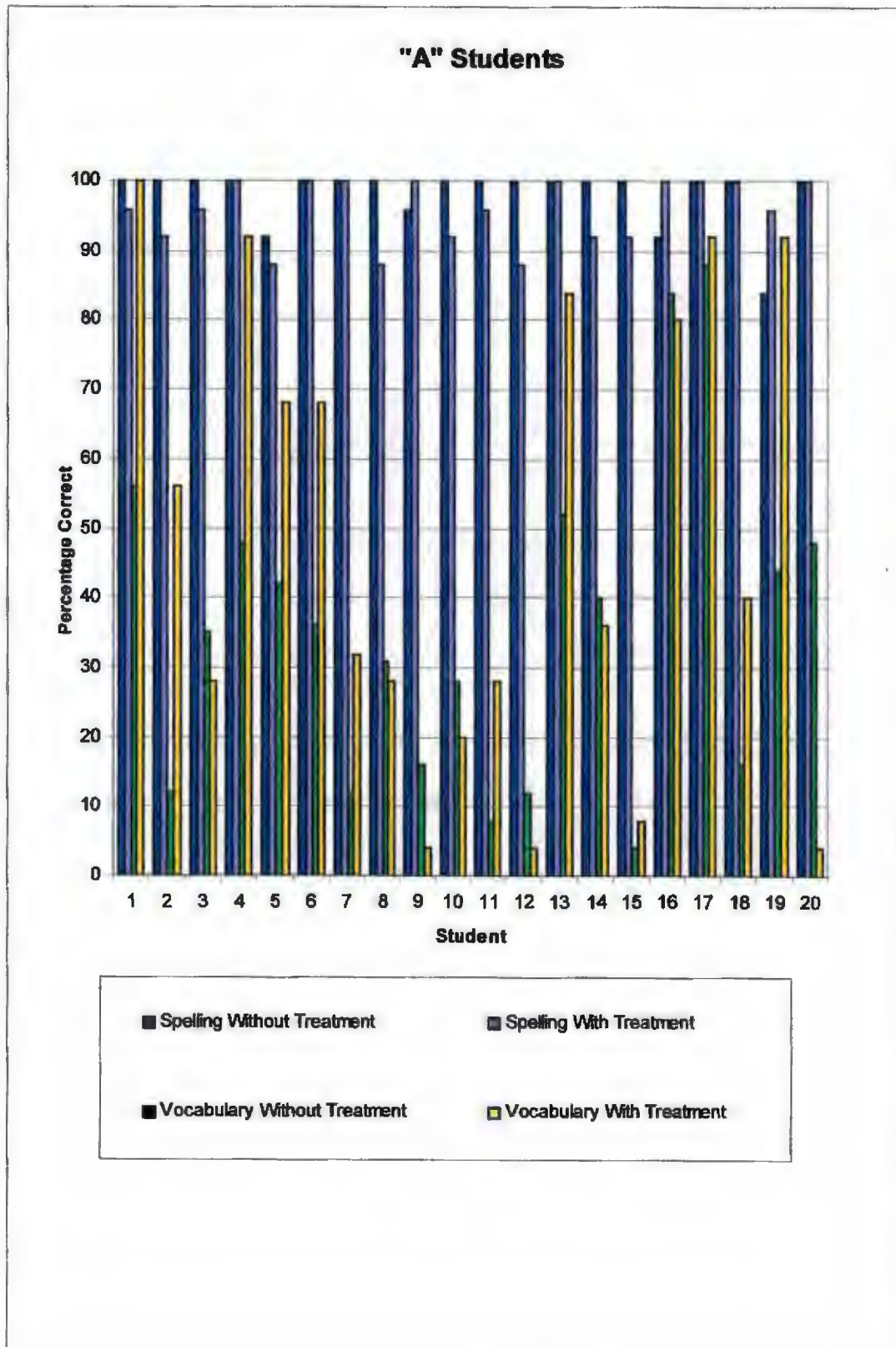inert

infinite

irascible

Appendix D

Data Graphs

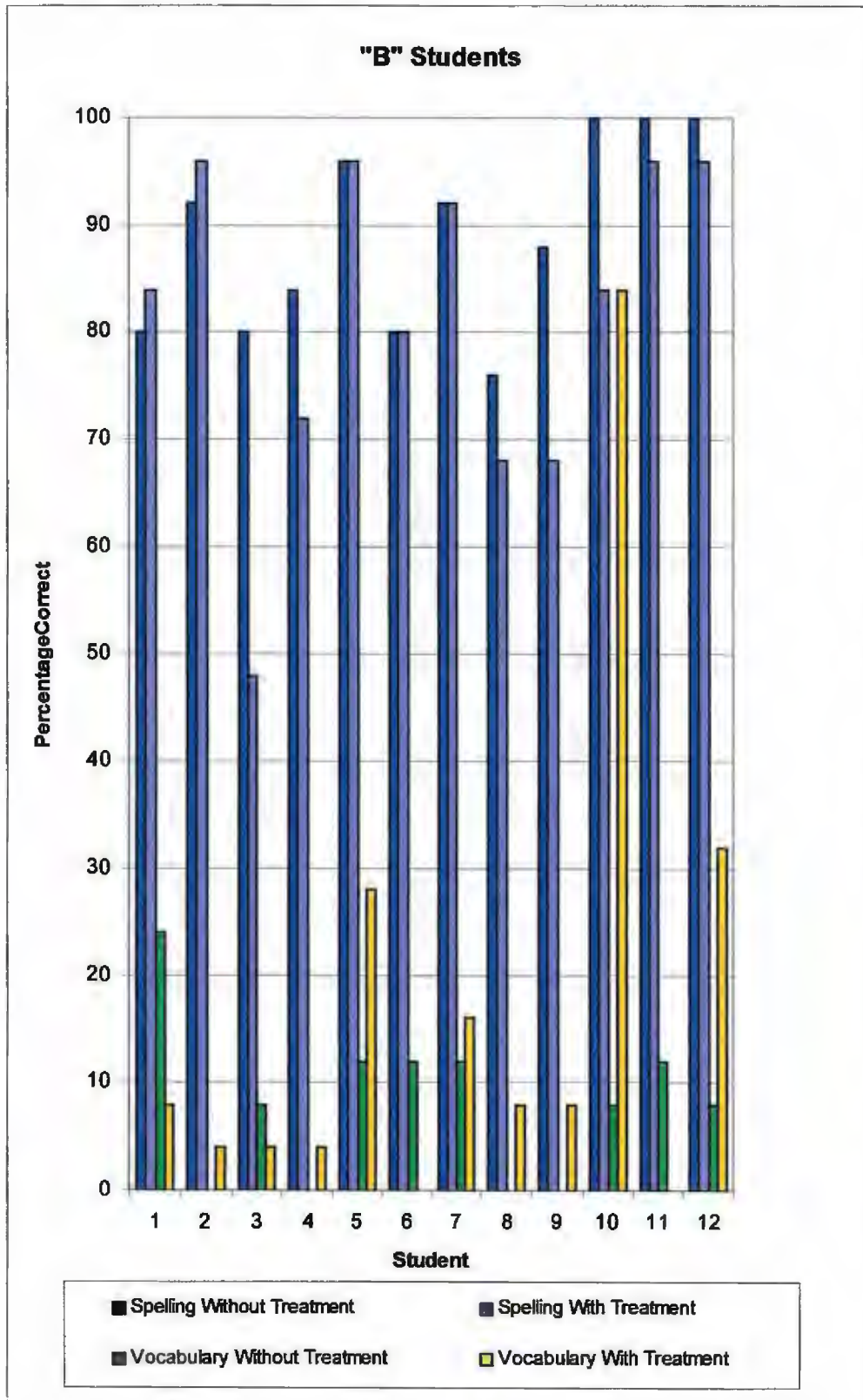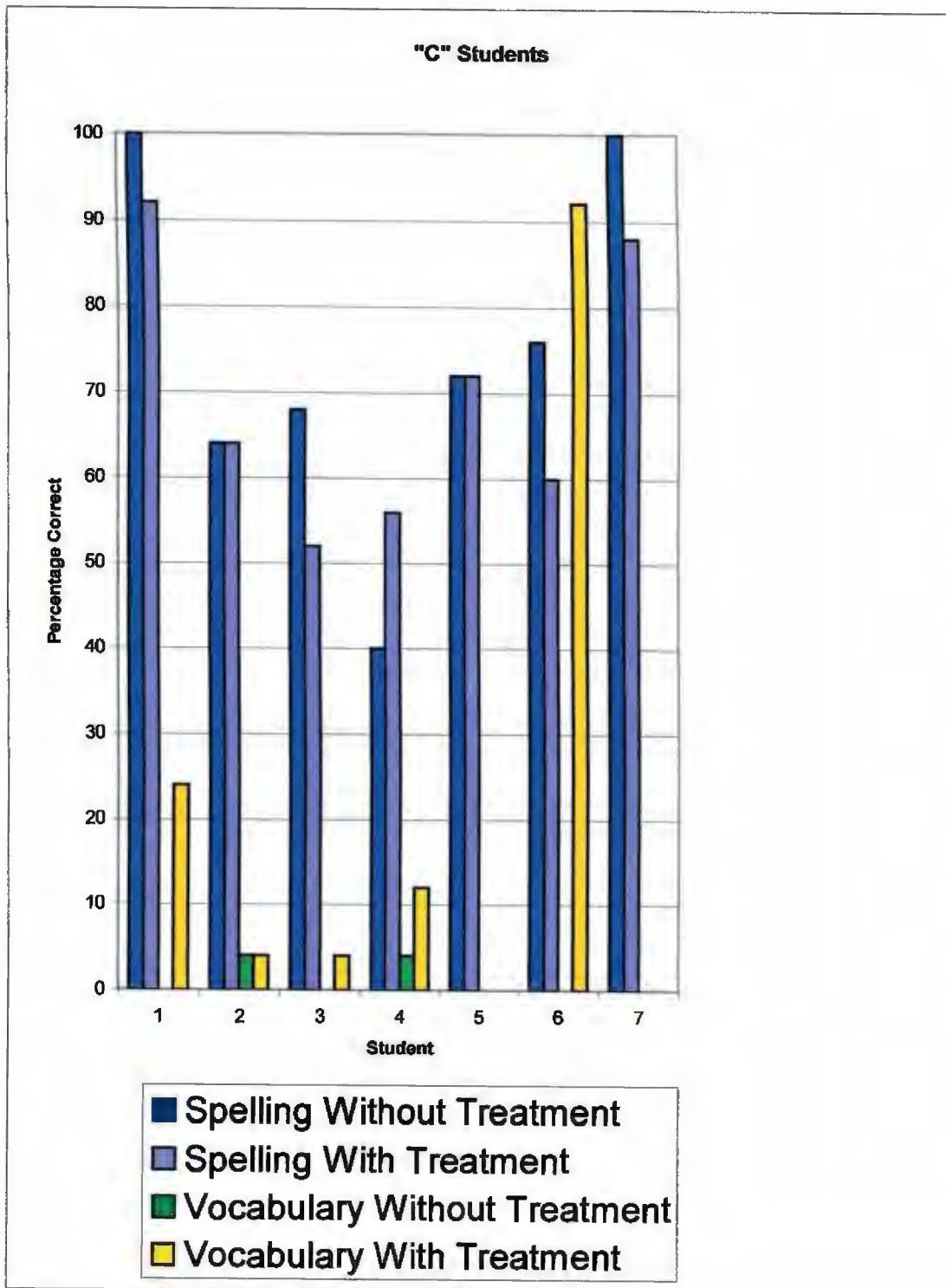Figure 1

"A" Students

Figure 2

Figure 3

"C" Students

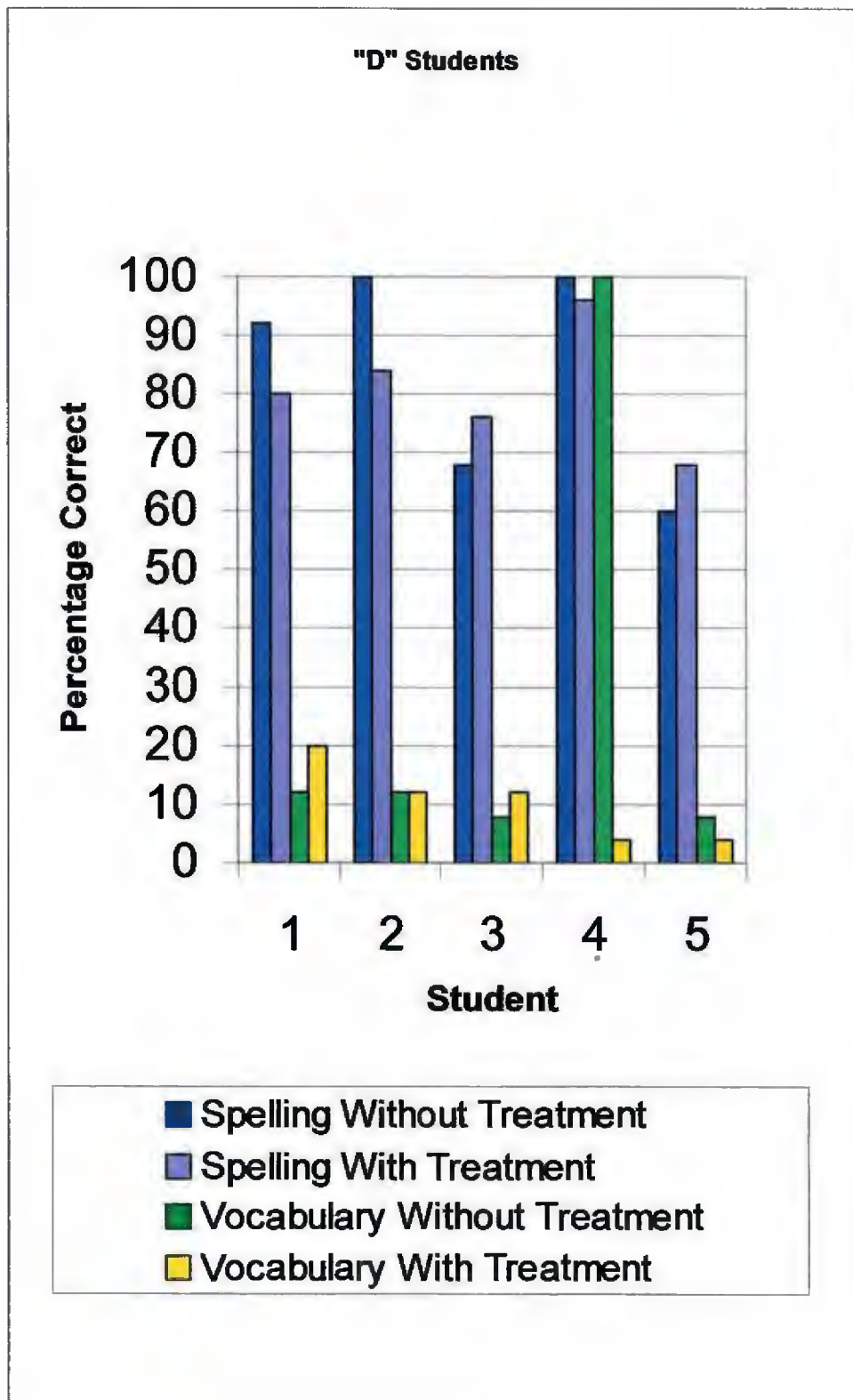Figure 4

"D" Students
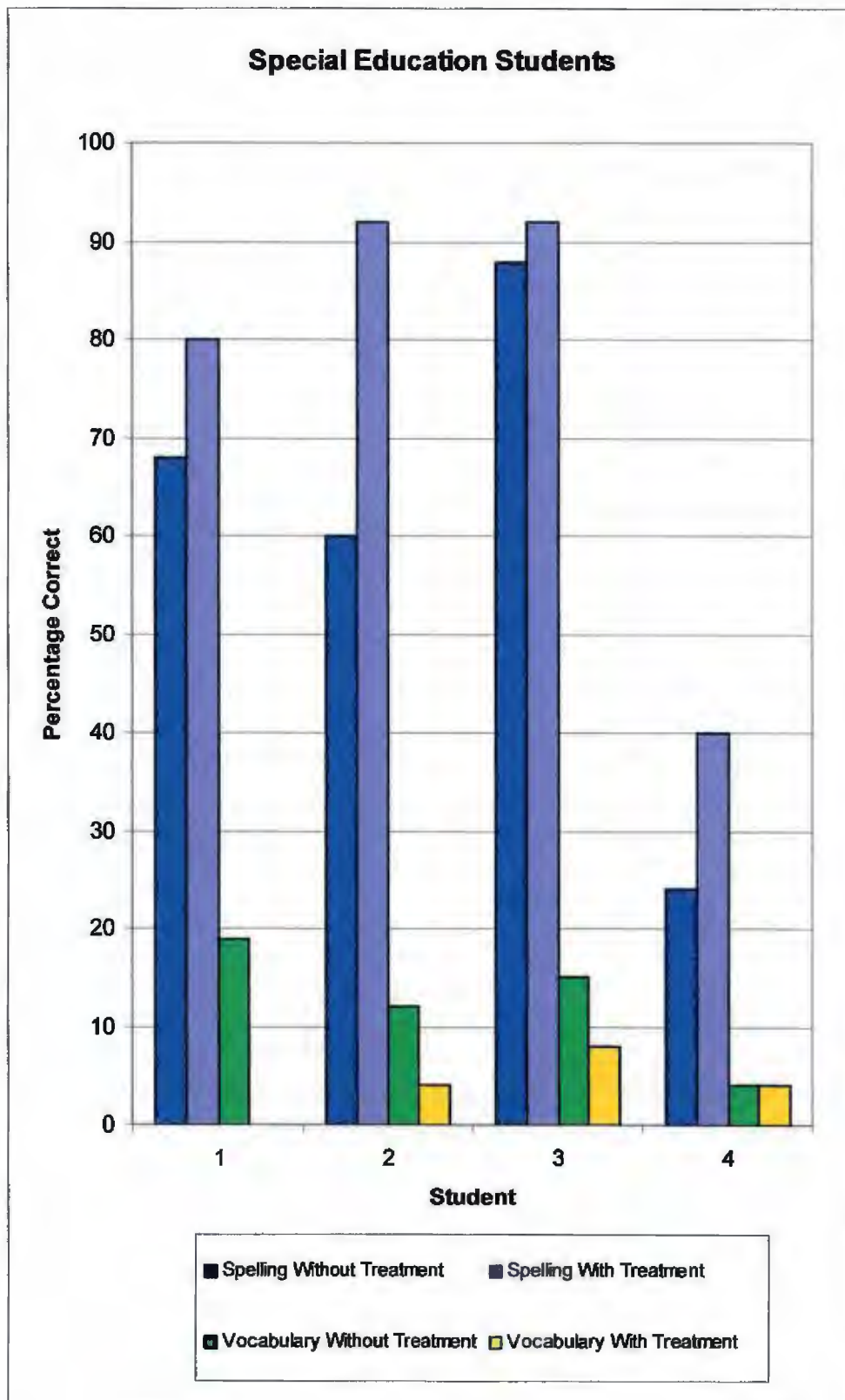
Figure 5

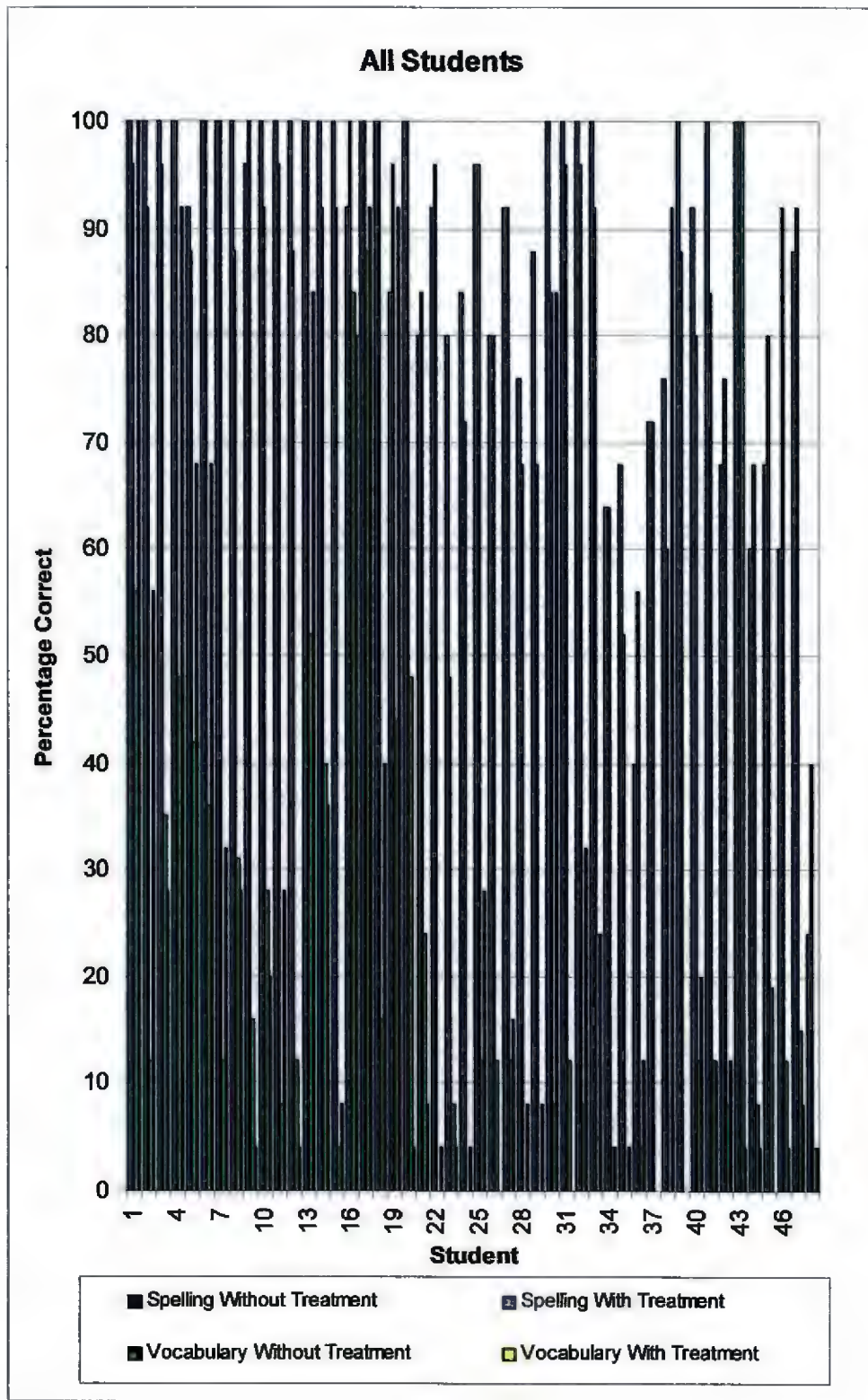**Special Education Students**

Figure 6

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