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Does sentence diagraming help seventh grade language art students understand sentence structure?

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Does sentence diagramming help seventh grade language art students understand sentence structure?

Abstract

Sentence diagramming could be an appropriate strategy used in teaching and reinforcing the concept of sentence structure to seventh grade language arts students. The goal of using appropriate teaching-learning strategies has been important to educators for many years (Levin, 1986). In pursuing this goal, there needs to be "matching" between the strategy selected and the characteristics of the learner at a given developmental stage; the match must be appropriate if the learner is to receive benefit from the teaching technique (Levin, 1986). According to Levin's study, both the specific skills and the competencies of the learner should be the central focus in selecting and developing teaching strategies.

DOES SENTENCE DIAGRAMING
HELP SEVENTH GRADE LANGUAGE ART STUDENTS
UNDERSTAND SENTENCE STRUCTURE?

A Research Paper

Submitted to the Faculty of the Graduate School
of the University of Northern Iowa

By

Bradeen Y. Short

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for the Degree of
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has been approved as meeting the research paper requirement for the Degree of Master of Arts in Education: General Educational Psychology.

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Chapter 1

Introduction

Sentence diagraming could be an appropriate strategy used in teaching and reinforcing the concept of sentence structure to seventh grade language arts students. The goal of using appropriate teaching-learning strategies has been important to educators for many years (Levin, 1986). In pursuing this goal, there needs to be "matching" between the strategy selected and the characteristics of the learner at a given developmental stage; the match must be appropriate if the learner is to receive benefit from the teaching technique (Levin, 1986). According to Levin's study, both the specific skills and the competencies of the learner should be the central focus in selecting and developing teaching strategies.

Both Piaget (1971) and Epstein (1983) have done studies which describe the stages of cognitive development. They explained that predictable stages of cognitive development will occur during specific periods of a child's life (Dworetzky, J. 1984). Since seventh grade students are in the cognitive stage of development which Piaget and Epstein identified as the concrete period, then sentence diagraming could be an appropriate teaching strategy to use in teaching sentence structure to that age student. However, there was a lack of empirical evidence to support that claim.

This study examined the application of using sentence diagraming as a visual aid to enhance the seventh grade language arts students in understanding sentence structure. This strategy gave hands-on

experience of drawing a line structure to show the function of each word in the sentence. It presented a pattern which helped the concrete learner to actually see and to write the function of each word in the sentence.

Statement of Problem

This was a comparative study of the effect of sentence diagramming as a teaching-learning strategy for two classes of seventh grade language arts students in understanding sentence structure. The data were measured by comparing the pretest and the posttest of the SRA Achievement Tests between experimental and control groups whereby the t-test was used to determine the difference between the mean of the two groups. A .05 level of significance was used. Whereby no significance of difference was predicated in the study.

Hypothesis

The comprehension of sentence diagramming in the understanding of sentence structure caused positive student changes to occur between their pretest and posttest on the SRA Language Arts Achievement Tests for the experimental and control groups of two associated seventh grade classes at the .05 level of significance.

Definition of Terms

Cognitive development: It concerns changes with age in relation to the system of what we know, and changes in the way

in which the system interacts with other behavior (Dworetzky, 1984).

Cognitive processes: It is thinking, planning, knowing, relating, classifying, creating, and problem solving (Dworetzky, 1984).

Cognitive theory: It emphasizes the ability to think (Dworetzky, 1984).

Concrete operations: Logical operations are applied to concrete (can see or touch) problems; conservation and reversibility are obtained (Dworetzky, 1984).

Formal operations: Hypothetical problems can be solved, and complex deductions made (Dworetzky, 1984).

Schema: A term used by Piaget which refers to the comprehension that a person may have about different aspects of his/her world (Dworetzky, 1984).

Sentence diagraming: This is a visual form of grammar that arranges the words of a particular sentence on lines according to their relationship within that particular sentence (Segal, 1979).

Seventh grade students: These students are 12 and 13 years old; a few students become 14 during the seventh grade year.

SRA Achievement Test: The language arts portion of the test was given as the pretest and posttest to both the experimental and the control groups for this study.

Methodology

Two seventh grade language arts classes of Humboldt Community

Junior High School, Humboldt, Iowa, were selected to participate as the experimental or control group. Forty-four students were pretested using the SRA Achievement Test. The experiment was conducted for a period of nine weeks. One of the eight parts of speech was taught each week to the experimental group but not to the control group. Forty-four students were then posttested using the SRA Achievement Test. The mean was calculated from the raw scores of the pretest and posttest for both groups; it was used to compare the scores of the two groups. The t-test was used to show the differences between the mean of the two groups. Significance was measured at the .05 level.

Limitations

1. The population of students used in the study was limited to two classes in the junior high school in Humboldt, Iowa.
2. The students were not selected randomly. They were two existing classes with 22 students in each class.
3. Both classes in the experiment were afternoon classes. One met at 12:15 P.M., and the other class met at 1:52 P.M.

Summary

There was limited research concerning the use of sentence diagramming as a teaching-learning strategy. This study was conducted to add to the research base concerning sentence diagramming as an appropriate and an effective teaching-learning strategy for seventh grade language art students. This study was

significant because it supplied evidence which identified possible effectiveness of sentence diagraming in a seventh grade language arts program.

Prior to beginning the classroom project, literature was read to gain understanding of factors which could help in the evaluation of the experiment. Reviewing studies by Piaget, Epstein, Shayer, Toepfer, Renner, and Brozee concerning mental development, brain growth, plateau years, and how this may effect learning was important in considering the results of this project.

Chapter 2

Review of Literature

The literature first reviewed related studies done by researchers Piaget, Epstein, Shayer, Toepfer, Renner, and Brozee concerning the related category of cognitive development. Since this research was concerned that an appropriate teaching-learning strategy be used to enhance seventh grade language art students in learning sentence structure, the subject of grammar in the curriculum was a second category in this chapter. One needed to consider under cognitive development, the basic studies of the stated researchers.

Cognitive Theory

Cognitive theory emphasized the ability to think. Internal conscious thinking as a vehicle for deciding, choosing, planning, and way which thinking develops was the focus of all cognitive theories (Dworetzky, 1984).

Piaget

Piaget's studies (1960) showed that cognitive development was the combined results of the development of the brain, the nervous system, and of experience that helps the individual adapt to his/her environment. He believed that because humans are genetically similar and show many of the same environment experiences, they can be expected to exhibit considerable uniformity in their

cognitive development. He argued that predictable stages of cognitive development will occur during specific periods of a child's life (Dworetzky, 1984).

Piaget's stages of cognitive development were as follows:

1. Sensormotor period (0-2 years)
2. Preoperational period (2-7 years)
3. Period of concrete operations (7-11 years)

Logical operations are applied to concrete problems. Conservation and reversibility are obtained.

4. Period of formal operation (11 plus years)

Hypothetical problems can be solved, complex deductions made, and advanced hypothesis testing become possible (Dworetzky, 1984).

According to Piaget, cognitive development in all children will follow this outline. Intellectually impaired children may develop at a slower rate or fail to reach the higher stages (Dworetzky, 1984). Instructors who are knowledgeable of these stages of cognitive development can appropriately assign material that match the mental development of their students. Students, for example, who are in the concrete stage of development, may need visual aids to comprehend the assignment.

Epstein

Another researcher, Herman Epstein (1981), showed that the brain not only grows in mass in a pattern consistent with age and maturation, but that there are definite periods in which there are

brain growth surges and corresponding periods when there is little or no brain growth. In his research (1981) he pointed out that there were five periods of extra brain intervals growth. They were approximately in the age intervals of 3 to 10 months; 2 to 4 years; 6 to 8 years; 10-12 years; and 14 to 16 years. He stipulated that there was virtually no growth in brain mass and no significant increases in the complexity of the neural network during the intervening periods at ages 4 to 6 years, 8 to 10 years, and 12 to 14 years for 85% to 90% of the population.

The conclusion has been reached that the significance of these brain growth spurts resides in some special function of the brain. Evidence pointed to a positive correlation of brain growth and learning capacity (Epstein, 1981).

Shayer, Toepfer, and Renner

Middle school educators should pay attention to brain growth plateau at ages 12 to 14 years. Shayer and associates (1976, 1978) as reported by Epstein and Toepfer (1978), discovered that the percentages of children working at the higher cognitive levels increase only at the ages of brain growth periods. Toepfer (1980) remarked that 76% of learners age 14 years were still unable to handle material presented at the level of formal reasoning (Hester, J., & Heather, P. 1983). Shayer (1986) and associates have illustrated that even in the top 20% of students, the gifted range, at age 14 years about 30% did not manifest formal operations.

Renner and Shayer

Studies by Renner and Shayer (1986) supported Epstein's (1981) findings. These data showed that regardless of I.Q., this plateau phenomenon between ages 12 and 14 years caused definite limits to youngsters and their ability to learn and initiate new and higher level cognitive or thinking skills (Toepfer, C. 1979). Seventh grade students were in the age range of 12 to 14. They were in the brain stage development that Piaget classified as the concrete stage. Instructors of these students more effectively worked with this age when the instructor understood both the mental growth as explained by Piaget, and the plateau periods as explained by studies by Epstein.

Toepfer, Strahan, and Brozee

Toepfer (1979) reported the effects of "turn-off" in middle school students as a side effect of inappropriately timed instruction (Hensley, 1985). Strahan (1980) and Brozee (1981) found that a vast majority of middle school students were pre-formal thinkers. Many materials used in school required formal thinking strategies. He found that the materials had not been designed or developed with consideration of the cognitive stage of the students (Brozee, 1983).

In addition to understanding the cognitive development of seventh grade students, the research was also concerned that the grammar unit be presented to the understanding of concrete thinkers.

Grammar

Grammar is the "oldest" subject in the school curriculum and also the "newest". In recent years the dissemination of concern over usage as a consequence of racial integration, and especially the "back to basic" movement have produced a new interest in the teaching of grammar (Algeo, 1981).

We have studied grammar because it was principally through language, written and spoken, that we communicated with one another, and grammar has had an indispensable part in helping us do so. Grammar insured that words and phrases, used in certain ways, had common significance for all of us. Without this common understanding, there would not have been a common ground on which to stand (Newman, 1984). Grammar, usage, and mechanics were not ends in themselves, but necessary conventions for the orderly and effective communication of ideas. The study of grammar promoted clear thinking, while the application of usage and mechanics ensured clear expression. While it has been well documented that knowledge of grammar does not necessarily contribute to successful writing, writing is unlikely to be successful if the writer ignores grammar. To this degree, that common pedagogical devices brought together grammar and writing, the students will increase their competence with both syntax and composition (Newman, 1984).

Having decided that grammar was going to be taught, one must decide how to teach it. There were four basic procedures that have been widely used. One was rule memorization or discovery. The

aim was that students should become conscious of the grammatical rules they unconsciously use when they talk or write. Another procedure was error correction. The students were given sentences that contain errors according to rules they have studied. They identified and eliminated the errors by re-writing the sentences. A third procedure was analyzing the structure of sentences and displaying that structure in some manner. The oldest technique was known as parsing. A student goes through a sentence word by word, telling the part of speech of each word (hence parse from Latin pars is 'part of speech'), and explaining its relationship to other words in the sentence. Reed and Kellogg diagraming, once almost universal in English classrooms but now rarely encountered, was the most characteristic way of displaying sentence structure in traditional grammar. It showed the function of each word in the sentence. The diagram showed how the parts of the sentence were related to one another. The fourth procedure was sentence synthesis. The student had to combine sentences (Algeo, 1981).

Diagrams, the third procedure just explained, were visual aids that are often used to give information or to instruct. For example, a picture can help put a bicycle together. Graphs in math or social studies textbooks helped the students understand many facts. In the same way, the lines in a sentence diagram showed the students the parts of the sentence and how they were related (Warriner, 1982).

Summary

According to research done by Piaget, all children go through

four stages of cognitive development. Epstein's studies showed that there were brain growth surges and corresponding periods when there was little or no growth. It was important for educators to know the approximate ages at which brain growth took place and when the plateaus happened. With this knowledge, program planners were able to coordinate the introduction of new, complex information to match with learners' brain growth surge periods (Hensley, 1985).

Researchers Algeo (1981), Newman (1984), and Warriner (1982), showed in their studies that grammar had been taught to promote both clear thinking and clear expression. Algeo (1981) explained that to help seventh grade students comprehend grammar, a teaching-learning strategy such as sentence diagraming can be used. It can give the concrete learner hands-on experience.

Chapter III

Methodology

This chapter explained the method in which this comparative study was done. It identified the population, explained the instrument, design, procedure, and it gave a statistical analysis of the study. The intent of the study was to determine if sentence diagramming helps seventh grade language art students understand sentence structure. The study involved pretesting the students to ascertain their prior understanding of the eight parts of speech before they began studying the grammar unit.

The experimental class was selected by a non-bias procedure. The names of the two classes were written on slips of paper and placed in a container. A colleague drew a slip of paper which determined the experimental class. Sentence diagramming was a teaching/learning strategy used in teaching sentence structure to the experimental class. This strategy was not used in teaching sentence structure to the control class. At the conclusion of the grammar unit, a posttest was given to both experimental and control classes.

Population

Forty-four seventh grade students from the Humboldt Community Junior High School in Humboldt, Iowa, were subjects for the study. Twenty-two students were in the experimental class which met Monday through Friday from 12:15 to 12:58 P.M. There were 7 girls and

15 boys in the experimental class. Twenty-two students were in the control class which also met Monday through Friday, but the time was from 1:52 to 2:35 P.M. There were 11 girls and 11 boys.

The population who became the experimental class were selected by a draw. The names of the two classes which were identified as Class A and Class B were written on two slips of paper and placed in a container. A colleague drew a slip of paper to determine which class would participate as the experimental group in the study. By this method Class A was selected to participate as the experimental class while Class B served as the control class. The researcher discussed the complete plans with the junior high principal and submitted a course outline of the project prior to commencement of the study.

All students in both classes had prior grammar study from elementary grades, however, neither class had experienced sentence diagramming. All students in both classes exhibited a positive attitude as the grammar unit commenced.

Instrument

The SRA Achievement Test Level F, Form 1 developed by Science Research Associates (1986) was used for the pretest and posttest. This test was used to determine the knowledge of sentence structure for both experimental and control classes.

The SRA Achievement Series was designed to provide information about student achievement through a battery of subtests. The language

arts part of the test, appropriate for grades four through nine, consisted of five timed tests. The tests were reading comprehension, vocabulary, spelling, mechanics, and usage, however, for this study the researcher concentrated on three of the five tests. The three tests were reading comprehension, mechanics, and usage. These tests were given in the language arts classroom by the researcher in three class periods on three consecutive days.

A reviewer of SRA Achievement Series, Samuel T. Mayo (1986), reported a reliability in the .90s for the inventory using the Kuder-Richardson formula 20 to measure internal consistency. Only one form of the test was available (Mitchell, 1985).

The following language skills were included in the test, and they were used to evaluate the treatment:

1. Reading comprehension: The students were required to read seven stories for the test. A total of fifty questions were given over the seven stories. The time given for this test was thirty-five minutes.
2. Mechanics: This test consisted of two parts which were capitalization and punctuation. The total time for the two parts was fifteen minutes.
3. Usage: There were four parts to this test. Part 1 and Part 2 required that a word be selected to make the sentence correct. In Part 3 and Part 4 the directions were to choose the sentence that means the same or almost the same as the underlined sentence. There were forty problems in this part of the test with fifteen minutes to do them.

Design

The experimental design was composed of two existing classes, pretest-posttest, and a experimental-control class design. The experiment consisted of teaching sentence diagraming to the experimental class, but not teaching sentence diagraming to the control class. Both classes were pretested and posttested using three tests from the language arts section of the SRA Achievement Series Test.

The class subjects who composed the experimental group were selected by a draw. A colleague made the selection. There were twenty-two students in the experimental group. They came from differentiated socioeconomic levels, however, few were disadvantaged.

The seventh period class served as the control group. They also came from a variety of socioeconomic levels, however, few were disadvantaged. Both the experimental and control classes were pretested and posttested using Level F Form 1 of the language arts sections of the SRA Achievement Test. There was only one form of the test available. There was a possibility that familiarity from the pretest affected performance on the posttest. Memory would probably not have been a strong factor in the posttest as the period between pretest and posttest was nine weeks.

Procedures

First, an approval form to use human subjects for a comparative

study concerning effectiveness of sentence diagraming was submitted to the graduate office of this university. Second, an oral and a written explanation of all the plans for this study were made to the junior high principal in the Humboldt Community Junior High School. Permission was given to use the two afternoon classes for this project. The researcher was the language arts instructor for both the experimental class and the control class. This study did not necessitate the help of other subject-matter instructors. The librarian agreed to let the control class use the media for free reading while the experimental class diagramed sentences.

This study was conducted the second quarter of the school year. It began November 1987 and continued until the middle of January 1988. The instructor/researcher taught the two classes the eight parts of speech. Each week a part of speech was reviewed. The instructor identified the function of each word in the sentence. An example is as follows:

s. v. adj. dir.obj.

I caught a ball.

The instructor taught the experimental class to diagram sentences.

An example is as follows:

s.	v.	dir.obj.
I	caught	ball
		the adj.

The control class did not learn to diagram. While the experimental class diagramed, the control class went to the library to read.

This study was designed to use three and a half days a week for nine weeks. A forty-five minute block of time was provided. The teacher explained each part of speech and demonstrated each part of speech in a diagram form to the experimental class. The students were assigned sentences in which they would identify the function of each word. The experimental class was assigned sentences to diagram. After they worked independently and completed the assignment, the instructor asked for volunteers to diagram the sentences on the chalkboard.

The control class had the same instructions except for the diagraming. This class identified each word in the sentence by labeling the function of each word. This class also used the chalkboard to demonstrate their work. The control class had the opportunity to go to the media and read on the days the experimental class diagramed sentences. During the nine week period, the experimental class diagramed sentences in a thirty minute block of time for fifteen days. The control class went to the media during a twenty minute block of time for fifteen days.

Statistical Analysis

The mean was calculated from the raw scores of the pretests and posttests for students in both groups. The mean scores from the pretest and the posttest were calculated using the pretests and posttests scores. The mean and standard deviation were used to compare the scores of the two groups. The t-test was used to

determine the difference between the mean of the two groups. Significance was measured at the .05 level. If significance existed, it would support the hypothesis.

Summary

Two seventh grade language arts classes in the Humboldt Community Junior High School in Humboldt, Iowa, participated in a research the second quarter of the 1987-88 school year. The research was done to determine if seventh grade language arts students who learn to diagram sentences understand sentence structure better than those seventh grade students who did not study sentence diagraming. Class A was selected by a draw to participate as the treatment class. Class B would serve as the control class. Both groups were pretested using the SRA Achievement Test.

The researcher presented one of the eight parts of speech each week to both classes. The experimental class reviewed, practiced, and demonstrated sentence diagraming during this nine week period. The control class did not learn to diagram sentences. The control class went to the media for free reading during the time the experimental class diagramed sentences. The SRA Achievement Test was also administered as the posttest.

Chapter IV

Data Collection and Findings

This study proposed to determine if seventh grade language art students who learned sentence diagramming would understand sentence structure better than those seventh grade language art students who did not study sentence diagramming. The effect was measured by determining the difference between pretest and posttest scores received on the SRA Achievement Test through using the t-test to determine if the results were significant. A significant level of or beyond the .05 level on the SRA Achievement Test was necessary to accept the hypothesis.

Analysis of Data - Pretest

The raw score mean for the experimental group on the reading comprehension pretest was 40 (Table 1). The standard deviation was 4.0 (Table 1). The control class had a raw score mean of 36.6 and a standard deviation of 6.1 (Table 1).

The raw score mean for the experimental class on the mechanics pretest was 23.3 (Table 1). The standard deviation was 4.2 (Table 1). The control class had a raw score mean of 24 with a standard deviation of 2.9 (Table 1).

The raw score mean for the experimental class on the usage pretest was 30 (Table 1). The standard deviation was 6.7 (Table 1). The control class had a raw score mean of 29.6 with a standard deviation of 4.3 (Table 1).

Analysis of Data - Posttest

The raw score mean for the experimental class on the reading comprehension posttest was 41.5 (Table 1). The standard deviation for this class was 4.5 (Table 1). The control class raw score mean was 41.6 with a standard deviation of 7 (Table 1).

The raw score mean for the experimental class on the mechanics posttest was 24 (Table 1). The standard deviation was 4.1 (Table 1). The control class had a raw score of 25.7 with a standard deviation of 2.7 (Table 1).

The raw score mean for the experimental class on the usage posttest was 31.3 (Table 1). The standard deviation was 5.1 (Table 1). The control class had a raw score mean of 32.0 with a standard deviation of 4.7 (Table 1).

Table 1

Summary Table of the Mean and Standard Deviation of the Raw Scores on the Pretest and Posttest.

Experimental Group	Mean	S. Dev.	Control Group	Mean	S. Dev.
Read - Pretest	40	4.0	Read - Pretest	36.6	6.1
Read - Posttest	41.5	4.5	Read - Posttest	41.6	7
Mech. - Pretest	23.3	4.2	Mech. - Pretest	24	2.9
Mech. - Posttest	24	4.1	Mech. - Posttest	25.7	2.7
Usage - Pretest	30	6.7	Usage - Pretest	29.6	4.3
Usage - Posttest	31.3	5.1	Usage - Posttest	32.0	4.7

Table 2

Summary Table of t-test.

Group	Mean	S. Dev.	No.
Pre-Exper. Read	39.7	329.02	22
Pre-Contr Read	36.7	830.92	22
	t= 1.893		
Post-Exper. Read	41.5	447.5	22
Post-Contro Read	41.6	1076.9	22
	t= .0393		
Pre-Exper. Mech.	23.3	381.6	22
Pre-Contro Mech.	24	183	22
	t= .6331		
Post-Exper. Mech	24	368	22
Post-Contro Mech.	25.7	164.3	22
	t= 1.583		
Pre-Exper. Usage	29.9	992	22
Pre-Contro Usage	29.6	415.1	22
	t= .1719		
Post-Exper. Usage	31.32	564.74	22
Post-Contro Usage	32.04	489	22
	t= -.4767		

*p < .05

Review of Tables 1 and 2

The hypothesis was that comprehension of sentence diagramming in the understanding of sentence structure caused positive changes to occur between the pretest and posttest on the SRA Achievement Test for the experimental and control groups at the .05 level of significance. The results do not support the hypothesis. The mean was calculated from the raw scores of the pretests and the posttests. The mean scores were then calculated from the tests scores. The t-test was used to determine the difference between the mean of the two classes. There is no significant difference between the t-tests of those students who were in the experimental class and those who were in the control class. Sentence diagramming did not show a significant increase in the understanding of sentence structure of the experimental class over the control class in this study.

Validity and Reliability

The SRA Achievement Test Level F, Form 1 developed by Science Research Association (1986) was used for both the pretest and posttest. The language arts part of the test consisted of five timed tests. This battery of tests compared very well with both the California and Metropolitan Achievement Tests.

Samuel T. Mayo (1986), a reviewer of SRA Achievement Series, reported a reliability in the .90s for the inventory using the Kuder-Richardson formula 20 to measure internal consistency (Mitchell, 1985).

Summary

This study examined seventh grade language art students to determine that if they learned sentence diagraming, they would understand sentence structure better than their counterpart who did not study sentence diagraming. Subjects were pretested with the SRA Achievement Test. Half were in the experimental group which had sentence diagraming each week for nine consecutive weeks. The SRA Achievement Test was also used for the posttest. A t-test was used to compare the results (Table 2). After comparing the t-test results of the pretests and posttests for the experimental and control classes, a significance was not found at the .05 level. The hypothesis was not supported. Sentence diagraming had no *significant effect on the understanding of sentence structure for the seventh grade language art students in this study.*

Chapter V

Summary, Conclusions and Recommendations

Summary

The purpose of this study was to determine if sentence diagramming helped seventh grade language art students to understand sentence structure. Forty-four seventh grade language art students were divided into treatment and control classes. Pretesting with the SRA Achievement Test was done prior to the beginning of the grammar unit.

The experimental class consisted of twenty-two students. They learned to diagram sentences. As each part of speech was reviewed, the instructor/researcher demonstrated that part of speech in a diagram. This class learned to diagram showing how each word functioned in the sentence. This study was conducted the second quarter of the school year. The experimental class studied the eight parts of speech and diagrammed sentences three and a half days a week for nine weeks. Forty-five minutes proved to be appropriate for the instructor to explain a part of speech, demonstrate the diagramming, and provide independent study time for the students to identify how each word functioned and to diagram sentences. Those who could not finish were encouraged to finish during their free time before the next lesson.

The control class consisted of twenty-two students. They had the same instructions as the treatment class except they did not

diagram sentences. They labeled each word to show the function. The control class went to the media to free read during the time the treatment class diagramed sentences. They went to the media for twenty minutes a day for fifteen days.

Upon completion of the grammar unit, both classes were posttested with the SRA Achievement Test. The entire study covered a period of nine weeks.

The statistical procedure used for data analysis was the t-test. The t-test was calculated on the changes between the raw score obtained on the pretest and the raw score obtained on the posttest.

Conclusions

1. The results of the t-test indicated that there was no significant effect from using sentence diagraming as a strategy to teach sentence structure to seventh grade language art students. However, more individual students in the experimental class made positive gain over the control class.

2. There were a number of extenuating circumstances that could have led to these results. First to be considered was the test. The SRA Achievement Test that was used for both the pretest and posttest could have made memory a factor in the posttest scores. The students also found the test to be quite simple. Pretest scores did not leave much room for improvement.

3. Being familiar with the test, seem to cause many students

not to take the posttest seriously. Many students did not thoughtfully take the posttest as they did the pretest. Being familiar with the test may have influenced the posttest scores.

4. The researcher selected the SRA Achievement Test because it is designed like the Iowa Basic Skills Tests. The style of test was familiar to the students. The tests were presented through a battery of subtests and were appropriate for grades four through nine which gave a good range for both the low and the high students. The students took all five of the language arts part of the test, but the researcher concentrated on three of the five. The three basic tests were reading comprehension, mechanics, and usage.

Recommendations

Sentence diagramming did not help the treatment class understand sentence structure better than the control class. This teaching strategy did give a visual, hands-on experience to students as they worked with the eight parts of speech. Some seventh grade students were still concrete thinkers so the visual, hands-on experience was beneficial for those learners. Therefore, the instructor will probably continue demonstrating sentence diagramming to reinforce lessons concerning the eight parts of speech.

This study should be replicated with a larger population. The population for this study was limited because two existing classes which had twenty-two students each were used for this study.

The following are primary recommendations for further study:

1. Use a different measuring instrument to determine prior language knowledge for pretest and posttest.
2. Select an achievement test that is more advanced so the students can show more growth when they take the posttest.

Concluding Remarks

The researcher found the study to be worthwhile as it gave a better understanding of the possible effectiveness of sentence diagraming. The researcher will continue to use this strategy in teaching the eight parts of speech in seventh grade language arts; the time spent in using this strategy will be reduced.

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