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IMPROVING READING FLUENCY IN ELEMENTARY SCHOOL STUDENTS
WITH ASSISTED READING TECHNIQUES

by

Leonard E. Barker

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Science in Teaching Degree in the Graduate
Division of Rowan College
1995

Approved by

Advisor

Date Approved

June 29, 1995

ABSTRACT

Leonard E. Barker
Improving Reading Fluency in Elementary School Students
With Assisted Reading Techniques
1995

Dr. R. Robinson
Master of Science in Teaching

The purpose of the study was to test the hypothesis that third grade students who participated in an assisted reading group would exhibit greater reading fluency than students who practiced repeated reading without a fluent oral model. It was also hypothesized that students who participated in an assisted reading group would exhibit fewer reading miscues than students who practiced repeated reading without a fluent oral model.

Twenty-two third grade students were randomly assigned to one of two groups. There were eleven students in the experimental group and eleven students in the control group. The class read a one hundred word passage as a pretest. The pretest was scored in words per minute and number of miscues. The experimental group then participated in treatment sessions which incorporated various forms of assisted repeated reading. The class then read an equivalent one hundred word passage as a posttest. The posttest was scored the same as the pretest and the results compared.

The t Test for Independent Samples was used to determine

the significance of the findings. The results proved to be significant at the level of $p = .10$.

ABSTRACT

Leonard E. Barker
Improving Reading Fluency in Elementary School Students
With Assisted Reading Techniques
1995

Dr. R. Robinson
Master of Science in Teaching

The problem which was investigated in this study was how to improve reading fluency in elementary school students. Assisted reading techniques were used to improve fluency.

The result of the study showed the treatment to be significant at a p level of .10 using the t Test for Independent Samples.

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Chapter 1

Scope of the Study

Introduction

Individuals will cease investing effort in a problem if they doubt their ability to solve it--if they have no expectation of success. Much of the time the only way a child can tell if he is progressing adequately toward a goal is by checking to see how other children his age are doing. If he is advancing at the same rate as they, he feels confident and continues to work. If he perceives that he is far behind, he is apt to conclude that he is incompetent and ceases investing effort. (Chomsky p. 292).

Cessation of effort is often present in the non-fluent reader.

Improving reading skills has been a goal of education since its foundation. With improved fluency comes improved general reading achievement (Allington, 1983; Rasinski, 1985).

Homan, Klesius, and Hite (1993) suggest that the difference between fluent and beginning readers is that the fluent reader is able to decode automatically. For this type of automatic decoding to take place, the reader must maintain a rate of at least 85 words per minute (Samuels, 1979).

Statement of the Problem

The problem to be investigated in this study is how reading fluency can be improved in elementary school students.

Statement of the Hypothesis

The literature strongly suggested that when coupled with a fluent oral model, repeated reading techniques would serve to enhance reading fluency. Therefore, it was hypothesized that third grade students who participated in an assisted reading group would exhibit greater reading fluency than students who practiced repeated reading without a fluent oral model.

It was also hypothesized that third grade students who participated in an assisted reading group would exhibit fewer reading miscues than students who practiced repeated reading without a fluent oral model.

Definition of Terms

For the purpose of this study the following terms and definitions were used:

Assisted reading defined as a method of reading in which the troubled reader is given help in the form of corrections, or is given a model to mimic.

Automatic decoding defined as the ability to read fast enough that the decoding of the material that was read is done without any extra effort from the reader.

Decoding defined as the interaction with the text that prompts an understanding of its content.

Errors defined as the mispronunciation of words in the text.

Fluency defined as a words read per minute score.

Insertions defined as the reading of words that are not found in the text

Substitutions defined as the replacing of words in the text with others that are not in the text.

Unassisted reading defined as a method of reading in which the reader is not given any type of assistance with his reading difficulties.

Word omissions will be defined as skipping, or the leaving out of words that are within the given passage.

Limitations

Ideally, the subjects of the study, as well as the location

in which it took place, would have been chosen randomly. However, the study was conducted in a classroom to which the researcher was assigned for a period of five months. Therefore, the subjects of the study were not chosen at random. Other students in the school had no chance of being selected for the study.

The study was also limited because it took place in one school in southern New Jersey. Schools in other areas of the state and country had no chance of being selected for use in the study.

The limitations of the study make it difficult to generalize the results to the greater population of the area, and to other populations in the rest of the country.

Chapter 2
Review of Related Literature
Introduction

The past 35 years have seen a great deal of research done in the field of improving reading skills. There have been several different techniques suggested to increasing reading skills in the poor reader. It was hypothesized that by using a combination of the researched techniques reading fluency could be improved in elementary school students.

Troubled Readers

Those who exhibit speech pauses while reading orally can be classified as troubled readers. In her research, Patricia Herman concluded that fluent readers will read in syntactic units which may be a phrase, clause, or an entire sentence (1985). The fluent reader will use punctuation to determine phrasing where the troubled reader will not.

It was concluded by Clay and Imlach (1971) that fluent oral readers read in syntactic units, while the word-by-word

reader "had rates that would destroy contextual clues and leave the child reading a string of words." This finding was supported by a study conducted in 1975 by Kowal, O'Connell, O'Brein, & Bryant. Kowal et al. found that "increased speech rate which accompanied proficiency consisted of larger syntactic units and fewer pausal intrusions into larger units of meaning."

Sight Vocabulary

In order to increase reading rate and reading fluency, the reader must increase their sight vocabulary so that time is not wasted on deciphering the word. Perfetti and Hogaboam (1975) concluded that rapid word recognition is correlated with good comprehension. However, O'Shea raises the point that reading is not just recognizing words, but it grouping them into larger, more meaning units.

It has been recommended by Stauffer, Abrams, and Pikulski that repetition can be used to build a readers' sight vocabulary (1978). The study suggests using word cards to arrange the words of a story and show them to the reader several times to increase exposure to the word list. Having followed the technique suggested by Stauffer et al., LaDonna K. Wicklund discovered that such activities work because vocabulary practice is in context with time on task, repetition, and motivation (1989).

Neurological Impress Method

The original Neurological Impress Method (N.I.M.) study

was conducted in 1961 by R.G. Heckelman. In his study the average student's reading level was raised 1.9 grade levels (1969).

The method resembles a type of unison reading. During a N.I.M. method session, the student and the teacher read aloud, together, at a rapid rate. The student is placed just in front of the teacher, and they each use a hand to hold the text being read. The voice of the teacher is projected into the student's ear as the pair reads in unison (Heckelman, 1969).

Heckelman continues his description of the method by saying the teacher should use his free hand to point to the text, making sure the finger is under each word as it is read. The most important thing the teacher must remember is that he sets the pace and does not stop or slow down to accommodate the student. The student must be forced to read faster.

The N.I.M. method is easy to implement and cost efficient (Heckelman, 1966).

There are two main sub-categories under the topic of Repeated Reading. The assisted variety, which has the reading of the passage modeled live or by audio-tape, and the unassisted in which no modeling takes place (Dowhower, 1987). The most widely known work in assisted repeated reading was conducted by Chomsky in 1976. Samuels (1979) is one of the founders and best known researchers in the unassisted field.

Unassisted Repeated Reading

Repeated reading. Samuels (1979) describes the method as rereading a short (50 to 200 words), meaningful passage several times until a satisfactory level of fluency is reached. This set level of fluency was 85 words per minute. The procedure is then repeated with another passage.

As the readers progressed from one passage to the next, it was found that the number of repetitions needed to achieve fluency decreased over a period of time (Chomsky, 1976; Samuels, 1979). The results showed that the repeated reading of one passage carried over to the reading of new passages (Homan et al. 1993). Studies (Anderson, 1981; Dowhower, 1987; Homan et al. 1993; Rasinski, 1989; Roshotte & Torgesen, 1985) have also shown that there is a positive relation between increasing speed over passages and the number of common words in the passages.

Research (Dowhower, 1987; Herman, 1985; Homan et al. 1993; O'Shea, Sindelar & O'Shea, 1985; Rasinski, 1990; Roshotte & Torgesen, 1985; Samuels, 1979) has also shown that the unassisted repeated reading technique is effective in increasing fluency and comprehension in all types of students.

Assisted Repeated Reading

The methods of assisted repeated reading give the student frequent opportunities to see and hear fluent reading. Rasinski (1990) feels that the teacher should be the primary model.

Tape-recorded assistance. Both Chomsky (1976) and Carbo (1978) did research using a taped recording of text to increase

fluency and word recognition. The taped recording of the text being read served as a model for the student to follow.

Mathes, Simmons, and Davis (1992) explain the technique as having the student follow a taped recording of small segments of text until the material can be read independently. This method is also referred to as audio-taped assistance, listening-while-reading, and the read along method.

Schreiber (1980) suggested that having a fluent oral model in the assisted repeated reading methods may prove more effective in promoting fluency than repeated reading alone. However, in his study, Rasinski (1990) found that ". . . neither treatment [unassisted or assisted] was superior to the other in improving students' reading fluency." (p. 149).

Group-assisted reading. Eldredge (1990) describes group assisted reading as having the teacher guide a group of students in reading text in unison. During the reading, correct phrasing, intonation, and pitch are stressed.

Dyad-reading groups. The dyad reading group is based on Heckelman's the N.I.M. method. The N.I.M. method was modified so it could be used in a classroom setting instead of a clinical situation. The role of the lead reader, which was originally taken by the teacher, is now taken over by another student in the class, a buddy reader. This method seemed to be equally as effective as the N.I.M. method, and it frees up the teacher in the process (Eldredge & Quinn, 1988).

Oral previewing. Mathes et al. (1992) says oral previewing incorporates repeated exposure to the same text. The reader

is presented with a fluent model of how the text should be read before being asked to read the text independently. The student listens to the text several times and only moves on to independent reading when they feel they are ready. The oral previewing method has been shown to work best with dysfluent readers (those who read less than 45 words per minute) (Dowhower, 1987).

Echo reading. Anderson (1981) explains echo reading as having the teacher read a passage first, and then student echoes what they have just heard. The teacher also uses his finger to follow the text as in the N.I.M. method. Again, the teacher is the main fluent model.

Summary

In summary, the literature strongly suggests that by using assisted repeated reading techniques, a poor reader can increase their fluency. Assisted repeated reading techniques include: tape-recorded assistance, group-assisted reading, dyad-reading groups, oral previewing, and echo reading.

Chapter 3

Procedure and Design of the Study

Introduction

The study was designed to test the hypothesis that by providing students with repeated exposure to material and a fluent oral model to emulate, that they would increase their reading fluency. It was also hypothesized that the students would make fewer errors in their reading if they were part of the group which was given a fluent reader as a model.

Population and Sample

The study was located in a suburban community of approximately 20,500 residents in southern New Jersey. The district in which the study was conducted consisted of four elementary schools and one middle school. The elementary school in which the study was conducted consisted of 432 students in grades kindergarten through fifth.

The subjects of the study were from an intact third grade classroom. The third grade consisted of eighty-eight students.

There were twenty-two students in the experimental class, fourteen females and eight males. At the time of the study all of the subjects were between the ages of eight and nine.

The students were randomly assigned to either the Treatment one Group, or the Treatment two Control Group. There were eleven students in each group.

Research Design and Procedure

In design the study was pretest-posttest quasi-experimental.

Each student was asked to read a one hundred word paragraph from Johns for their pretest and a different one hundred word paragraph from Johns for their posttest. Treatment group one was given Form A for their pretest and Form B for their posttest. Treatment group two, the control group, was given Form B for their pretest and Form A for their posttest. (See appendix)

Both groups read their pretest to the researcher at the beginning of the study. Two weeks later, after the treatment sessions, both groups read their posttest to the researcher. As the students read their pretest and posttest, they were monitored for miscues by the researcher. The readings were taped so no miscues were unnoticed. The researcher listened to the tapes at a later time to ensure proper scoring.

A word per minute score was calculated using the formula described in Johns' (1994) inventory (p. 41). A stopwatch was used to determine how long it took the student to read the

passage. As the researcher listened to the tapes of the readings, a stopwatch was again used to verify correct times. The times were converted to seconds for use in the formula.

Each treatment session lasted twenty minutes. The treatment sessions took place four times a week for two weeks. Both groups were given practice paragraphs between 100 and 150 words in length to read during the course of the study. Treatment group one read the paragraphs with the researcher acting as a fluent oral model. Treatment group two, the control group, read the passages silently.

Both groups were given the same practice paragraphs. Group one participated in a combination of assisted reading techniques including: oral previewing, group assisted reading, and echo reading. Both groups read each passage at least four times before moving on to the next passage.

After two weeks of treatment, the groups were given the posttest which was monitored and critiqued the same as the pretest.

Description of Instrument

The equivalent pretest and posttest passages were taken from Johns' Basic Reading Inventory, a commercially prepared informal reading inventory. (See appendix) The passages were 100 words in length and were on a fourth grade level, one grade level higher than the class.

Johns' inventory has been revised several times. Each

revision took into account new research in the field of reading, and suggestions from professionals who use the inventory for assessment.

Chapter 4
Analysis of Findings
Introduction

The purpose of the study was to determine if reading fluency of elementary students could be increased by using repeated reading techniques. A two week treatment was implemented between a pretest and posttest.

Tabulation of Data

For the purpose of the study it was necessary to determine a word per minute reading rate for each of the students. The students were timed, in seconds, as they read both their pretest and posttest. A one second penalty was added to the total number of seconds for each reading miscue made by the student. Each time was then divided into 6,000 to determine a word per minute score. The 6,000 for each passage was determined by multiplying the number of words per passage (100) by sixty, the number of seconds in a minute.

table 1
Words per Minute Scores

Group 1			Group 2		
pretest	posttest	change	pretest	posttest	change
102.5	108.1	+ 5.6	106.7	103.5	- 3.2
138.3	146.3	+ 8.0	80.0	78.9	- 1.1
108.4	116.4	+ 8.0	100.1	94.8	- 5.3
118.3	126.4	+ 8.1	90.4	91.1	+ 0.7
132.6	139.4	+ 6.8	85.5	85.8	+ 0.3
100.2	108.4	+ 8.2	130.4	127.6	- 2.8
98.7	98.7	0.0	98.7	100.2	+ 1.5
135.0	133.6	- 1.4	102.1	102.2	+ 0.1
63.2	69.8	+ 6.6	99.8	96.0	- 3.8
79.0	88.1	+ 9.1	107.5	104.6	- 2.9
98.7	106.9	+ 8.2	103.7	101.3	- 2.4

AVERAGES					
106.8	112.9	+ 6.1	100.4	98.7	- 1.7

The above table shows the data that was collected during this study. It is important to note that the groups were randomly selected from the population of the class and that there was no matching between the two groups.

The treatment group, group one, had an average gain of 6.1 words per minute while group two, the control group, had an average loss of 1.7 words per minute. Of the eleven subjects in group one, nine showed a gain in their words per minute score while one subject experienced a drop in their reading rate, and one subject showed no gain or loss during the treatment. Of the eleven subjects in group two, four showed a gain in their words per minute score while seven subjects experienced a drop in their reading rate.

The change in reading rate for group one ranged from a gain of 9.1 words per minute to a loss of 1.4 words per minute. The change in reading rate for group two ranged from a gain of 1.5 words per minute to a loss of 5.3 words per minute.

table 2
Number of Miscues

Group 1			Group 2		
pretest	posttest	change	pretest	posttest	change
2	3	+ 1	3	4	+ 1
2	0	- 2	6	5	- 1
4	2	- 2	4	6	+ 2
3	0	- 3	7	7	0
5	3	- 2	4	2	- 2
5	1	- 4	2	2	0
4	2	- 2	4	3	- 1
3	3	0	4	6	+ 2
6	3	- 3	3	4	+ 1
7	2	- 5	3	5	+ 2
5	0	- 5	5	4	- 1

Averages					
4.1	1.7	-2.4	4.0	4.3	+0.3

The above table shows the number of miscues for each student on their pretest and posttest as well as the change in scores. Both groups performed similarly on the pretests. Group one averaged 4.1 miscues while Group two averaged 4.0 miscues.

After the treatment sessions, the posttest miscue scores were calculated. On the posttest, a gain in miscues would lead to a drop in a student's words per minute score. Group one averaged 1.7 miscues, with an average drop of 2.4 miscues while Group two averaged 4.3 miscues with an average gain of

0.3 miscues.

Analysis of Data Related to the Hypothesis

It was hypothesized that students who participated in an assisted reading group would exhibit greater reading fluency than those students who did not. It was also hypothesized that students who participated in an assisted reading group would exhibit fewer reading miscues than those students who did not. The data shows that the assisted reading group, Group one, did improve their reading fluency on an average of 6.1 words per minute. To determine if the gain was statistically significant, a t test was used.

After computing the means for the two groups, the t Test for Independent Samples was used to determine if the findings could be considered significant. The score on the t Test was computed to be 1.82. Given the degrees of freedom present in this study (20), the findings could only be called significant at the .10 level.

Chapter 5

Summary, Conclusions, and Recommendations

Introduction

The study was designed to test the hypothesis that students who participated in assisted reading groups would exhibit greater reading fluency than those who did not. It was also hypothesized at the beginning of the study that students who participated in assisted reading groups would exhibit fewer reading miscues than those students who did not.

Summary of the Problem

The problem that was investigated in this study was how reading fluency could be improved in third grade elementary school students using assisted reading techniques.

Summary of the Hypothesis

It was hypothesized that third grade students who participated in an assisted reading group would exhibit greater

reading fluency than students who practiced repeated reading without a fluent oral model.

It was also hypothesized that third grade students who participated in an assisted reading group would exhibit fewer reading miscues than students who practiced repeated reading without a fluent oral model.

Summary of the Procedure

The students were randomly assigned to either group one, the treatment group, or group two, the control group. Each student was then asked to read a one hundred word paragraph for their pretest.

Both groups read their pretest to the researcher and two weeks later, after the treatment sessions, read their posttest to the researcher. As the students read their pretest and posttest, they were monitored for miscues such as word omissions, substitutions, insertions, and errors by the researcher. The students were also timed as they read.

Group one participated in treatment sessions twenty minutes a day, four days a week, for a total of two week. Both groups were given practice paragraphs between 100 and 150 words in length to read during the course of he study. The treatment sessions consisted of various repeated reading techniques including: oral previewing, group assisted reading, and echo reading. Group two read the passages silently. Both groups read the practice paragraphs at least four times before

moving on to the next passage.

After two weeks of treatment, the groups were given a posttest which was monitored and critiqued the same as the pretest.

Summary of the Findings

The data collected from the students showed that while the control group averaged a loss of 1.7 words per minute, the treatment group averaged a gain of 6.1 words per minute. The data also showed that the treatment group was able to lessen the amount of reading miscues on their posttest while the control groups' average on their posttests showed an average gain of 0.3 miscues.

The data was used to determine a t score which was calculated to be 1.82. This score proved to be statistically significant at a p level of .10. However, according to Educational Research by L.R. Gay, though the .10 level does show a relationship, it is weak. For a score to be used for prediction, it must be significant at the .50 level.

Conclusions

From the data that was collected during the process of the study, it can be concluded that the treatment did have an effect on the treatment group. Students who participated in assisted reading groups increased their reading fluency

while decreasing the number of miscues made during reading.

Implications and Recommendations

This study is a good starting point for further research in the area of reading fluency. To increase the level of statistical significance the study could be replicated with a larger sample and performed over a longer period of time.

Though the relationship was significant only at a p level of .10, the treatment group did show improvement over the course of this study. The results of this study show the effectiveness of assisted reading techniques. By incorporating assisted reading techniques into a classroom reading program it would be possible to improve the reading fluency of the students involved.

Appendix
Pretest/Posttest Paragraphs

Paragraph A

Fire and Animals

The summer was a dry one, unusual for this area. Trees and bushes in the forest wilted and died. One afternoon a storm came to the forest. Thunder was heard and lightning was seen. Then it began to rain. A spark touched the leaves and a fire began. The fire spread quickly. The animals warned each other as they hurried to escape the flames. As the fire came closer, trees fell to the ground. Their branches were yellow, orange, and red. The smoke was so thick the animals could hardly breathe. Many couldn't escape the danger of the flames.

Paragraph B

The Plant World

The world of plants is an exciting one. There are over three hundred thousand different kinds. Some plants grow bigger and live longer than animals. Plants grow in many sizes and shapes almost everywhere in the world. Some are smaller than the period at the end of this sentence. These plants can only be seen with a microscope. Other plants, like the giant pine, tower high in the sky. Most plants have stems and leaves. Plants can live in a variety of places. Some seem to grow out of rocks. Others live in water, old bread, and even old shoes!

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