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Books-on-Tape and Word Recognition: The Effect of Listening to Books-on-Tape on the Acquisition and Retention of High Frequency Sight Words with at-Risk First Graders

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Abstract

This study investigated the effect that listening to books on tape has on the high frequency sight word recognition of first graders identified as at-risk. The subjects consisted of 12 at-risk urban first graders split into two equal groups of six students each. The treatment lasted for 10 weeks, and each group alternated between listening to books-on-tape and using more traditional methods such as flash cards and word games to learn the words. The high frequency sight words were chosen by the publisher of the reading series currently used in the classroom. The results of the treatment were analyzed at the end of the study using a dependent t test of difference between two means. There was no statistically significant difference between the use of books-on-tape versus the use of traditional methods. There was a statistically significant difference between pre-test scores and post-test scores for both methods, indicating that the use of either method to teach students high frequency sight words is effective.

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CHAPTER I

Statement of the Problem

Purpose

The purpose of this study was to investigate the effectiveness of using books-on-tape to help first graders acquire and retain high frequency sight words.

Need for the Study

Teachers today face classrooms full of students whose abilities fall along a complete spectrum. Testing pressures and time constraints are forcing teachers to focus on the "average" students in their class with little time left over to assist those struggling with material being taught. These students, often those with disabilities, are then put at a greater disadvantage. One way teachers try to meet their needs is by using books on tape.

Despite the popularity of listening centers with books-on-tape, teachers are using mostly anecdotal evidence of their value. Research is scarce in this area. It has been taken for granted that listening centers

are effective, but in what areas? Can they help low-achieving students learn high frequency sight words? This researcher was only able to find two studies to support that they do (McKenna & Reinking, 1987; Reissner, 1997). More recent and specific evidence would help support the notion that listening centers are effective tools to use in the classroom.

It is important for teachers to look for alternative routes to providing students with the wide exposure to reading that they need in order to succeed. Books-on-tape appear to provide a simple and efficient way to offer this exposure when teacher time is limited. This study will test the effectiveness of listening to books-on-tape on the acquisition of high frequency sight words.

Research Question

Will listening to books-on-tape enhance the acquisition of high frequency sight words by at-risk first graders?

CHAPTER II

Review of the Literature

Introduction

While many classroom teachers struggle to determine the best way to teach reading, most teachers and researchers agree that word recognition is central to the success of good readers (Chard & Osborn, 1999; McCormick & Becker, 1996; Nicholson, 1998; Tan & Nicholson, 1997). Word recognition is defined here as a reader's ability to recognize a word without the use of any apparent strategy.

Word recognition is essential to reading stories independently. The ultimate goal of reading, as described by Chard and Osborn (1999), is not to simply "recognize and call out words on the page, but to access the message that the authors attach to words and to construct our own meaning from that message" (p.272). In order to successfully retrieve the author's message, the reader must spend less time figuring out what a word is, than on figuring out what a word means. Teaching word recognition then, is an important precurser to teaching any child to read.

Developmental Stages in Word Recognition

Word recognition is essential to learning to read. How then, can educators know if their students are prepared. "Too often, instruction in word identification is unsuccessful with problem readers because it requires capabilities that students have not yet acquired" (Ehri & McCormick, 1998, p.136).

Often quoted for her research in development, Ehri and McCormick (1998) distinguished five phases of word learning.

> Each phase is characterized by learners' understanding and use of the alphabetic system in their word reading. The five phases are: (1) the pre-alphabetic phase, (2) the partial-alphabetic phase, (3) the full-alphabetic phase, (4) the consolidated-alphabetic phase, and (5) the automatic-alphabetic phase....One phase may overlap with the next phase, and mastery of one phase may or may not be a prerequisite for movement to the next. Each phase highlights a characteristic of word learning that becomes prominent (p.139)

Students in first grade are generally working within the second phase, or the partial-alphabetic phase. Students in the partial-alphabetic phase are able to remember how to read words by sight using partial alphabetic cues. They can use knowledge of some letter sounds combined with context clues to guess the identities of unfamiliar words. It is within this phase that instruction in word recognition could successfully begin. The partial-alphabetic phase has also been called the phonetic-

cue phase by Spear-Swerling and Sternberg (as cited in Compton, 1997) and the visual recognition stage by Mason (as cited in Ehri & McCormick, 1998).

The development of word recognition skills is a crucial component in learning to read. Teachers who are aware of the natural phases of development a student progresses through when learning to read, will be better prepared to meet the needs of individual students. Knowledge of these phases and the ages at which most children reach them should also enable a teacher to determine whether a child is exhibiting atypical development which may signify "a significant obstruction to reading development" (Compton, 1997, p.293).

Rather than identify specific developmental stages, Chard and Osborn (1999) instead describe four pre-requisite conditions to strong word recognition. First, children must recognize that print is used to carry meaning. Second, children must "understand that speech maps out onto print" (p.271). In other words, children must recognize that spoken words can be put into print. Both conditions appear to be met in many children as young as age three through being read to and by observing others reading.

The third prerequisite condition for word recognition is

phonological awareness. This appears to be the most critical condition of the four, and additional research has shown that "children who could not recognize words reliably in the first grade had entered kindergarten with little phonological awareness" (Griffith & Gough as cited in Chard & Osborn, 1999, p.271).

The fourth prerequisite to word recognition is alphabetic understanding. Before children are able to read words proficiently, children must understand that words are made up of letters, and that letter-sound knowledge can be used to read words.

Regardless of how the stages or phases are defined, it is clear that children progress through a series of steps before readiness for reading is apparent (Chard & Osborn, 1999; Compton, 1997; Ehri & McCormick, 1998).

Methods for Word Recognition Instruction

While many researchers agree that word recognition plays an important role in learning to read, the best way to teach it to children is not as easy to agree upon (Asselin, 2001; Joseph, 2000; Juel & Minden-Cupp, 2000; Tan & Nicholson, 1997).

In a study conducted by Juel and Minden-Cupp (2000), reading groups and whole group reading instruction in four first-grade classrooms were observed for 90-minutes each day for one school year. Each classroom was organized into three reading groups according to reading level. All four classrooms varied in the way instruction was presented. One classroom spent 30 minutes each day on a word wall activity before splitting into reading groups, while another classroom extended the Morning Message into the Language Arts period. The other two classrooms spent the entire 90 minutes in reading groups. The classrooms were statistically similar in distribution of students' reading levels. The results of the study enabled the researchers to make five conclusions regarding successful strategies for teaching children to read.

First, "teachers modeled word recognition strategies by (a) chunking words into component units such as syllables, onset/rimes, or finding little words in big ones, as well as modeling and encouraging the sound and blending of individual letters or phonemes in these chunks; and (b) considering known letter-sounds in a word and what makes sense" (Juel & Minden-Cupp, 2000, p.468). Chard and Osborn (1999) agree with this assertion, and added that the teaching of letter combinations are essential to helping students use these strategies

independently.

The second successful strategy used by teacher in the classrooms

studied by Juel and Minden-Cupp (2000) was that "children used hands-

on materials (e.g., pocket charts for active sorting of picture cards by

sound and word cards by orthographic pattern)" (p.468). This is

overwhelmingly the most agreed upon successful method to teach word

recognition (Asselin, 2001; Tan & Nicholson, 1997).

The final three findings by Juel and Minden-Cupp (2000) included

having children finger-point to words as text was read, writing for sounds

in phonics instruction and keeping instructional groups small with word

recognition lesson plans designed to meet the individual needs of the

students. The most successful classroom by far, they found, "was

characterized by phonics first and fast" (Juel & Milden-Cupp, 2000, p.51).

Additional support for a strong foundation in phonics can be found

in a study by Joseph (2000). This study was conducted with three first

grade classes. Joseph examined the effectiveness of two phonic

instructional approaches: word boxes and word sorts. Word boxes

involve "matching sound to print as children articulate sounds in words

while placing magnetic or tile letters and writing words in the boxes"

(p161). Word sorts are used to help children "categorize words according

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to shared phonological, orthographic, and meaning structures" (p.161).

Both methods were found to be successful in helping children with word

recognition.

Following the study, Joseph (2000) emphasized the need for

teachers to use a "variety of phonic approaches systematically to facilitate

children's knowledge about distinguishable but interconnected word study

components" (p.168).

The study by Joseph confirms another widely supported belief, that

children benefit from hands-on and other multisensory instruction

(Asselin, 2001; Chard & Osborn, 1999; Joseph, 2000; Juel & Minden-

Cupp, 2000; Tan & Nicholson, 1997). The two most successful

classrooms for low-reading group students in the study by Juel and

Minden-Cupp (2000) was "very hands on and included writing for sounds"

(p.468).

Using Books-on-Tape in the Classroom

There has been limited research conducted in the area of books-

on-tape and their effectiveness in helping children learn to read. Many

elementary classrooms have a listening station, listening post, or some

other similarly named area where children can listen to recorded stories either alone or with a group. What has not been widely researched, is what children are learning by listening to recorded stories.

It has been said that children learn to read by reading. If students are to be successful readers, then they must be provided with opportunities for wide reading (Vaughn & Milligan, 1986). Additional research backs up this assertion (Newcomer, 1988; Reissner, 1996; Reissner, 1997; Sanacore, 1999). How then, do we get children to read, when they have often experienced only failure when reading independently?

C. Chomsky (1976) is cited in Milligan and Vaughn (1986) stating that "an activity as simple as having children follow along looking at the print in a text while listening to a tape of the material being read produced dramatic improvements in the reading fluency, comprehension ability and attitude of eight-year-old disabled readers" (p. 9). Reissner (1996), found similar results in a study of the use of audio-books with at-risk first graders. She found dramatic improvements in the students' concepts about print and listening comprehension skills.

At-risk children and children with disabilities are at a greater disadvantage during reading instruction than other children. "These

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children have not had the opportunity to predict outcomes, practice answering questions from text and learn basic sight words" (Reissner, 1996, p. 361). As a result, teachers need to increase opportunities for exposure to more literature than is currently available to them in the classroom. In the study conducted by Reissner (1997), "repeated exposure to stories afforded by audio-books was beneficial to many children" (p.304). Reissner (1997) continues, "additional exposure to print enhances their readiness to learn" (p.304).

A study by Olson, Foltz, and Wise (1986) is described in McKenna and Reinking (1987) as supporting the use of books-on-tape with disabled readers between the ages of eight and twelve. They found a significant increase in the students' comprehension and word recognition abilities. Olofsson (as cited in McKenna & Reinking, 1987) also reported success with reading disabled children, but observed that the benefits were greater for children in grades four and higher. Research by Lewin (as cited in McKenna & Reinking, 1997) adds further support to the use of books-on-tape in the classroom. Lewin found that listening to audio-books had positive results in decoding for third through fifth grade children.

Carbo (1996) conducted research on how to implement a listening

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center in the classroom that would be most effective. Following her research, she concluded that several things were important when setting up a listening center. She determined that to be most effective, "the recorded books should be above the student's reading level and close to, or even slightly higher than, the student's language-comprehension level" (p.56). In addition, Carbo found that the books should be recorded in very small segments and at a fairly slow pace. Finally, children should be exposed to the books-on-tape for at least four days per week.

Blum, Koskinen, Tennant, Parker, Straub and Curry (1995) conducted research using books on tape with second language learners. This study "investigated whether home-based repeated reading with an auditory model was a significant supplement to the literacy instructional program of language minority students" (p.553). Over 19 weeks, five first-grade students with limited proficiency in English were instructed to listen to books-on-tape at home that had been introduced previously in a shared reading activity in school. Blum, et al. found that the "support provided by the audiotapes enabled students to fluently read increasingly more difficult texts" (p.553). Improvement was seen in the students' letter identification and word recognition. Substantial increases in fluency were also noted, as were the confidence and motivation of the subjects.

"Repeated reading with an auditory model provided critical support-

scaffolding-which enabled these novices to feel like expert readers"

(p.555).

CHAPTER III

Design of the Study

Purpose

The purpose of this study was to investigate the effectiveness of using books-on-tape to help first graders acquire and retain high frequency sight words.

Methodology

Subjects

The subjects in this study were 12 first graders from an urban elementary school. All 12 students are currently performing below grade level and are part of an inclusive first grade classroom. The twelve students were chosen through review of scores on an Emergent Literacy Survey mandated for use in this school district. This survey measures a student's knowledge of letters and sounds, sight words, rhyming words, beginning sounds, and phonemic segmentation. The twelve students who scored the lowest on this survey were chosen to participate. Four of the 12 students receive formal special education services.

Materials

The materials used in this study include:

* Children's books from the first grade Houghton Mifflin series (one copy for each child)

* Audiotapes of the children's books used in the study

* Tape player with headphones for each child

* BINGO and Memory games with sight words

* Flash cards

Procedure

This study took place over a period of ten weeks. The subjects were split into two equal groups of six students each. The groups were as equal as possible with regard to ability level. This was done by selecting the two children with the highest scores on the Emergent Literacy Survey and placing one in each group. The next two children in order of performance were then placed one in each group. This was done until all 12 children were assigned to a group. After assignments were made,

both Group A and Group B consisted of equal numbers of higher

performing, middle performing, and low performing students. These

groups remained the same for the duration of the study.

Each Monday, the 12 students were individually administered a

pretest for sight recognition of the 5-7 new words for the week. The

words were read in isolation. They were then formally introduced to these

words by the teacher. These words have been chosen by the publishers

of the Houghton Mifflin reading series to coordinate with a set of two

books. One book is chosen by the publishers at a first grade instructional

level, the other is a much shorter book at their independent level. The

latter is called a "watch me read" book. Following introduction of the

words, the teacher read aloud both books, drawing the students' attention

to the new words in the stories.

Three more days in the week were spent learning to recognize the

words. Each group was given 15 minutes to complete the individual

activity. During weeks 1, 3, 5, 7, and 9:

* Group A (identified before the study began) listened to both

books on tape while following along in the books. The publishers

provided the "instructional" book on tape, and the researcher read the

"independent" book into a tape for the students to listen to.

* Group B used traditional means to learn and reinforce the sight words, such as flash cards and word games (BINGO and Memory).

On Friday, students were given a posttest on the words (in isolation). The posttest was intended to be an additional exposure to the words as well as an assessment used by the teacher for weekly lesson planning. During weeks 2, 4, 6, 8, and 10, the groups switched and Group B listened to books on tape and Group A used flash cards and played word games. The groups were switched on alternating weeks in order to balance out the possibility of different levels of difficulty in the word lists.

As shown in Figure 1, the two groups alternated in their treatment each week. The last six weeks continued in the same pattern set in the first four weeks.

Week :	#1	#2	#3	#4
Group A	Audio-books: word list 1	Traditional: word list 2	Audio-books: word list 3	Traditional: word list 4
Group B	Traditional: word list 1	Audio-books: word list 2	Traditional: word list 3	Audio-books: word list 4

Figure 1. Instructional sequence for weeks 1-4.

Following the ten week treatment period, a final post test of sight
word recognition was individually administered to each student. The post
test contained all 66 words that were taught during the ten weeks.

Analysis of the Data

In order to determine whether a significant difference existed
between the two methods, a comparison was made between final post
scores as they were learned by the audio-book or traditional method. The
data were analyzed using a dependent t test of difference between two
means.

CHAPTER IV

Analysis of Data

Purpose

The purpose of this study was to investigate the effectiveness of using books-on-tape to help first graders acquire and retain high frequency sight words.

Analysis of Data

The subjects were given a pretest and a posttest for each week of the study (a total of 20 tests--10 pretests, 10 posttests). In addition, a cumulative test was administered at the end of the study. The raw score from each subject's 10 pretests were added together for the treatment and the control (each word was worth one point, for a total possible score of 33 on each of the treatment and control pretests and posttests).

Three t tests were performed to analyze the data. The first t test evaluated the effectiveness of using a listening center to teach high

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frequency sight words. The mean raw pretest score for the listening

center treatment was 3.1. Therefore, students knew an average of 3.1

words out of a total of 33 words before the treatment began. The mean

raw posttest score following the treatment was 10.0. The data are

presented in the following table.

Table 1

t-test results: pre vs. post test for listening center treatment

	x	s.d.	t
pretest	3.1	4.63	
posttest	10.0	6.78	4.55

critical t = .0014 $p < 0.05$

The data indicate that there is a statistically significant difference

between the pretest and the posttest scores.

The second t-test evaluated the traditional methods of teaching

high frequency sight words. The mean raw pretest score was 3.2 words.

The mean raw posttest score was 11.5. The data are presented in the

following table.

Table 2

t-test results: pre vs. post test for control group (traditional)

	x	s.d.	t
pretest	3.2	3.94	
posttest	11.5	7.41	4.74

critical t = .0011 $p < 0.05$

The data indicate that there is a statistically significant difference between the pretest and posttest scores for the control group.

The final t test compared posttest scores of the listening center treatment with the posttest scores of the traditional methods. The mean raw posttest score of the listening center treatment was 10.0, as compared to the mean raw score of the traditional methods, 11.5. The data are presented in the following table.

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Table 3

t-test results: post listening center treatment vs. post traditional methods

	x	s.d.	t
Listening Ctr.	10.0	6.78	
Traditional	11.5	7.41	.96

critical $\underline{t}$ = .3609   p > 0.05

The data indicate that there is not a statistically significant difference between the posttests of the two treatments.

CHAPTER V

Conclusions and Implications

Purpose

The purpose of this study was to investigate the effectiveness of using books-on-tape to help first graders acquire and retain high frequency sight words.

Conclusions

The results of this study indicate that the teaching and the reinforcement of high frequency sight words in the classroom can be done in a variety of ways. Traditional methods (as defined by methods used widely by teachers in the local area of the study) include flash cards, word BINGO, magnet letters, letter stamps and writing the words. These methods tended to be more hands-on, and students were given a choice as to what they wanted to use on any particular day. The second method, which was tested here, was the use of a listening center as a vehicle for

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learning the words. Both approaches proved to be valuable in teaching sight words to first graders as there was a statistically significant difference between pretests and posttests in both methods. There was not, however, any statistically significant difference between the two methods on the learning of sight words.

According to teacher observation, students seemed to enjoy the traditional methods better. They showed excitement at the choices offered and spent the majority of the time engaged in learning activities. Occasionally, the teacher would have to refocus or redirect the students, but essentially it was very independent. In contrast, students who had been assigned to the listening center for a week, would often appear to grow tired of listening to the story repeatedly and would need to be frequently redirected by the third listening.

Casual observation by the teacher also revealed that certain students appeared to learn words more quickly in one way than in another. Some students were certainly more hands-on learners and learned words quicker using the traditional methods. Others, meanwhile, seemed to learn words quicker when presented multiple times on the audio tape and therefore may be more auditory learners.

Implications for the Classroom

There is not a teacher I know that is not struggling on a daily basis to meet the varying needs of his or her students while feeling strapped for time. This study gives credibility to the use of books-on-tape in the classroom to help reinforce the learning of high frequency sight words. In this study, six students shared a tape player and listened to a story at the same time. This would give the teacher an opportunity to work with another small group of students while feeling confident that this group of students would be learning independently.

Further Research

Further research in this area is needed to determine whether the results of this study could be replicated using a larger group of students with a larger core of words. It would also be interesting to determine whether a student's reading fluency and/or listening comprehension is affected by listening to books-on-tape.

In addition, it would be interesting to study the link between different learning styles, giving choices for learning activities, and

success in school. For example, if students are given a choice of activities, will they choose the one most appropriate to their own learning styles and will these activities help them succeed more than other activities would.

Summary

The use of books-on-tape to help teach and reinforce high frequency sight words allows students to be independent for a small segment of the day while improving their sight word recognition. This method is particularly valuable for auditory learners, but has proven successful with others as well.

Sight word recognition is a skill necessary for success in reading and writing. The more opportunities available to students and teachers, the better off students will be. A listening center is a simple, quick, and inexpensive way to help students learn to read.

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