1994

The Effects of a reading intervention program on comprehension of "at-risk" third graders

Judith Annette Schierling
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of “at-risk” third graders**

Schierling, Judith Annette, M.A.

San Jose State University, 1994

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THE EFFECTS OF A READING INTERVENTION PROGRAM
ON COMPREHENSION OF "AT-RISK" THIRD GRADERS

A Research Paper
Presented to
The Faculty of the School of Education
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

By

Judith Annette Schierling
May, 1994

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ABSTRACT

THE EFFECTS OF A READING INTERVENTION PROGRAM ON COMPREHENSION OF "AT-RISK" THIRD GRADERS

by Judith Annette Schierling

The purpose of this thesis was to analyze the reading of eight third graders enrolled in an extended day reading program to observe any advances in reading comprehension. Pre and posttest reading sessions occurred in which each child read passages from The Classroom Reading Inventory (Silvaroli, 1990). The students retold the stories and answered comprehension questions for each selection. The readers' miscues and responses were analyzed and scored.

The results were mixed, reflecting some initial growth. Students' omissions and insertions of words were more strategic. Four readers tried harder texts. Yet the inconsistent use of self-corrections and the heavy reliance on substituting words revealed the need for more practice to break old habits and develop more effective reading.

ACKNOWLEDGMENTS

I wish to thank my family and friends, those with me and those gone from me, who have encouraged and supported me during these last years. You have truly been "the wind beneath my wings."

solī Deo gloria

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Chapter 1

INTRODUCTION

Introduction

The public school system's goal is quality education for all. However, the goal remains illusive, because a growing number of children are not receiving the assistance they need to succeed in school and their number is growing (Allen, 1991).

. . . the expectation is that they will not succeed, will not become readers and writers, will not graduate from high school or attend college, and certainly are not likely to become truly literate members of our society (Allen, 1991, p. 458).

In recent years, researchers and educators have tried to identify the characteristics which make a child vulnerable to or a victim of school failure, i.e., poor school attendance, low achievement, or traumatic family history. Lists of risk factors have emerged so that schools could meet these needs and students could experience success.

In 1965 the federal program, Title One (now known as Chapter One) was developed to help deal with the challenge of educating children whose needs were not being addressed by the standard school curriculum. This federal program funded teachers and material for special math and reading classes. The children needing extra help were usually pulled from class several times a week to receive the added instruction. Over the years, Chapter One's effectiveness has been mixed, depending

on how it was implemented in the schools (Funkhouser & Moore, 1990; Rowen & Guthrie, 1986; Slavin & Madden, 1989).

Other, more strategic programs, such as Reading Recovery, have emerged in the last decade, focusing on the specific area of literacy. This program, begun by Marie Clay in New Zealand in 1979, has shown dramatic success with students who were struggling with reading (Clay, 1991). Due to its success, Reading Recovery has been adopted in several districts throughout the country or used as a model for literacy intervention programs.

One Santa Clara County district developed it's own reading intervention program. This study will analyze the reading of eight students from the program to observe any advances in reading comprehension.

Background

The district involved in this study wanted to incorporate the new approaches towards successful literacy education for students who were struggling with reading. In the past, the district had Chapter One programs established in some of the elementary schools. Each school decided how to use the money, whether it was in materials, curriculum or added staff. The programs were mostly the traditional pull-out model. The district wanted a more strategic program to meet the needs of struggling readers and writers. In order to try something bold and innovative for struggling readers, the district needed funding. In March, 1991, the community passed a parcel tax which allocated \$3,744,291.00 to the school district over a three

year period. \$1,100,000.00 was projected to be spent on assisting at-risk learners. The district program was divided into upper grade and primary components. The primary (K-3) program focused on reading comprehension and was titled Reading Academy.

The Reading Academy

At its inception, Reading Academy incorporated recent research findings regarding at-risk learners. For example, besides using the extended day, instead of another pull-out program, Reading Academy planned to use credentialed teachers, not aides or inexperienced tutors. The reason for this choice was two-fold: to insure quality instruction for Reading Academy, and to influence the way reading is taught throughout the district. Like Clay's Reading Recovery, the tutoring program will act as a base to spread new techniques to the teaching population. An integral aspect of Reading Academy would be two all day training sessions for the teachers.

At these training sessions, the teachers were introduced to the philosophy and content of Reading Academy lessons. The act of reading was presented as a constructive meaning making activity. All skills were to be in the context of the reading act. Any phonics instruction was to be tactile; no workbooks were allowed. The lessons were to be interactive, involving all modalities (visual, auditory and kinesthetic). The teachers were exposed to learning styles and encouraged to tailor their lessons to the styles of their students; all students were to be involved in writing at some point in each lesson. Reading strategies were to be modelled and explicitly

taught. Teachers were directed to carefully observe the students and teach to their need, using the student's strengths.

Literature, mostly "big books," and various supplies were ordered for every school site. Each book had a lesson plan filled with suggestions for strategies, enrichment and comprehension ideas. The teachers were to decide what to use according to their students interests or needs.

As the planning for Reading Academy progressed, several constraints created differences between this program and others, such as Reading Recovery. Primarily, the funds did not allow for one-to-one tutoring. The community would not have accepted such a restricted number of children using these tax dollars. Also, due to financial crisis, the projected amount for the program was continually decreased. Due to cost, it was decided that five students would be assigned to each class, thus allowing for an intensive program. In fact, Reading Academy classes were an hour long, rather than twenty or thirty minutes. The task force planning the program wanted to focus on kindergarten and first grade, making it an early intervention program like Reading Recovery. The principals, though, wanted to include second and third grade. So a remedial aspect was added to Reading Academy. Another variant from previous programs was the student selection process. Each school site handled it differently. Some targeted children did not receive any assistance while others went on classroom teachers' recommendations only. Since there were no funds for transportation, some schools had difficulty providing opportunities for bussed

children to participate. Originally, the reading program was to have two twelve week sessions its pilot year (1991-1992). A student could be reenrolled after the first session and receive twenty-four weeks of assistance if needed. However, the teacher's association negotiations were difficult and when the agreement was reached, there was only time for one eight week pilot session.

The school involved in this research study had two Reading Academy classes for second and third graders. Each class of five students had a different teacher. One teacher was hired specifically to teach Reading Academy sessions, while the other was a regular classroom teacher who also taught one second/third grade session of Reading Academy. The latter was also the researcher for this study. Though teaching styles were different, both instructors used Reading Academy lesson plans and a multisensory, strategic approach to reading. The educators met throughout the eight week program to confer and plot similar approaches in their classes.

Statement of Problem

The district wanted to assess not only Reading Academy's effectiveness but also the personal growth of students while in the program. By using a variety of evaluative tools, different perspectives of the program could be seen. This dual approach gave a broad view of the program as well as an intimate picture of a reader.

For the broad program evaluation, standardized tests and Marie Clay's Diagnostic Survey were used. However, to see individual readers' growth, the reading miscue analysis was administered to third graders at the beginning and end of

the reading program. Comparative analysis was made to see if individual readers comprehension had increased.

The form of evaluation for this group of readers was the reading miscue analysis. This evaluative tool would be administered at the beginning and end of the reading program to see if any growth occurred in the students' ability to construct meaning from the text.

Statement of Purpose

This research project will analyze the reading of eight third graders enrolled in the extended day reading program to observe any advances in reading comprehension.

Research Questions

1. Do students show growth in their ability to comprehend more difficult text? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
2. Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
3. Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)

4. Do the students' use of omissions reflect better understanding of the text?

(As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

5. Do the students' substitutions show growth in reading comprehension?

(As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Operational Definitions

For this research study, the following terms were defined:

Syntax (syntactic). The grammatical systematic arrangement of words in a sentence-sentence structure.

Semantic. The element of reading which deals with the meaning of a passage --the story's plot or theme.

Phonemic. The analysis of language by sounds.

Assumptions

In assessing Reading Academy's effect on the reading achievement of these third graders, the researcher assumed the following:

1. The children participating in this study would regularly attend their Reading Academy sessions.
2. The children participating in this study would be available on scheduled pre and posttesting days.

3. The individual responses given to reading opportunities would vary, reflecting the children's background experiences, culture and ethnicity.

Limitations

In conducting this evaluation, the researcher was limited by and acknowledged the following:

1. The small number of children who participated in this study.
2. All the children participating in this study were drawn from the same school.
3. Reading Academy attendance was voluntary, an after school activity. High absenteeism would limit reading growth.
4. Silvaroli's comprehension evaluation in The Classroom Reading Inventory 1990, only contains five questions.

Delimitations

In conducting this program assessment, the researcher imposed the following limitations.

1. Miscue analysis of reading was limited to eight children attending two grade classes in Reading Academy. No inference can be made for the overall program.
2. The detailed assessment was focused on eight and nine year olds.

Statement of Significance

Learning to read is crucial for success in school and life (Boyer 1987). A child's self esteem and future are affected if s/he is left to struggle in remedial programs (Madden 1991, Boyer 1987).

The present evaluation sheds light on one group of readers in a reading intervention program. By observing the reading of eight students at the onset and conclusion of this eight week pilot session, the researcher can evaluate whether students' reading began to grow.

Chapter 2

REVIEW OF RELATED LITERATURE

Overview

This study will analyze the reading comprehension growth of third graders while enrolled in a reading intervention program. The literature review will first focus on reading comprehension. The interactive nature of reading comprehension will be discussed and the different elements of meaning will be explained: meaning within the text, meaning within the reader, and meaning within the reading situation itself. Second, the literature review will analyze reading miscues in relationship to comprehension. Miscues will be defined and the importance of proper interpretation will be discussed. The third section of literature review will provide background information on the reading programs which influenced the Reading Academy, namely, Chapter One and Reading Recovery. Historical perspective is given to the district's decision to develop a new, more holistic reading program and a more qualitative evaluation of reading.

Reading Comprehension

Views of reading comprehension have evolved through the years. These views changed from being seen as a collection of skills acquired sequentially (Pearson, 1990) to an existential act of building meaning or making a text personal (Pearson, 1990; Pierce, 1988). As Pearson states:

We no longer think of reading comprehension as a series of discrete skills that can be summed to achieve comprehension ability. Instead, we see comprehension as a complex process involving interactions between readers and texts in various contexts for various purposes (p. 3).

Some researchers describe reading comprehension as a constructive process in which the reader builds meaning by using past experience and knowledge to understand new print (Pearson, 1990; Pierce, 1988). Block, 1986, describes this process as a struggle:

The thoughts that wander or rush through the minds of readers, the searches and struggles for meaning, the reflections and associations, are hidden from the outside observer. Yet this struggle and search for control are the core of reading comprehension (p. 463).

Reading comprehension, then, is not a neat, static entity. It is a process in which various elements provide pieces of meaning the reader uses to create his/her own version of the text. These elements are the meaning found in the text, the meaning provided by the reader's personal background or knowledge, and the meaning found in the actual situation--the reason for reading (Morgan, 1983). These meanings are "all influencing the construction of meaning in response to print by individual readers" (Morgan, 1983, p. 306).

Meaning in the text deals with the actual printed word since it is the basis for the process. Spiro (1980) calls it "the skeleton, a blueprint for the creation of meaning" (p. 245). The text develops meaning with the syntax, the story structure and the use of transitions and anaphora. The text may also explain or give examples that clarify (Morgan, 1983). Since text helps to explain itself, it has more meaning

when seen as a whole, rather than dissected sentence by sentence or word by word (Morgan, 1983). Readers show more confidence in understanding a passage when allowed to read an entire passage, rather than a piece of it (Block, 1986).

However, Malik (1990) states the crucial relationship between the text's meaning and the meaning brought by the individual reader.

. . . reading comprehension is more than understanding at word and sentence level. It is relating and integrating new information with the background knowledge and effectively utilizing predicting, confirming/correcting, and integrating strategies to construct meaning and text (p. 219).

The comprehension of a reader will be affected by what information and strategies the reader already knows (Malik, 1990). What does a reader need to comprehend a text? Morgan lists three factors which aid a reader's comprehension:

1. Prior knowledge of the subject.
2. Knowledge of the language, cultural conventions and expectations of the text.
3. Personal interest in the subject (p. 311).

Pierce lists the following key elements present for understanding:

1. Prior knowledge of the subject.
2. Motivation to read.
3. Language facility (similarity to author's language).
4. Familiarity with how to read different kinds of print materials (Pierce, 1988, p. 117).

The reader's prior knowledge of a topic, or his/her schemata, is crucial for reading comprehension. While reading, a person relates the new information to what is already known to create meaning, or make sense of the text. If the text assumes knowledge that is not within the reader, it will be more difficult to understand (Malik, 1990).

Reading, then, is a personal interaction with text. The reader organizes the new facts by connecting them to what is already known. As reading continues, the reader reorganizes, changes the meaning as the text guides the process. The reader, therefore, builds meaning in an intimate way.

Gradually, iteration by iteration, readers construct their own meaning. That meaning probably resembles the meaning the author had in mind in setting pen to paper. But no reader will develop the same model as the author, nor will any two readers ever develop exactly the same model. Each of us prints a unique stamp on every act of reading we create (Pearson, 1990, p. 4).

"Knowledge of language" (Morgan, 1983, p. 311) and "familiarity with how to read different kinds of print materials" (Pierce, 1988, p. 117) both refer to a reader's comprehension strategies when approaching print. According to Block (1986), reading strategies show:

1. How a reader sees a reading task.
2. What cues the reader uses.
3. How a reader makes sense of what s/he reads.
4. What action the reader takes when s/he does not understand (p. 465).

Certain strategies are used repeatedly by able readers. Strong readers immediately look for connections to integrate new information to personal background knowledge (Pearson, 1990; Pierce, 1988; Weisenbach, 1987). Able readers monitor their reading and reorganize or alter previously incorrect understanding as they read (Block, 1986; Pearson, 1990; Pierce, 1988). These readers look for clues and predict what will happen in the text while they read (Block, 1986; Pearson, 1990; Pierce, 1988; Weisenbach, 1987). Able readers also look for the main idea and can distinguish it from details (Block, 1986; Pearson, 1990). Lastly, independent readers match comprehension strategies to suit different writing styles or text structures (Block, 1986; Pierce, 1988; Weisenbach, 1987).

Block (1986) titled the strong readers "integrators" (p. 482) and found the differing factor between the "integrator" and "nonintegrator" (p. 487) to be their overall understanding of how to use strategies (Block, 1986). All readers had developed comprehension strategies, ". . .but only the Integrators were able to plan and control their learning. While the others did possess strategic resources which could be strengthened, they applied these learning strategies sporadically and unsystematically" (p. 487).

The reader brings to the text a certain background, interest and ability to use reading comprehension strategies. It is the interaction between the reader and the text that builds meaning, or reading comprehension.

However, another key element in reading comprehension is the setting for the reading itself, the actual reading situation. "Readers do not read in a vacuum. They read in a particular setting and within a larger cultural context. Both situation and culture exert powerful constraints on reading" (Morgan, 1983, p.312).

The reading situation determines the reader's attitude toward the reading task. It affects whether the reader will become involved in the meaning making or remain passive and outside the learning experience (Morgan, 1983). For example, if the reading event were a standardized test, would the reader be anxious and unable to think or alert and ready to use strategies wisely? If the reading events occur only in the classroom and only at the teacher's direction, the reader may decide reading is for school and not the real world. For this reason, Pierce warns that reading events should be integrated into all facets of life, in a variety of forms, and for various purposes. By doing so, a person continues to enrich his/her background and reading comprehension grows stronger (Pierce, 1988).

Reading must be seen by a child as being more than decoding, reading out loud, or answering questions after reading a selection. Children must have an opportunity to read for pleasure, see teachers and others reading, talk about and share what they have read, and achieve some success in reading (Pierce, 1988, p. 120).

The act of reading and understanding what is read is a process and involves several key elements: the actual written text, the background and knowledge of the reader, and the reading situation itself. To authentically evaluate reading comprehension, then, the actual process of reading must be observed.

Miscue and Reading Comprehension

For many years reading comprehension meant exact adherence to the written script, any deviation was an error. However, in 1970, Goodman and Burke rephrased the concept of good reading with a broader definition:

The effective reader is not the one who necessarily produces errorless or near errorless performances, but the one who is able to gain the greatest amount of information from the written material with minimal use of the three available language cuing systems (Goodman & Burke, 1972, p. 15).

This definition is derived from a whole picture of the reading process:

1. All readers bring an oral language system to the reading process, a personal dialect.
2. All readers bring the totality of past experiences to the reading process.
3. Reading materials represent the language patterns and past experiences of the author.
4. Reading is an active language process which involves constant interaction between the reader and the text (Goodman & Burke, 1972).

This constructivist view of reading takes a new look at errors. They are seen now, not as mistakes, but as a reader's effort to reconstruct meaning from the words in the text using the language cuing systems available (semantic, grammatic and phonemic). Instead of being labeled "mistakes," variations from the printed word are called miscues. They reveal the readers interaction with the text, the construction of meaning.

Deviations in oral reading are called miscues to suggest that they are not random errors but, in fact, are cued by the thought and language of the reader in his encounter with the written material (Goodman & Burke, 1972, p. 5).

Miscues, and how they are viewed, affect the task of comprehension. If a reader is only focused on getting the words correct, "the next word syndrome" (Goodman, 1981), the construction of meaning is halted. It is interesting to note that in one study, low readers were very aware of "mistakes" and felt good readers did not make any errors. They never mentioned meaning-making in relation to good reading (Borko & Eisenhart, 1986). Unless a reader approaches text as a search for meaning, willing to risk predictions and interact with the print, the exercise will be pointless. Reading is a meaningful, but not errorless activity in which the reader constructs a new, more personal text.

Title One/Chapter One

The school district involved in this study, like other districts nationally received federal funding, titled Chapter One, to assist students who are failing. Title One (now known as Chapter One) began in 1965 as the Elementary and Secondary Education Act, part of Lyndon Johnson's War on Poverty. Its aims were to equalize education, improve instruction and teacher training, and increase parent involvement in the child's education (LeTendre, 1991). In the last twenty-five years, different approaches have been attempted with mixed results. New programs have emerged, however, and research now shows more clearly what has, or has not been effective

when teaching at-risk students (Archambault, 1989; Rowan & Guthrie, 1986; Madden & Slavin, 1983).

By far, the most popular structure used in the past was the pull-out program (Glass & Smith, 1977). A Chapter 1/Title 1 teacher would pull struggling readers from their classrooms at scheduled times each week to give small group instruction in key areas. Then the children would return to the classroom. Another modification of pull-outs was to have the Chapter One teachers come to the classroom for a session with a student. Studies have shown, however, that when the small group time is compared to the instruction lost in the classroom, the Chapter One student only received ten to fifteen minutes more actual teaching time (Funkhouser & Moore, 1990; Rowen & Guthrie, 1986). The results from pull-outs were mixed. Students might be able to maintain (in primary math mostly), but never caught up with other students and continued to need assistance (Slavin & Madden, 1989).

When evaluating past Chapter One programs, certain weaknesses have emerged.

1. They can be poorly organized and can block or fragment student learning.
2. The teachers have not always been high quality or well trained.
3. Students have spent a great deal of time with paperwork and sitting at their desks.
4. Many programs have had low expectations for their students.

5. Programs have shown some success with the marginal students, but have been least effective with learning disabled students.
6. The students remain in Chapter One throughout their school career (Anderson & Pellicer, 1990).

In some cases, methods and approaches were grasped for like magic elixirs promising to teach all and cure all, such as Singerland or Phonetic Keys and summarily abandoned when they did not immediately cure everything. This directionless flailing about affected teacher morale. "Each time an innovation is superficially implemented and then quickly phased out in favor of the next 'hot' item, personnel become a little more cynical" (Pinnell, et al., 1988, p. 65). What grew from many Chapter One programs was a comfort with student failure, as long as it could be adequately monitored and verified with copious paperwork. LeTendre (1991) stated that,

In the past, I would have to say that too many Chapter One programs have followed the letter rather than the spirit of the law. Too many programs have been designed to facilitate monitoring rather than maximize student learning. The point is not to provide services that are easiest to document, but to offer services that are best for students (p. 580).

Similarly, Anderson and Pellicer (1990) have said that, "Rather than truly compensating or remediating these students, we have contented ourselves with merely slowing the rate at which they fall further and further behind" (p. 15).

From this analysis has grown some new viewpoints and techniques to improve education for at-risk learners. One major change in new Chapter One approaches is in the educator's perspective. Instead of seeing the glass as half empty, the approach

is to perceive it as half full. In other words, a student's strengths, not just weaknesses, are becoming an important element in his/her education. Educators are stressing the need to build on each child's abilities, rather than create more risk by harping on weaknesses (Wood, 1988).

Disabilities that appear to us to be major handicaps are reduced to inconveniences by their courage. Their will to survive and grow shows me that we should emphasize what they have accomplished and will accomplish rather than simply being preoccupied with the details of their vulnerability (Wood, 1988, p. 5).

Integral in this attitude change is a shift of emphasis from merely being serviced to being successful--not just access but success as well (Anderson & Pellicer, 1990, p. 15).

The way to use a child's strengths and improve his weaknesses is not to work on one or the other but to design the tasks so that he practices the weakness with the aid of his strong ability (Clay, 1991, p. 13).

Another change in Chapter One programs is the growing awareness that merely dealing with school curriculum is insufficient to meet student needs. Other factors need to be addressed such as: attendance, health and parent contact (Funkhouser & Moore, 1990; Helge, 1988). Preventative changes which assist "at-risk" learners would be on a large scale. Students need early childhood nutrition, a new school schedule adjusted to the modern family (rather than farming communities of one hundred years ago), understanding and affirming all forms of intelligence, an emphasis on language learning rather than grades in the initial years of schooling (K-

3), and smaller class sizes (Boyer, 1987; Madden, Slavin, Karweil, Dolen, & Wasik, 1991).

Besides a change in viewpoints or perspectives, research has shown some light on successful characteristics or techniques in strong Chapter One programs.

1. The staff should be well trained, committed and empowered to make decisions about the program (Funkhouser, et al., 1990; LeTendre, 1988; Stringfield, Shelley, & Davis, 1991).
2. Programs should be bold and innovative based on research, rather than tradition, habit or convenience (LeTendre, 1988; Stringfield et al., 1991).
3. Higher level thinking, not just basic skills, should be part of the program emphasizing meaning and balancing skills with complex tasks (Anderson et al., 1990; Knapp, Turnbull & Shields, 1990; Peterson, 1989).
4. Programs should be intensive, hopefully, one to one and should occur every day (Clay, 1991; LeTendre, 1988; Slavin & Madden, 1989; Stringfield, et al., 1991).
5. Most importantly, assistance and enrichment should begin early to prevent failure--early intervention rather than remediation (Clay, 1991; Madden et al., 1991; Slavin & Madden, 1989). This intervention, according to Pinnell, "takes place before the emotional impact and confusion of failure occurs" (Pinnell, et al., 1988, p. 2).

. . . the time to provide additional help to children who are at risk of school failure is early on, when they are still motivated and confident and when any learning deficits are relatively small and remediable (Madden, et al., 1991, p. 594).

Within Chapter One programs, the classrooms, the environment surrounding the learner, should be carefully constructed to assist students. Teachers should create a friendly but structured environment built on fairness and good management (Wood, 1988). The goals should be clear. Instruction should be interactive, challenging, maximizing student learning time (Anderson & Pellicer, 1990; Stringfield, et al., 1991). For example, teachers should be engaged with students, not grading paperwork while students are producing more papers to grade.

Recent research by Carbo and Hodges (1988), when writing about learning styles and "at risk" students, suggests some effective strategies to enhance student learning as well. These researchers found that at-risk learners do best with soft light and informal but structured work areas. Some needed headsets to block noise or to listen to relaxing music. Several learners needed to move and eat while they were learning. They preferred tactile experiences over visual and auditory ones. Carbo and Hodges felt dittos/workbooks should be replaced by active learning (acting plays or manipulatives). In this study, the students seemed not to be self-learners; working by themselves was not recommended. Instead, they learned better with peers or with an adult. Many at-risk students in this study were global, rather than analytical. They needed to see the entire picture and how something related to the whole, before

understanding the material. Because of this global view Carbo and Hodges suggest skills, facts, and story comprehension needed to grow from a meaningful context, from the known to the new.

In order to be most effective with struggling students, strategies must be used which incorporate the learners' styles. Teachers should structure lessons and activities that provide options beyond the traditional lecture or workbook approach.

Effective New Programs

In recent years, several research-based programs have been developed for struggling students (Slavin & Madden, 1989). Some are just reorganizing the schedule while others require great commitment of time, personnel and money (Madden, et al., 1991). Each approach has incorporated some of the characteristics mentioned for strong Chapter One programs and has experienced some success.

One of the simplest changes in Chapter One education has been to extend the school's day. There are several types of extended days currently being used:

1. extended day for kindergarten
2. before and after school tutoring
3. home instruction with a tutor or computer
4. hosting Saturday schools for at-risk students
5. structuring homework to be a parent reinforcement of the day's learning
6. hosting summer school for struggling students (Funkhouser & Moore, 1990).

However, simply extending the day does not insure success. Research shows the extended time must be "engaged time" in order to be effective (Hossler, et al., 1988). The teaching needs to be prescriptive, challenging, appropriate, engaging students and parents in the process (Funkhouser & Moore, 1990).

Obstacles naturally arise when reorganizing schedules in a public school. Issues of staffing, transportation, scheduling and space need to be faced. In addition, evaluating an extended day program is a delicate affair. How much time should be spent on evaluating instead of teaching? How much staff time and knowledge is required for evaluation? And, of course, the most prominent question--Who will pay for this program? (Funkhouser & Moore, 1990). Despite these concerns, many schools have enacted some variety of extended days and found them to be a positive influence on their at-risk learners (Funkhouser & Moore, 1990).

Summary

The history of Chapter One shows the need to stress effective programs beyond merely providing services. Some of the improvements, such as extending the day and before/after school tutoring, were elements incorporated into the structure of the Santa Clara County district's Reading Academy to create a more effective Chapter One program.

Reading Recovery

Educators in a Santa Clara County district were interested in the changes occurring in Chapter One programs throughout the country. Besides the various new

approaches, an alternative to remedial reading programs, Reading Recovery, had attracted their attention. "Reading Recovery was designed to be used by an education system to reduce reading difficulties in the schools" (Jongsma & Clay, 1990, p. 272).

Marie M. Clay began Reading Recovery in New Zealand in 1979. It became a national program and in 1984, it was begun in Australia and the United States. A Reading Recovery pilot began in Columbus, Ohio the spring of 1984 and was enacted in eighteen Columbus sites in 1985. By 1986, one hundred sixty-seven districts were involved. This amount grew in 1987 to two hundred twenty-eight districts. In 1988, several other U. S. cities began Reading Recovery Programs in their districts (Pinnell, et al., 1988).

Reading Recovery is built on a distinct philosophy regarding the act of reading (Pinnell, et al., 1988, p. 14):

1. Reading is a strategic process that takes place inside a reader's mind.
2. Reading and writing are interconnected and reciprocal processes.
3. To accelerate reading, children must read.
4. Literacy development helps a child figure out what reading really is (starts globally).
5. It's most educationally productive to intervene early. Not all children "mature" and need help. If need is seen, teachers should respond.
6. Accelerated progress is possible--don't force fast pace, just have child/teacher work together with the right support. "Acceleration is

achieved as the child takes over the learning process and works independently, discovering new things and pushing the boundaries of his/her knowledge" (Pinnell, et al., 1988, p. 14).

From the outset, Reading Recovery is seen as a program with many interrelating parts, "a complex set of interlocking systems all necessary to implement the program" (Pinnell, et al., 1988, p. 65).

Clay stresses a program based on individual interaction between a student and a carefully trained teacher, not a prewritten manual with accompanying materials. Rather than buying materials, the emphasis is on expanding the teacher's knowledge to assist the learner. The program revolves around a teacher's decisions concerning one student's needs and how to maximize that child's learning (Jongsma & Clay, 1990).

With its view of reading and the interactive character of the program, Clay feels Reading Recovery has many unique features that set it apart from other programs.

Unique factors of Reading Recovery:

1. It is short term help aimed at accelerated progress--students are only in the program until they learn the self-guided system and have caught up to their peers.
2. It builds on strengths and is action oriented--students learn specific strategies to apply their own knowledge.

3. It has reading/writing connections in every lesson which include sound-letter relationships working from word to letter, not letter to word.
4. It is individualized instruction.
5. It involves reading for meaning (Pinnell, et al., 1988).

The Reading Recovery teaching process begins with the selection of the students who need tutoring. The lowest twenty percent of first graders are chosen in the middle of, (or late), September. The selection is based on the information given by the kindergarten and first grade teachers as well as a Diagnostic Survey designed by Marie Clay. Some districts have used standardized tests (Pinnell, et al., 1988), while others have included as a requirement, a commitment by the student to attend school regularly (Leitner, 1990).

The Diagnostic Survey contains a broad range of activities to observe a child's understanding of written language.

1. The child reads as the teacher does a running record, noting the child's strategies and miscues.
2. The child is asked to identify all lower and upper case letters, give a sound they can make and offer a word that starts with the letter.
3. The child demonstrates his/her knowledge of the concepts of print. What's a word? Where do we start to read? Where is the front of the book?, etc.
4. The child reads a list of common words they have been exposed to.

5. The child's writing is analyzed taking into account letter formation or words the child may already know.
6. The child writes as many words as possible in ten minutes.
7. The child writes a story the teacher dictates (Clay, 1991).

After the selection and survey are compiled, the half hour daily classes begin. During the first two weeks of Reading Recovery, the child is involved in "Roaming the Known" being involved with reading in a relaxed fashion while the instructor observes and finds a readable, appropriate text for the student. Next, based on the selection information, the Diagnostic Survey and personal observation, the teacher begins new instruction. The teacher encourages the student to develop a self-improving system and strategies. At the same time, lessons are structured to help clear up the reader's confusions. For example, a lesson could cover hearing sounds in words, direction, sequence (cut up stories), writing stories, phrasing, or word analysis, (Clay, 1991). Slowly the difficulty of the text increases as the teacher notes what the student can do, what she/he needs to do and develops a plan.

Discontinuing students depends on the judgement of the teacher and the student's needs. Clay has found most students have "recovered" by sixty lessons; however, some readers need fewer lessons while others need more. Releasing readers from the program relies on the student's growth and abilities. The Reading Recovery teacher evaluates the child's growth during tutorial time, talks to the classroom teacher, checks recorded observations and running records, looks for self-monitoring

and cross checking on the student's part which show independence. Clay offers questions that help decide whether a child is ready to leave the program. "Is the student reading increasingly difficult material with ninety percent accuracy? Where was the student weak before? Will those scores be higher? How well will the student survive in the classroom?" (Clay, 1991).

The discontinuing process begins with the last two weeks of Reading Recovery being in the classroom. The Diagnostic Survey is done again to check for growth. The Reading Recovery teacher also monitors the child's return to the classroom. It is interesting to note that the classroom teachers do not always agree with the Reading Academy teacher regarding "recovery." Some teachers felt the students' classroom reading behaviors were not as strong as Reading Recovery asserted (Pinnell, et al., 1988).

Establishing Reading Recovery in a district requires "interlocking systems" (Clay, 1991, p. 65). Clay was not just referring to the language cuing systems. Reading Recovery requires commitment from the large educational systems within the city and state in order to succeed. Once begun, the process intends to keep reproducing itself by continual teacher education across districts.

Year 1: Two teachers are sent to teacher-leader training for one year.

Year 2: Upon return, 12 teachers start training (College course or in-services) while simultaneously beginning a Reading Recovery program.

Year 3: Other sites are added. In some cases, a professor is hired to train more teacher-leaders who then train more teachers, act as program directors and as community liaison personnel (Clay, 1991; Jongsma & Clay, 1990).

Clay describes the teacher training as actually "retraining," giving them "new points to ponder and new approaches to maximize learning" (Jongsma & Clay, 1990).

Besides teacher training, the public school systems must struggle with funding. Ohio received grants from the private sector and used University resources as well as pulling funds from the school budget. Since 1985, however, funds for training and materials have come from the Ohio State Assembly (Pinnell et al., 1988). Some districts like Portland, Oregon, have had tough decisions. The district canceled Chapter One services to others besides using funds from the general fund, the Basic Skills and the Superintendent's discretionary fund in order to service Reading Recovery students (Leither, 1990). The reasoning behind this dramatic financing is the belief that as students recover their reading, costs in remedial and special education services will drop significantly to eventually produce long term savings. One Ohio district, after one and a half years of Reading Recovery, felt it had saved thousands of dollars because ninety-five percent of the Reading Recovery students would have been retained and only ten percent actually were. They saw this as cost effective. Most observers feel, though, a longer investigation is needed regarding

cost effectiveness. The savings are hard to "prove" since they are, in part, based on speculation (Pinnell et al., 1988).

Reading Recovery results have been extremely positive. In New Zealand in 1978, not only did the discontinued Reading Recovery students make higher gains than the control group, but the students still in Reading Recovery were very close in scores to the control group (Clay, 1991). In Ohio, a longitudinal study was begun in 1984. Two groups of students were chosen from the bottom twenty percent of first grade. One group received the traditional Chapter One pull-out education and the other group was put into Reading Recovery. These two groups were compared to each other and a score band gathered from a random sampling of average students their age. The Reading Recovery students have performed better than the Chapter One students from first grade on through the present without any further assistance. Their scores have been within the average band for their grade level (Pinnell et al., 1988). In Portland, this scenario was repeated with Reading Recovery students scoring higher than the mean and within the average band for their grade level (Leitner, 1990).

However, some researchers are concerned with the 1989 results of the Ohio State University longitudinal study as seen in Figure 1 on page 32. Reading Recovery children were now in fourth grade, three years after receiving assistance. Their scores barely reached the average band for their grade level. In the longitudinal study, the change was attributed to an unusually high reading level of this small

Figure 1. Columbus Follow-Up Studies: Sustained Effects

random sample (Pinnell et al., 1988). Others wonder if the results of Reading Recovery are wearing off since the residual effect of Reading Recovery (effect size) on its former students dropped from $+ .72$ in first grade to $+ .14$ in fourth. The distance between the Reading Recovery students and the Chapter One control group was narrowing. The concern is whether the students, once again, would need assistance (Wasik & Slavin, 1990).

In evaluating the Reading Recovery program, Gay Pinnell states that the approach has its limitations. There continues to be a debate over what competency entails. Some teachers feel Reading Recovery students are discontinued too soon. Pinnell also notes that children in the classroom are affected by a classroom teacher's low expectations and do not always work up to potential. The transience of the at-risk population has made coordinating and completing the program difficult (Pinnell et al., 1988). In the longitudinal study, the mobility factor is again cited, as is erratic attendance at school. Those who did not make accelerated progress in Reading Recovery also had high absentee rates (Ohio State University, 1989).

Reading Recovery makes great strides with struggling students. It cannot, nor did it aim to, deal with all the factors which place a child at risk. Society's systemic problems limit the program's effectiveness. To compensate for these problems, there needs to be another facet to Reading Recovery developing a support system for the families involved in the program.

In summary, Reading Recovery's use of whole language strategies, active learning, building on strengths, flexibility, and responsiveness were all elements the Santa Clara County district wanted in their Reading Academy. The Marie Clay approach to evaluation was also adapted and teacher training was stressed. By incorporating these elements into the Reading Academy, the Santa Clara district developed a more effective reading intervention program.

Chapter Summary

Major Findings

The view of reading comprehension has expanded from being an accumulation of skills to a constructive act which entails a reader's previous knowledge and understanding (Smith, 1965; Pearson, 1990; Pierce, 1988). The reader draws meaning from the printed text and organizes it by using past experience and knowledge of the reading situation itself (Morgan, 1983).

In this process the reader also uses the cuing systems (semantic, grammatic and phonemic). Deviations from text do not necessarily deflect comprehension. In fact, they reveal the construction of meaning within the reader (Goodman & Burke, 1972). However, a reader must see the act of reading as a meaning making activity, rather than saying each word perfectly. It is this communication between the meaning of the text and the reader's meaning that creates comprehension.

When researching effective reading intervention programs, certain characteristics emerge: Strategic teaching by well trained staff, a tutorial setting,

engaged and active learning that is meaning based and accelerated. Besides these features with the effective Chapter One programs, Reading Recovery also incorporates sharing reading assessment that is more holistic, observing the actual reading act, or the creation of reading comprehension.

Implications of Findings

Since research has shown a constructive, interactive quality in reading comprehension, this study will approach assessment from the interactive perspective. Comprehension will be observed as not only a product, such as an accurate retelling, but also as a process, observing the reader's use of language systems and strategies while reading.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

Since reading is a complex cognitive process, requiring many elements such as background knowledge and phonemic awareness, careful assessment is necessary.

This research project will analyze the reading of eight third graders enrolled in the Reading Academy to observe any advances in reading comprehension.

Research Questions

1. Do students show growth in their ability to comprehend more difficult text? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
2. Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
3. Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)
4. Do the students' omissions reflect better understanding of the text? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

5. Do the students' substitutions show growth in reading comprehension?

(As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Sample

The eight third grade children in this study were enrolled in the two second/third grade classes formed at one of the elementary schools in the district. Criteria for selection included the child's need for reading assistance, rather than a sample for the study. The student's need was determined through teacher recommendation and whether the child already received reading assistance. Priority was given to those who had received no special assistance in reading at the time. However, two readers in the sample were an exception; they had tutoring, but their teachers felt the students needed further assistance.

Interestingly, the sample reflected a diversity of its own. Ethnically, it contained three Hispanic, two Black, two Caucasian, and one Asian student. There were three 8 year olds and five 9 year olds. The group consisted of five girls and three boys.

Two children learned English as a second language (ESL). ESL students' English ability is assessed by levels ranging from one to five through the Language Assessment Scale (Avila & Duncan, 1990). Limited English Proficient (LEP) is the designation for levels one through three. Levels four and five are considered Fluent

English Proficient (FEP). The two children in the research sample were considered Fluent English Proficient.

Procedures

Introduction

Being able to accurately assess the strengths and needs of students is a key element in this research study. Yet many questions and continual controversy surround the issue of reading assessment. What should be included in assessment? What does it tell about the reader?

In order to be authentic, assessment should be an outgrowth of the learning process. Valid assessment should:

1. reflect, not determine, the curriculum.
2. be child centered.
3. describe what a child achieved, not what she should have achieved.
4. should be used to improve a child's education (Pearson, 1988).

"Rather than distancing assessment from the learning process, we need assessment procedures which are an integral part of a child's development and which reflect all aspects of reading" (Pearson, 1988, p. 160).

Some educators feel an teacher's approach to assessment is rooted in a person's educational philosophy. The traditional view of reading and assessment was driven by tests. Readers were diagnosed to find what was wrong and then instructional programs were built to deal with a reader's weakness, centering on

skills. Within the whole language philosophy, assessment is not focused on disorders. Importance is placed on observing the student's development rather than test taking. The material gleaned from watching and observing is to increase or enhance student learning, not to create a teaching agenda (Woodley, 1988).

Miscue Analysis

The reading miscue analysis is a perfect example of watching and observing. It was selected as the assessment tool to provide a deeper, more intimate picture of each child's reading. The reading process is a complex task, encompassing more than letter/word recognition, word attack, and comprehension. It includes the learner's approach to script, his/her strategies. To see these at work a person needs to observe the reading act itself.

. . . reading is a constructive thinking process. The competent reader is aware of both the explicit and implicit meanings . . . he can read between the lines. Reading is an active means of information processing (Pumfrey, 1985, p. 1).

The miscue analysis approach, developed by Goodman and Burke (1972), is a means for the educator to see how a child uses language to create meaning from the written word. It is "a window into the reading process as it operates within individual readers" (p. 15).

The issue is a qualitative, rather than a quantitative point. It is more important to analyze the kinds of miscues, instead of counting the amount of miscues (Goodman & Burke, 1972). "The extent to which the reader's miscues continue to make sense, coupled with the reader's success in retelling what he has read are central to the

approach" (Gillet & Temple, 1986, p. 34). While listening to readers, patterns have emerged which show the difference between a fluent reader's miscue and a struggling reader's miscue. ". . . all readers occasionally miscue when reading aloud and probably do so when reading silently, but that their miscues differ in type from those made by less-fluent readers" (Gillet & Temple, 1986, p. 15). A reader who is not fluent has miscues which do not follow the story context or fit grammatically with the sentence. The miscues can change the meaning of the text and many times are not corrected. Fluent readers made minor changes, using synonyms ("daddy" for "father") or interchanging words ("said Sally" for "Sally said"). Usually, fluent readers correct any miscues that do not fit the story's meaning because they are aware of their own reading process. Gillet and Temple summarize miscues by saying they "reveal to us whether or not the reader is monitoring his or her own comprehension" (p. 137).

It is crucial the teacher look for patterns in the miscues in order to formulate a "diagnostic hypothesis" (Pumfrey, 1985, p. 34). Does the reader omit or substitute words? Are words added or reversed? Does the reader have long pauses in the reading or gross mispronunciations?" (Pumfrey, 1985). Do these miscues fit in the story (semantic) or into the sentence (syntactic)? Do the words chosen have phonemic or graphic similarity to the actual word? (Goodman & Burke, 1972).

Once patterns are noticed, the analysis begins. It is important not to make generalizations about miscues, but to look at them individually. Omissions, for

example, don't always mean the reader doesn't know the word, have "word attack" skills, or is careless. They could reveal an unwillingness to risk a logical guess or a search for meaning by omitting unneeded words (Goodman, 1981, p. 39). Likewise, all substitutions are not equally important. Some substitutions are synonyms or maintain the meaning of the text while others are phonic approximations, not words at all, that show the reader "losing themselves trying to get the words right" (Goodman, 1981, p. 40). In these cases the understanding of meaning and the grasp of "interaction of syntactic and semantic cues" are lost (Goodman, 1981, p. 40). Other miscues could be examples of the reader transforming the text, making it match an internal prediction.

ER (Expected Response)

They must take the sand outside.

The sand is made into little hills.

OR (Observed Response)

They must take the sand outside.

Then the sand is made into little hills.

By adding "then" to the passage, the reader created a sense of sequence or order. Other miscues also could reflect a reader's surprise that the text didn't follow her/his prediction, rather than confusion. "It is not so much that they [words] are difficult as that they are unexpected that causes the problem" (Goodman, 1981, p. 31).

As the teacher carefully analyzes miscues, a picture of the reader's strategies, strengths, and weaknesses should emerge.

There are professional reading miscue inventories available; however, some teachers prefer to develop their own. Though there is flexibility in a teacher made reading miscue, some see definite weaknesses in them. There are questions regarding the criteria for levels. It would vary greatly between teachers it is feared. The choice of reading material would also be an inconsistent variable as are the comprehension questions asked in the retelling. The major concern, though, is the extensive teacher time involved in creating, executing, and scoring the miscue analyses (Pumfrey, 1985).

It was most expedient in this research project to use a professionally made miscue analysis inventory. The Classroom Reading Inventory by Nicholas J. Silvaroli (1990) was chosen.

The Classroom Reading Inventory has four forms, A - D. The first two, A and B, are constructed for elementary students and are interchangeable to facilitate pre and posttesting. Each form has two parts: a graded word list and graded paragraphs. Each story begins with a question the teacher asks the reader in order to stimulate prior knowledge. If, at this point, the child shows no prior knowledge, a different passage is found. Each story also has an accompanying picture to stimulate comprehension. There are five questions following each passage that cover factual or

literal aspects as well as some questions requiring inference and use of vocabulary (Silvaroli, 1990).

In scoring The Classroom Reading Inventory, a teacher counts how many miscues there were in the passage and follows the passage guide to choose the level, whether it was independent, instructional, or frustration level. Silvaroli (1990) defines a miscue as an "error [which] impacts or interferes with the student's fluency or thought process." For a score in comprehension, the instructor adds up the number of incorrect responses to the questions and once again chooses the level dictated by the guide. In order to be considered an independent reader of a passage, the student has to be in the independent level in both the miscue and comprehension category. If the reader has one level as instructional, then the overall level for that passage is instructional. If the frustration level is used in either category, then the student's level for that passage is considered frustration level (Silvaroli, 1990).

Additional Procedures

Several concerns have arisen regarding The Reading and Inventory, focused on its interpretation and validity. In Reading: Tests and Assessment Techniques, 2nd ed., Pumfrey (1985) mentions: "The manual gives no evidence of the reliability or validity of the procedures involved in the CRI . . . The interpretation of the CRI deserves more attention than is given in the manual" (p. 217). Basically, much time is given to procedure in the manual and little to test validation or reliability.

There will be several changes in administering and interpreting the scores to help strengthen this evaluative tool. First, because there are only five questions in the comprehension evaluation, the students will have time to retell the story in their own words besides answering questions about the passage. Also, this research project will add the process of oral net scores described by Gillet and Temple (1986). First, scorable miscues (uncorrected miscues, substitutions, and omissions) are tabulated. The deduction per miscue is figured by dividing the number of words in the passage into 100. Then, one subtracts that amount for each miscue from 100%. This process provides a gross oral reading score. To find the net oral score, one subtracts only those miscues which alter the meaning. From these scores a person can see what reading level the passage was for the student: independent level (could read easily without help) 97-100%, instructional level (more challenging, correct level for teaching) 90-96%, and frustration level (too difficult to read without a great deal of support) 90% and lower. These levels are high, but the reader has had the best setting for reading within context and all language systems were available. If the score is below 90%, the student is not using all the clues and comprehension is affected (Gillet & Temple, 1986, p. 127-129).

Another change will be the use of only Part II in forms A and B. Using words in isolation to determine reading level was questionable. Instead, the teacher begins the paragraphs at least two levels below grade placement for all readers and continue to each new level until the frustration level is attained for each student.

By bolstering the weaker areas of The Classroom Reading Inventory such as the scoring, and maximizing the positive aspects of this inventory, i.e., prior knowledge, discussion, and pictures for each story, the process should allow the researcher to see the strengths, weaknesses, and strategies of a particular reader.

Data Collection

Data was collected in pre and post individual reading situations where the Silvaroli passages were administered. These sessions occurred the first week of Reading Academy and the week immediately following the conclusion of Reading Academy.

In this study, the following coding system was used to record miscues:

Substitution of a word or phrase: Student's word written above the printed word.

Ex. The ^{dog}doll fell from the shelf.

Insertion of a word not in the text: Word written in over a caret or small arrow.

Ex. The doll fell ^{off} from the shelf.

Omission of a word, word part, or phrase: Omitted section circle.

Ex. The (big) dog ran away.

Reader's self-correction: Check mark next to original miscues.

Ex. The (big) dog ran away.

Repetition of a word or phrase: Wavy line under repeated element.

Ex. Once upon a time a wizard . . .

Reversal of word order: Curled line between inverted words.

Ex. "Let's go," shouted Sally.

Pauses longer than normal: Slashes indicate long pauses.

Ex. The // controversial theory was discussed (Gillet & Temple, 1986, p. 134).

Parentheses are normally used as the coding symbol for a word given to the reader by the observer. However, the readers in this study were asked to figure out the words on their own, no words were supplied by the researcher.

Data Preparation and Analysis Procedure

The miscue inventory procedure was as follows:

1. The teacher finds a quiet, comfortable area, free of distractions.
2. The teacher chooses the graded paragraph which is two levels below the student's grade to begin oral reading. If the reader is nervous, the teacher may start at a lower level to develop confidence and relax the student.
3. The teacher discusses the background knowledge with the student, asking the child to predict the story's content.
4. The student reads out loud as the teacher marks a copy of the passage and records the reading for later reference.
5. The child discusses the story, and the teacher asks the five questions marking correct replies, partial replies, and information mentioned in the retelling.

6. A percentile score for comprehension is derived by dividing the total number of possible correct answers (5) into the correct answers given and information included in the story retelling.
7. Later, after listening to the recorded readings and verifying the coded symbols, the teacher uses Gillet and Temple's miscue formula to arrive at a miscue score for each passage.

Analysis

The volume of miscues coupled with the need for individual analysis requires a dual approach to understand the data. For an overview, miscues and comprehension scores for pre and posttesting are organized in tables for comparison. Miscues are tallied and sorted by type. Focus will be on substitutions, insertions, and omissions. Another important reading behavior noted will be self-corrections since they reveal a student's awareness of his/her reading.

However, the information will be meaningless unless individual miscues are analyzed to see what each reader meant by the miscues. Consequently, besides showing what readers did, the purpose will be to discover why they did it, thus adding meaning to the organized data.

Summary

The methodology for this study is based on a whole language view of assessment. By using The Classroom Reading Inventory coupled with Gillet and Temple's miscue scoring procedure, the researcher can move beyond merely counting

miscues to understanding them. This observation will provide an opportunity to view the readers' comprehension during the act of reading. It will also produce authentic evaluation of reading comprehension growth.

CHAPTER 4

RESULTS AND DISCUSSION

Introduction

This research project analyzed the reading of eight third graders enrolled in the Reading Academy to observe any advances in reading comprehension. The pre and posttest data in this chapter is organized in light of the following research questions.

1. Do students show growth in their ability to comprehend more difficult text? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
2. Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)
3. Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)
4. Do the students' omissions reflect better understanding of the text? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

5. Do the students' substitutions show growth in reading comprehension?

(As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

The data will have a dual approach. First, the scores from Gillet and Temple's (1986) miscue analysis and Silvaroli's (1990) comprehension evaluation will be listed in Table 1 and discussed in order to answer question #1. Following this information will be a tally analysis (Tables 2 and 3) and examples of the most common miscues or behaviors observed in the students' reading: self-correcting, insertions, omissions, and substitutions. This discussion will focus on research questions #2 through #5. By looking at the quantity and quality of the reading miscues, a more accurate picture will emerge of the students' construction of meaning during the act of reading.

Question 1

Do students show growth in their ability to comprehend more difficult text? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

Table 1 on the following page shows the miscue and comprehension scores for each passage read, organized by reader and level. The pre and posttest scores for each level are listed in the same box. The pretest score is located at the top left corner while the posttest score is at the bottom right. If no score is listed, the reader did not attempt that particular level.

Table 1

Pretesting Net Miscue and Comprehension Scores

Student	Preprimer		Primer		Level One		Level Two		Level Three		Level Four	
	Net Miscue Score	Comprehension Score	Net Miscue Score	Comprehension Score	Net Miscue Score	Comprehension Score	Net Miscue Score	Comprehension Score	Net Miscue Score	Comprehension Score	Net Miscue Score	Comprehension Score
#1			93 100	60% 70%	78 98	60% 80%		89 40%	86 60%			
#2			93	100%	100 100	100% 80%	95 91	80% 60%	94 90	80% 80%		
#3			93 100	100% 80%	88 95	60% 80%	91 100	60% 80%		70%		
#4					100 98	40% 50%	100 100	70% 20%	98 98	20% 80%	88	70%
#5					93 95	100% 100%	98 100	100% 80%	98 99	100% 90%	79 96	60% 100%
#6			100	60%	100 98	60% 80%	95 100	60% 55%	95 96	40% 60%		
#7			98	50%	93 98	100% 90%	95 77	100% 70%	84 80	60% 70%		
#8			98	80%	100 84	40% 100%	93 98	50% 100%		60%		

*The pretest score is located in the top left corner. The posttest score is in the bottom right.

It is interesting to note the general upward movement between the two readings. The students, on the whole, were more comfortable with harder text. One reader (#1) was able to read texts two levels higher in the posttest than in the pretest while three readers (#3, #4, and #8) tried one level higher. Four of the eight readers (#2, #5, #6, #7) revealed through restless behavior or weak scores a reluctance to move on to the next passage.

The comprehension scores also revealed changes. Though readers #6 and #7 did not proceed to a higher level than the pretest, their comprehension improved on the last passage with reader #6 improving from 40% to 60% and reader #7 increasing from 60% to 70%. Reader #5 also followed this pattern and went from 60% to 100% comprehension on level 4.

It was interesting to note that miscue and comprehension scores were not always linked. Reader #3, for instance, rarely had 100% on miscue, but showed improvement in comprehension. A more dramatic example is reader #8's level one scores. In the pretest she had no miscues (100%) but only scored 40% in comprehension. On the posttest, her miscue score was 84, but she had 100% comprehension. This rise in comprehension illustrates the reader's use of miscues to understand the text. The miscues show this construction of meaning, rather than loss of comprehension.

Summary

When looking at Table 1, growth can be seen in two ways. First, four of the eight readers moved to harder text levels during the posttest. The second area of growth was not as obvious, but it is still meaningful. Of the four students who did not move to a higher level of reading, three of these readers had better comprehension on the posttest passages they did read. Only one reader (#2) did not reveal some reading growth either in comprehension or willingness to deal with more difficult text.

Question 2

Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

According to Table 2, three readers (#1, #3, #6) did more correcting of their miscues during the posttest reading. Of these readers, one (#3) began correcting more strategically, changing words that affected a passage's meaning. For example, in the pretest, she only corrected a contraction "it's" to "it is." However, during the posttesting she changed "soon" to "all" after realizing something was confusing her. This change shows more awareness of meaning while reading.

In addition to using self-correcting more often, readers #1 and #6 used the behavior even in their most difficult passages. In the pretest, both readers had

Table 2

Types of Miscues

Student	Self-Correcting		Insertions		Omissions		Substitutions	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
#1	2	7	0	1	0	1	12	21
#2	10	5	1	0	0	0	12	11
#3	1	3	1	2	0	0	11	18
#4	5	1	0	0	0	0	2	14
#5	10	6	1	3	7	1	9	6
#6	2	6	1	1	1	1	6	5
#7	6	5	1	0	0	8	28	29
#8	2	2	0	1	1	7	5	6
TOTAL	38	32	5	8	19	18	88	110

self-corrected rarely, or only in the easier texts. During the pretest, they didn't correct or change anything in their last, most difficult, stories. On the posttest, however, they self-corrected, in most of their stories, no matter how difficult.

Readers #2 and #5 did not show growth in self-correction. However, this observation reflects the readers' behavior during posttest reading. Reader #5 would have gone on to level 5, but was restless and tired of reading. He simply didn't have many miscues that affected his understanding and required self-corrections. Reader #2 was also restless and lacked concentration during the posttest. He could only manage to read three passages during the posttest, rather than four, as in the pretest. Counting his self-corrections would be misleading since he read fewer stories. He used self-corrections similarly in pre and posttesting as an optional strategy in concert with predicting and repeating to find meaning.

Example: ^{A✓} All spiders have small feet.

Plant spiders live in nests.

They soon learn to hunt for food ^{build✓} and build new nests.

Two readers, #4 and #7, had a decline in self-corrections which affected comprehension. Both readers used self-correcting intermittently until a harder text was confronted. Then the task of constructing meaning seemed to overwhelm them. Substitutions, nonwords, and even increased speed occurred. The reading behavior suggests the students wanted to "get it over with," rather than figure out the story's meaning.

ER (Expected Response) - Student #4

Smart Birds

Everyone knows that birds like to eat seeds and grain. Birds also like to eat little stones called gravel. Birds have to eat the gravel because they don't have teeth to grind their food. The gravel stays in the bird's gizzard which is something like a stomach. When the bird eats seed, the gravel and the seed grind together. All of the seed is mashed up.

Tame birds must be given gravel. Wild birds find their own gravel on the road sides. Now you can see how smart birds are.

OR (Observed Response) - Student #4

Smart Birds

Everyone knows that bird like to eat seeds and grain. Birds also like to eat little stones called grāvel. Birds have to eat the grāvel because they don't have teeth to grind^u their food. The grāvel stays in the bird's gizzard which is something like a stomach.^{ch} When the bird eats seed, the grāvel and the seed grind^u together. All of the seed is mushed up.

Tame birds must be given gr̄avel. Would (self-checked)
 wild birds wild birds find their own gr̄avel on the road sides.
 No you can see how smart birds are.

ER (Expected Response) - Student #7

Smart Birds

Everyone knows that birds like to eat seeds and grain. Birds
 also like to eat little stones called gravel. Birds have to eat the
 gravel because they don't have teeth to grind their food. The
 gravel stays in the bird's gizzard which is something like a
 stomach. When the bird eats seed, the gravel and the seed
 grind together. All of the seed is mashed up.

Tame birds must be given gravel. Wild birds find their
 own gravel on the road sides. Now you can see how smart
 birds are.

OR (Observed Response) - Student #7

Sweet Birds

Everyone knows that birds like to eat seeds and gran. Gran
 birds almost like to eat little stones call golly. Birds have to
 eat the golly because they don't have teeth to chew their food.
 The golly stands in the bird's jug which is something like a
 strong string strings. When the bird eats seeds, the golly and

the seed chews together. The bird eats seeds, the golly and
the seed chews together. All of the seeds in marshed up.

Tamly birds most be given gollies. Wild birds find their
own gollies on the road outside. Now you can see how sweet
birds are.

Summary

The results seem mixed when focusing on self-corrections. While one reader (#5) did not need to self-correct much, three readers (#1, #3, #6) had begun to use more self-correcting to monitor their understanding. One reader (#8) remained unchanged with two self-corrections in pre and posttesting. Reader #2 normally used self-correcting when he was not restless. Of the eight readers, #4 and #7 seem to struggle most with the use of self-corrections, becoming overwhelmed with the print. Self-correcting, then, is still developing in these readers as a comprehension strategy.

Question 3

Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Table 2 also shows insertions increased from five in the pretest reading to eight in the posttest reading. In fact, four readers (#1, #3, #5, #8) added extra words more often in posttesting than in previous reading. However, to fully understand the significance of these inserted words, a closer analysis is needed.

Reader #1 altered a line in the level 1 story about spiders.

ER (Expected Response)

Plant spiders live in nests.

OR (Observed Response)

Plant spiders live in a nest.

When discussing the story, reader #1 knew where plant spiders lived. The comprehension for this level actually improved from the pretest score of 60% to a posttest score of 80%. Seemingly, the insertion had no negative effect on understanding the passage.

Reader #3 also altered more text by inserting words in the plant spider passage.

ER (Expected Response)

This black and green one is called a plant spider.

OR (Observed Response)

This black spider and green one is called the plant spider.

Though the syntax is awkward and one could assume there were two spiders, reader #3 understood the reading. While discussing this story she could remember the spider was green and black. Further on in the spider story, reader #3 again added a word.

ER (Expected Response)

They soon learn to hunt for food and build new nests.

OR (Observed Response)

They soon learn to hunt for food and build their new nests.

If anything, this insertion added clarity for the reader as to whose nests they were referring. As with reader #1, reader #3's comprehension increased on this level from 60% in pretesting to 80% in posttesting. The insertions either had no effect, or actually improved understanding of the text.

Another reader who inserted more words during posttest reading was reader #5. It is interesting to compare the pre and posttest insertions. The pretest insertion occurred in the last passage he read, level 4. The passage described Conestoga wagons and how they moved. Reader #5's insertions reveal his struggle to find meaning:

ER (Expected Response)

The bumping and churning of the ride could be compared to
being on a ship in rough water.

OR (Observed Response)

The bumping bumping and carnage of the ride could be
compared to being to being onto be on a ship in a raw water.

While reading, reader #5 interpreted the "in" to signal a preposition and added "a."

However, when asked about the comparison of rides (on a ship or in a wagon), reader #5 mentioned raw water. He knew where the information was in the passage, but didn't understand it.

During the posttest, however, reader #5 inserted in two different stories without the previous struggle for meaning. In his first posttest passage he inserted twice on the same line.

ER (Expected Response)

A plant spider has small feet.

OR (Observed Response)

The plant spider has a small feet.

(repeated line)

The plant spider has no small feet.

Although the last sentence contradicts the expected response, reader #5 understood perfectly. Later, he discussed how plant spiders have small feet.

During reader #5's last posttest passage (level 4), the third insertion occurred.

ER (Expected Response)

An exciting new sport in the world today is sky diving. Skydivers do tricks . . .

OR (Observed Response)

An exciting new sport in the world today is sky diving with skydivers do tricks . . .

Once again, reader #5 understood the passage and answered questions describing what skydivers do. The inserted "with" did not impede his understanding. His comprehension on this level went from 60% to 100%.

The last reader to increase insertions during the posttest was reader #8. On the pretest, no insertions were made. However, one word was added in the posttest story about skydiving.

ER (Expected Response)

In fact, more people learn to dive each year.

OR (Observed Response)

In a fact, more people learn to dive each year.

Again "in" was seen as a preposition and "a" was added. This insertion did not alter the sentence's meaning. Since the popularity of skydiving was not discussed in the comprehension activity, it is impossible to know if this insertion was detrimental to understanding.

Summary

Four of the eight readers had more insertions in the posttest than the pretest reading. Actually, the insertions themselves show the readers' deeper understanding of text. Readers #1, #3, and #5 made insertions more related to the passages' meanings while reader #8's insertions did not block comprehension. The insertions did not reveal confusion, rather better comprehension occurred.

Question 4

Do the students' omissions reflect better understanding of the text? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

The total number of omissions between pre and posttest reading remained almost the same, from 19 to 18. Several readers never exhibited this behavior (#2, #3, #4), and reader #6 remained at the same amount (1) each reading. Of those who changed, reader #5 had fewer omissions, while three readers (#1, #7, #8) omitted more words. Since omissions can reflect not only a reader's struggle with constructing meaning, but also a strategy to find meaning, it is important to evaluate the types of omissions readers made during posttesting.

Reader #5 omitted entire lines in the pretest, affecting his comprehension. However, reader #5's confusion occurred before omitting the words. He had already substituted a nonword for the word "Conestoga" and paused for several seconds before skipping those lines. Rather than cause confusion with meaning, the omissions reflected the reader's pre-existing confusion with the text. While reading about Conestoga wagons, he omitted 15 words all in one section. Clearly, he was struggling with the meaning from the beginning of the reading and was not even aware of the missing section. The omitted words are circled.

^{Conestoga}
The Conestoga Wagon

People riding in wagon trains did not have our easy ways of traveling. Their trip was made in what was called a

Conestoga wagon. These were good wagons, but they were

not comfortable. The wagons were large. They had broad ^{board}

wooden seats. Sitting on these seats was a ^{weary} task. The

^{carnage}
 bumping and churning of the ride could be compared to being
^{to be a raw}
 on a ship in rough water. When this old wagon reached a
 river, the wheels were removed. // Then the wagon was made
^{built}
 into a flat boat. These are but a few of the interesting facts
^{fats ✓}
 about these old wagons.

Reader #5 did not repeat that behavior in posttesting. There was one omission.

ER (Expected Response)

called a plant spider

OR (Observed Response)

called plant spider

This omission reflected a search for important, meaning related words and skipped the article "a." The reader's comprehension was unaffected.

Like Reader #5, readers #1 and #8 had omissions which did not impede comprehension, even though they had more omissions in posttest than pretest reading.

Reader #1 had one omission in the level one story.

ER (Expected Response)

build new nests

OR (Observed Response)

build nests

When discussing the passage, reader #1 knew about the nests. Whether they were new was somewhat unimportant.

Reader #8 made seven omissions but was carefully building meaning and seemed to fill in the missing words. For example, in the story about plant spiders, she omitted an entire line.

ER (Expected Response)

This black and green one is called a plant spider.

A plant spider has small feet.

All spiders have small feet.

OR (Observed Response)

This black and green one is called the plant spider.

All spiders have small feet.

Because the lines were repetitive, reader #8 did not need to correct. She had a comprehension score of 100% on this story. She also omitted a last name in her level 2 passage.

ER (Expected Response)

Can Bob Hill ride this great horse?

OR (Observed Response)

Can Bob ride this great horse?

Reader #8 had previously read Bob Hill's entire name twice in the passage.

Evidently, she did not think she needed to again. She was right; her comprehension score was again 100%.

The only reader whose omissions affected comprehension in the posttest was reader #7.

The Rodeo

The people at the rodeo stood up.

They were ^{all} waiting for the big ride.

Everyone came to see Bob Hill ^{rode} Midnight.

Bob Hill is a ^{river} top rider.

Midnight is the best horse in the show.

He is big and fast. Midnight is a black horse.

And ^{rode} Can Bob Hill ride this great horse?

It is clear that reader #7 was struggling with the text. During this reading, after omitting the line about Midnight, she paused and said to herself, "Where am I?" However, she did not back up and self-check or correct. Instead she forged on. Because she missed the sentence about Midnight being the best horse, she thought Bob Hill was big and fast. So, when describing the horse after the reading, she thought he was simply black. The large omission, having been accompanied by several substitutions, repetitions and a pause, not only confused the reader but also was a result of her confusion.

Table 3

Types of Substitutions

Student	Nonwords		Synonyms/Predictions		Real Word-- Out of Context		Altered Root Words	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
#1	0	2	1	5	11	12	0	2
#2	2	1	4	6	6	2	3	2
#3	1	1	1	9	9	6	0	2
#4	1	9	0	1	1	1	0	3
#5	2	3	2	2	4	0	1	1
#6	2	3	1	0	3	1	0	1
#7	4	10	3	6	16	9	5	4
#8	0	0	1	4	4	6	0	0
Total	12	29	13	33	54	35	9	15

Summary

After examining the quality of omissions found in posttest reading, a picture emerges of readers omitting unimportant words, with meaning left intact. Only one reader continued in posttest reading to have omissions that blocked her comprehension or reflected the loss of comprehension before seeing the printed word.

Question 5

Do the students' substitutions show growth in reading comprehension? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

The most common miscue in pre and posttesting was substitution, replacing the printed word with another word. According to Table 2, the number of substitutions rose from 88 in pretest reading to 110 in posttest reading. Though three readers (#2, #5, #6) used fewer substitutions, all five other readers used more substitutions. In order to carefully analyze the meaning of this data, Table 3 details the types of substitutions used. The substitutions have been classified into four groups:

1. Nonwords: A phonetic approximation with no meaning for the reader.

Example: grany for gravel

2. Synonyms or words which reflect the reader's prediction of text.

Example: dad for father

3. Real words used out of context.

Example: Sweet for Smart

4. Root words with suffixes dropped or changed.
-

Example: seeds for seed

Certain substitutions, such as the nonwords and words out of context, are more apt to block comprehension while other substitutions, like synonyms, predictions and root words, may be part of the reader's construction of meaning. The data requires a closer look.

The substitutions made by reader #3 reflected her interaction with the print. She used mostly synonyms, similar parts of speech, and root words. Consequently, the substitutions did not drastically affect comprehension. Instead, positive growth in comprehension is seen. According to Table 3, she used more synonyms and did not use words out of context as much. In fact, many of reader #3's substitutions show thoughtful selection of synonyms or similar parts of speech.

<u>ER</u> (Expected Response)	<u>OR</u> (Observed Response)
do	did
father	dad
little	small
the	these
grind	ground
mashed up	mixed up

One of reader #3's substitutions was common for 6 out of the 8 readers. It was the confusion over a collective noun.

When the bird eats seed, the gravel and the seed grind
together. All of the seed is mashed up.

The readers realized "seed" was plural and logically changed the word to
"seeds." Reader #3 altered text to accommodate this plural.

ER (Expected Response)

OR (Observed Response)

All of the seed

All of these seeds

As the text became more difficult, reader #3 used more substitutions. The one
nonword is found in the last passage.

ER (Expected Response)

OR (Observed Response)

mashed

mached

Even with the nonword and substituting, reader #3's comprehension score was 70%
for this story. Clearly, she was building meaning as she read.

The increase in substitutions by reader #8 can also be seen positively, as a
willingness to risk. Her initial substitutions reflect logical choices using the same part
of speech.

ER (Expected Response)

OR (Observed Response)

the

a

was

is

In the pretest, reader #8 only reached level two. However, in the posttest reading,
she went on to read two more passages. The significant substitutions occurred in
these last two stories. Gradually, phonetic approximation began to appear instead of

meaningful substitutions. One substitution would be interpreted as an approximation or a prediction of an upcoming verb using the first and last letters in the word.

ER (Expected Response)

Wild birds find their own gravel . . .

OR (Observed Response)

Wild birds feed their own gravel . . .

Other phonetic approximations were:

ER (Expected Response)

grind

out

OR (Observed Response)

gather

about

Even though reader #8 did not correct these awkward substitutions, self-correcting on other miscues did occur in both of the last two stories. The last passages were not easy for reader #8, yet she demonstrated a confidence to search for meaning and not give up.

The final group of readers who used more substitutions (#1, #4, #7) did not have as much confidence when faced with difficult text. There were some observed behaviors showing that willingness to risk and an ability to build meaning were growing. However, these readers were overwhelmed by their texts and comprehension was difficult.

Improvement could be seen in several areas. More self-corrections occurred with substitutions in the posttest reading than in the pretest. Readers #1 and #4

moved on to more challenging passages in the posttest, a sign of risk taking on the reader's part. In fact, one could argue that though substituting continued, it became more strategic. For example, the use of synonyms and predictions increased for these readers.

	<u>Pretest</u>	<u>Posttest</u>
Reader #1	1	5
Reader #4	0	1
Reader #7	1	4

Even in the harder stories, more synonyms were used.

<u>ER</u> (Expected Response)	<u>OR</u> (Observed Response)	<u>Reader</u>
grind	chew	#7
grind	ground	#1
mashed	mushed	#1, #4

Again, the sentences using the collective noun "seed" confused the readers. Reader #7 substituted "seeds," still retaining the meaning. Reading for meaning was becoming more prominent in their practice.

However, as the text became harder, these readers used more wild substitutions, "phonetic approximations" or nonwords, which made comprehension more difficult. Table 3 shows that nonwords increased from pre to posttesting.

	<u>Pretest</u>	<u>Posttest</u>
Reader #1	0	2
Reader #6	1	9
Reader #9	4	10

Most of these nonwords occurred in the last passages they read. For example, in the level 3 passage about birds, the following nonwords appeared.

<u>ER</u> (Expected Response)	<u>OR</u> (Observed Response)	<u>Reader</u>
gravel	grāvel	#4
	gravy, grany, grainly	#1
	golly, gollies	#7
stomach	stomach ^h	#4
	strong, string	#7
grind	grind ^u	#4
mashed	marshed	#7

Though these readers had improved, when faced with hard stories, the old habit of seeing reading as a word by word battle rather than a search for meaning reappeared.

It is interesting, however, to compare the level 3 comprehension scores of these four readers from pre and posttesting.

	<u>Pretest</u>		<u>Posttest</u>	
	Miscue/Comprehension		Miscue/Comprehension	
Reader #1	--	---	85	60%
Reader #4	97	20%	98	80%
Reader #7	82	60%	75	70%

Somehow, in spite of their panic, these readers did understand a major part of the posttest passage. Though overwhelmed by unknown words, they still managed to construct meaning.

Summary

The readers' substitutions seem conflicting at first, more substitutions alongside better comprehension. However, upon closer analysis, one can see some patterns. Since synonyms/predictions and altered root words do not necessarily hinder comprehension, growth in these areas could be positive. It could mean a willingness, on the readers' part, to risk and build personal meaning, to become more involved in the reading act. It is interesting to note the category of Real Words Out of Context decreased dramatically. Three readers (#2, #3, and #7) used fewer words out of context while increasing their use of synonyms. This switch to synonyms from real words out of context shows more strategic substituting and more comprehension. The increase in nonwords from 12 in pretesting to 29 in posttesting is due to readers #4 and #7 becoming overwhelmed by text in their most difficult levels. They made 14 of the 17 additional substitutions. On the whole, all readers need further practice

to lessen the difficulty of their task. Growth, however, is occurring. Meaning is guiding many of the chosen substitutions.

Summary of Results

This research project analyzed the reading of eight third graders enrolled in the Reading Academy to observe any advances in reading comprehension.

1. Do students show growth in their ability to comprehend more difficult text?

(As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

Readers revealed through the miscue analysis and comprehension evaluation varied levels of growth. Half of the readers did move on to harder text in the post-test. Of the four who did not reach higher levels, three readers showed a deeper understanding of the passages they did read. Only one reader demonstrated no growth in either area. There is a positive movement toward better reading comprehension, but it is only beginning.

2. Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

The results regarding self-corrections are mixed. While three readers either did not need to self-correct or remained unchanged from pretest to posttest, three other readers did use more self-corrections and monitored their reading more. Two readers still struggled with using self-corrections and abandoned making meaning

from difficult texts. Self-monitoring while reading is still developing with these readers.

3. Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Yes, though half of the readers inserted more words during the posttest reading, these insertions do not reflect poor understanding. All four readers' comprehension either increased or was unaffected. The insertions by three of the four students actually show them personalizing the text, making it more meaningful.

4. Do the students' omissions reflect better understanding of the text? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Yes. On the whole, the readers who used omissions in the posttest reading dropped unimportant words, leaving the meaning intact. Only one reader struggled with omissions either blocking understanding or reflecting her loss of understanding before seeing the printed word.

5. Do the students' substitutions show growth in reading comprehension? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

The results involving substitutions require careful analysis. Substitutions increased from 88 in the pretesting to 110 in the posttesting. By observing the types of substitutions (i.e., nonwords, synonyms/predictions, real words out of context, and altered root words), a clearer picture can be seen. The use of more synonyms/

predictions and root word alterations can be seen as positive. The readers were thinking as they read, "transforming" text. These substitutions did not seem to block comprehension. The use of real words out of context dropped by 19 (54 to 35). Three readers seemed to change their use of substitutions from real words out of context to synonyms/predictions. This change shows a growth in understanding, choosing word options more strategically. The greatest increase in substitutions was in the nonword category, going from 12 to 29, an increase of 17. This change is a major concern since this type of substitution can block comprehension and may reveal the reader's abandonment of meaning making. However, this jump reflects the behavior of two readers who are responsible for 14 of the additional 17 nonwords during posttesting. It would not be accurate to assume all readers were overwhelmed with text as these two readers were. Actually, the substitutions for six of the readers reveal the ongoing construction of meaning. It is "messy" and more practice is needed, but growth and comprehension are occurring during their reading.

On the whole, then, progress is being made in reading comprehension. The volume of miscues, as well as the minimal use of self-corrections seem to reveal the early stages of growth. These readers have grown, but the construction of meaning is still a difficult struggle. All of them could benefit from more practice.

CHAPTER 5

SUMMARY, RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Reading comprehension is the interaction between the text and the reader, to create meaning. As Block (1986) states, comprehension is the "struggle and search for control" (p. 463). To truly evaluate and assess what the reader understands, a person must observe this process of constructing meaning.

This research project analyzed the reading of eight third graders enrolled in an extended day reading program to observe any advances in reading comprehension.

1. *Do students show growth in their ability to comprehend more difficult text?*
(As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

2. *Do the students' self-corrections exhibit a growth in the ability to monitor their reading?* (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

3. *Do the students' insertions while reading reveal more comprehension in the posttest?* (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)

4. *Do the students' use of omissions reflect better understanding of the text?*
(As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

5. *Do the students' substitutions show growth in reading comprehension?* (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

In order to observe the readers' interaction with text, Silvaroli's The Classroom Reading Inventory, 1990, as well as Gillet and Temple's, Miscue Analysis Scoring Procedure, 1986, were used for pre and posttesting. Deviations from print were analyzed to gain insight into the readers' construction of meaning or the reasoning behind their word choices. Common miscues and reading behaviors were noted and organized according to type (self-correcting, omissions, insertions, and substitutions).

Results

1. Do students show growth in their ability to comprehend more difficult text? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

Different levels of growth are seen in this area. Half of the students went on to harder text during posttesting. Of the four readers who did not proceed to more difficult text, three of them demonstrated deeper understanding of the posttest passages they did read. One reader revealed no change in approaching harder text or deeper comprehension.

2. Do the students' self-corrections exhibit a growth in the ability to monitor their reading? (As measured by miscue analysis, Silvaroli comprehension evaluation: The Classroom Reading Inventory, 1990.)

The use of self-corrections was inconsistent. Three readers remained the same from pre to posttesting, three readers showed more monitoring of their reading, and two readers still abandoned the pursuit of meaning when working with harder text. The mixed results show only initial growth in this area.

3. Do the students' insertions while reading reveal more comprehension in the posttest? (As measured by miscue analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Though half of the readers inserted more words during posttest reading, these insertions did not prevent comprehension. In fact, the readers inserted words to make the text more understandable to them. Comprehension was either unaffected or aided by the posttest insertions.

4. Do the students' use of omissions reflect better understanding of the text? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

Omissions were used strategically during posttesting. The readers who used omissions dropped unimportant words, leaving the meaning intact. Only one reader's omissions reveal either a loss of understanding due to the omission or, more likely, before seeing the omitted word.

5. Do the students' substitutions show growth in reading comprehension? (As measured by analysis, Gillet and Temple, 1986, miscue scoring procedure.)

The results involving substitutions are clearer when organized by type and reader. Though substitutions increased in posttesting by 35, not all of them blocked

comprehension. In fact, the use of synonyms/predictions and altered root words illustrate the reader "transforming" the text. In many cases, comprehension was maintained, even enhanced. Substitutions which are real words out of context can block comprehension. However, this type of substitution was not as common during posttesting. Three readers actually used less of these out of context words and more synonyms, a sign of focusing more on meaning. The most obtrusive substitution, the nonword instead of an actual word, rose by 17. However, upon closer analysis, one can see 14 of these nonwords came from two readers who were overwhelmed by their last, most difficult passages. The volume of substitutions point, once again, to a need for more practice. However, initial growth in comprehension can be seen.

Conclusions

After reviewing the mixed results from the pre and posttest miscue analyses, several conclusions can be drawn.

Though growth in comprehension can be seen in most readers, it is only a beginning. The minimal use of self-monitoring and the heavy reliance on substitutions reveal a difficult struggle. Reading as meaning making is still an all consuming task for these readers. An eight week extended day reading program has helped, but not assured these readers' success. They need more practice, even more reading, to continue this growth pattern.

Reader #7 seems to have shown only a slight amount of growth. She did show more comprehension during the hardest posttest passage. However, she was not able

to try the next higher level of text. She used nonwords heavily, though she did also use more synonyms. She tried harder to make sense of the print during the post-testing but quickly reverted to old habits (rushing, blurting out nonsense) just to get done with the reading. Out of all the readers, reader #7 was absent the most, missing almost two weeks from an eight-week program. As stated in the limitations, high absenteeism affected reading growth.

Recommendations

Further study into substitutions could be made. It would be interesting to see if the types of substitutions would alter over a period of time. Would nonwords eventually disappear? Would the move from words out of context to synonyms continue? What sort of substitution would be most common in a strong reader? Continued study in this area could reveal the role of substitutions in reading growth.

It would seem that some of the most struggling readers in this sample need a more intimate and strategic reading program beyond the Reading Academy. In some cases, one-on-one tutoring focusing on one reader's needs would be justifiable. All else seems not to be enough.

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