How Fifth-grade Students Use Story Mapping

to Aid Their Reading Comprehension

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ABSTRACT

This thesis examined the reading comprehension process of three fifth-grade students who demonstrated the ability to read and write fluently but had difficulties remembering and understanding important information about what they read. The aim of this research was to develop and implement an effective teaching strategy for low-achieving students not qualifying for special education services. The study addressed one question: How will low-achieving students not qualifying for special education services use story mapping to aid their reading comprehension? Three fifth-grade boys were selected from the researcher's class of 19 students. The three that were selected were the only students in the researcher's class that fit the profile required by the researcher. The research models that were the basis for this study came from the work of Lawrence-Lightfoot and Davis (1997), Maykut and Morehouse (1994), and Merriam (1998). Using qualitative methodology, case study profiles emerged from description and interpretation within the context of the setting. The perspectives of the participants were discovered. Data collection methods included pre and posttests, observations, researcher notes, interviews, and documents. The participants kept free-write journals as they read narrative stories. Recursive, audiotaped interviews were held with each participant. The constant comparative method of data analysis was employed along with triangulation of the findings. The findings indicated that the research participants demonstrated enhanced reading comprehension following treatment lessons in story mapping.

CHAPTER I

INTRODUCTION

Statement of Problem and Objectives

During my teaching career I have become aware of children who are able to read and write fluently but have difficulties remembering and understanding what they have read. Some students often do not monitor their own comprehension and frequently seem unaware that they are not connecting the information together in a logical way (Emery, 1996; Sahu & Kar, 1994). I also can identify with these students. I have been a fluent reader most of my life, but I have experienced difficulty remembering the important parts of what I have read. I think these students are missed or overlooked by teachers because they seem to be achieving commensurately to their ability. Much of the research done at the elementary level has focused on reading fluency. There exists a school of thought that if a child is able to read fluently, they are also good at comprehension, but this is not always the case.

Through the review of literature, I discovered reading strategies that focused on fluency and comprehension (see a complete documentation of the literature review for this study in Appendix A). Most of this research was conducted on fluency with children in the early primary years. It was thought that comprehension would normally follow a fluent reading pattern. The majority of story comprehension research that I found was done with children from fifth-grade or higher. The choice of story mapping evolved from the preliminary review

of literature from the search for teaching strategies that had proved successful with low-achieving students. This present study sought to investigate how fifth-grade students used story mapping to aid their reading comprehension. The proposal for the study was written with this in mind (see the University Institutional Review Board proposal in Appendix B and the approval letter in Appendix C). This present study grew from my concern over how children understood and organized the information from the stories they were reading, and from an internal desire to improve my reading instruction. Following the approval from the University Institutional Review Board, I sought approval for the study from the district where I taught and conducted the research (see Appendix D for the district approval letter).

For the purpose of trustworthiness and to track my path as I traveled through the various phases of the research, I decided to keep an audit trail as a visual record of my work. Lincoln and Guba (1985) described an audit trail as a means by which the researcher can visually represent the work that they have done to arrive at the outcomes of the study. The observations, researcher notes, interview transcripts, unitized data, and documents including journals, all contributed to the audit trail. The timeline for the audit trail can be viewed in Appendix E.

Definition of Terms

Story Map

Beck and McKeown (1981) defined **story map** as a "unified representation of a story based on a logical organization of events and ideas of

central importance to the story and the interrelationships of these events and ideas" (p. 914). It is upon this context that the treatment lessons in story mapping for this study were based. Central themes of narrative stories were mapped out according to a pattern that most narrative stories follow: main characters, setting, problem, main events leading to the solution of the problem, and the solution. For this study, I developed a version of a story map that was based on several maps studied. Questions that elicit the information in the map and follow the progression of main events and central themes of the narrative story were then used to promote the development of reading comprehension.

Reutzel (1985) defined **story maps** as "visual representations similar in construct to semantic mapping, webbing, or networking-graphically organize and integrate the concepts and events contained in a story" (p. 400). I thought that mapping the main ideas of stories and then teaching this structure to students for them to follow made logical sense. Our school district had been concentrating on the use of graphic organizers in the teaching of writing; why not use them for the teaching of reading also?

Story Grammar

From the review of literature on the topic of story mapping, it appeared that story maps were a visual representation of **story grammar**. Marshall (1983) defined story grammar as "simply the description of typical elements found frequently in stories" (p. 616). For stories from Western Cultures, Marshall identified the following elements:

1. Stories made up of a theme and a plot.

2. The plot is made up of an episode or series of episodes.

3. A complete episode contains a setting and a series of events.

4. The setting describes time, place, and the central character.

5. The series of events include:

   a. An initiating event that sets a goal or problem,

   b. Attempts to achieve the goal or solve the problem,

   c. Goal attainment or resolution of the problem, and

   d. Reactions of characters to events. (p. 616)

The premise was that comprehension is organized and the closer the reader's organization is to that of the story, the more the reader will understand about the story.

Story maps are structured visual aids or diagrams of stories. Moore and Scevak (1997) defined visual aids, such as maps and diagrams, as visual, spatial material that is graphically displayed rather than purely written material. The visual material is presented in order to illustrate main points, show relationships, and to summarize important details. Mayer and Sims (cited in Moore & Scevak, 1997) noted that even though children may develop separate oral, written, and visual representations of the story they read, when connections are made between the different modes, enhanced comprehension occurs.

This was the stimulus for the development of arts-based research methods for the data collection process of this study. Since comprehension occurs in the student's brain and may not be readily apparent, it made sense to encourage students to graphically represent their ideas, revealing what they

knew or were understanding (Guillaume, 1998). Teaching students more than one mode of conveying what it is that they were comprehending from their reading whether they were writing, drawing pictures, or verbally expressing their understanding of the story, not only appeared to enhance the research participants' comprehension, but also allowed for a richer development of data triangulation.

Summary and Need for the Study

I have long been concerned about students who read and write fluently but have difficulty comprehending and recalling what they have read. I have repeatedly watched these students read and study stories in preparation of comprehension tests and then perform poorly because they did not understand the story they had read.

The ability to read with understanding, and use this ability as a tool for learning is paramount for success in or out of school (Barclay, 1990). Barclay points out that good readers are actively searching for meaning while they are reading. They are putting together new information with background knowledge and making connections between main ideas in a story. Readers who demonstrate good comprehension are engaged in self-questioning that acts as an ongoing evaluation to self-check their own comprehension. Mason and Au (1990) found that children who exhibit poor comprehension ability often do not self-question and seem to be unaware that they are not putting information together in meaningful way.

I have experienced this phenomenon in the classroom. These students read through a story and are not able to express the main ideas of the story, and when they take a test over the story, they perform poorly. The students do not understand why their performance was poor because they did read the story. This has been frustrating for the students and for myself as their teacher. I wanted to learn more about the process of reading comprehension from the perspective of the children within their context. Unfortunately, I found limited research that used this type of methodology. I decided to conduct this study using a qualitative case study approach with arts-based methodology employed in data collection procedures. I felt that through this approach I would be more likely to gain insight about and illuminate the important issues surrounding the process of how students interact with a narrative story when employing story mapping.

Merriam (1998) described qualitative case study as an intensive, holistic description and analysis of a single phenomenon. The phenomenon for this study was to investigate how the research participants used story mapping to aid their reading comprehension. Since comprehension occurs in the student's brain and may not be readily apparent, I chose to employ arts-based methodology. Lawrence-Lightfoot and Davis (1997) have described this methodology as the use of visual images to investigate the cognitive processes of thought.

Purpose of the Study

The main objective of this research study was to investigate how fifth-grade students used story mapping to aid their reading comprehension. It is my

hope that this study will lead to enhanced understanding of narrative stories for the participants. Another purpose of this study is that educators and parents who may read this study will gain insight into the process of reading comprehension of children who are fluent readers and writers but have difficulty with remembering and understanding what they read.

This thesis investigated the thoughts and actions of 3 fifth-grade boys as they interacted with the reading and mapping of narrative stories. The study sought to describe this interaction by exploring the question: How do fifth-grade children use story mapping to aid their reading comprehension? Using an arts-based approach to data collection and analysis, I developed a qualitative case study that described the reading experiences of 3 fifth-grade boys from their perspective and in the context of their classroom.

Limitations of the Research

It is not the intent of the research to generalize to a broader population. This present study may not be representative of all fifth-grade students who are fluent in reading and writing but experience difficulties remembering and understanding what they read. The study may, however, be viewed as a useful model in the approach to improving reading comprehension for students who are low-achievers not qualifying for special education.

The Researcher in Case Study Development

The primary instrument in qualitative research is the human researcher. Since we as humans are subject to our own biases and interpretations of our own realities of the world, all observations and analyses are filtered through

these biases (Merriam, 1998). This study seeks to illuminate rather than hide the researcher's experience and biases so that readers will have the opportunity to make their own interpretations of the study and its findings in light of being more completely informed about the researcher.

My perspective regarding teaching and children has been shaped by my prior experiences. I have taught a total of twelve years, three of those years were spent teaching third grade in an inner city school that was ethnically and racially diverse, with a low socio-economic base. For the past nine years, I have been teaching fifth-grade in a suburban environment at a school that has a low minority population and a middle-class socio-economic base.

Before entering my teaching career I worked for two years as a counselor for delinquent teenage boys. My responsibilities were similar to that of a case study researcher in that I had certain boys that were assigned to my caseload. I wrote observations, asked them questions similar to an interview, and they shared much of their lives with me. I also took the role of a mentor to the boys in my care, acting on their behalf in their personal life, academic life, and their work place. Once a week I reported to a team of other professionals who also were available for any guidance that I might need. As I reflect back on this previous experience, I wish I could do it over again with the knowledge and maturity that I have now. I was young and inexperienced, not a lot older than the boys I counseled, but maybe that helped us to relate to each other. From working so closely with these boys, I became a part of their lives on a daily basis. This

experience as a counselor has impacted my teaching career and may shed some light into the way I have related to my students and the participants in this study.

Probably the second most influential experience in my life that affected my present teaching career was working with severe and profound physically and mentally handicapped children. This experience lasted almost three years. It took place in a residential treatment center where the children lived full-time. I was assigned a caseload, and had much of the same responsibilities as when I worked with delinquent teenage boys. The biggest difference is that I trained and supervised a team of caregivers that worked with my team of children, since all the children required round-the-clock physical care. My staff wrote observations in a journal and shared concerns with me. This experience had an impact on my thinking and behavior towards others. I became more sensitive to physical and mental differences in people. Since most of the children at the center had severe health impairments, I also became familiar with health care issues and needs. Children with special medical or emotional needs have frequently been placed in my classroom.

My experience working with handicapped children led me to a new position as a psychiatric nursing assistant in a hospital setting. As part of the requirements for this position, I was trained in general patient care before transferring to the psychiatric area. In this position, I was assigned a caseload of patients for whom I was responsible, not only their nursing needs, but counseling needs as well. My responsibilities also related to that of a researcher because I kept written observations at timed intervals, asked questions, and prepared

written and oral reports. As I reflect on this experience, I feel that because of it, I am more sensitive towards the psychological needs of my students and have a working knowledge base of psychiatric diseases and the medications used to treat them.

In recent years, I have taught many students who have received psychiatric care and medications. I have supplied written observations that have been used for the treatment of these students and have been involved in their daily care.

I strongly feel my approach towards students in general is one of acceptance and personal awareness of their special needs due to my background in the health field profession. Although I have held different career positions, I feel that they all relate to being an educator because I was not only teaching others, I was also learning about them. I strongly feel that because of my multidisciplinary background, I am able to relate to my students on levels connected to not only their academic needs but also their physical and emotional needs.

In conclusion, this study seeks to present a brief glimpse into the reading comprehension experience of 3 fifth-grade boys. It is not the intent of the research to generalize to a broader population; it is sufficient for my purposes to create for the reader a study that employs the methodologies of qualitative case study and arts-based research in a relationship that best describes the participants' perspective of narrative story comprehension. The purpose of describing my background was to enlighten the reader regarding my dispositions,

therefore creating a window for the reader to see through in order to more completely evaluate this report from a more comprehensive context.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The structures of many narrative stories follow a basic pattern (Brand-Gruwel, Aarnoutse, & Van Den Bos, 1998; Sadow, 1982). Research indicates that when children become familiar with the structure of narrative stories, they will be better equipped to comprehend what they are reading (Reutzel, 1985; Sorrell, 1990). Story maps and diagrams used as visual aids have been found to increase learning by connecting to the schema, or an orderly combination of connected parts that children have related to the understanding of how stories are formed in their minds (Carriedo & Alonso-Tapia, 1996; Moore, Chan, & Au, 1993; Moore & Scevak, 1997). When students are taught to focus on the main ideas of the story and the basic structure of stories, they remember more details as well as understand what it is they have read (Carriedo & Alonso-Tapia, 1996; Reutzel, 1985).

Story Grammars

Story grammars have been described as a set of rules that depict how narrative stories are usually organized (Gordon & Braun, 1983). These rules designate the component parts of stories, the kinds of information that happen at different locations, and the relationships amid the parts. Gordon and Braun have described the major story elements to include a setting, theme, plot, and

resolution. The plot includes five subparts: (a) starter event- an action or natural occurrence that marks a change in the story environment and causes a response in a character, the beginning of an episode; (b) inner response- a character's emotion, thought, sub-goal, or plan; (c) action- the effort planned to achieve the goal or sub-goal; (d) what happens- the success or failure of the action; (e) reaction- a feeling, thought, or response to outcome or earlier action. The main categories are not always present in all stories, but Gordon and Braun contend that knowledge of the components may enhance student's memory and comprehension through inference. They suggested that teachers use stories for instruction that follow the typical model of story grammar. Educators should look for stories that have repetitive elements such as fairytales, myths, and legends. During the teaching of story grammar awareness, teachers could practice diagramming stories with their students to help them become familiar with the grammar components. The questions that are asked should follow the story's grammar components. This will help students to develop expectations about the story's content (Gordon & Braun).

In using the story grammar strategy to enhance narrative story recall and comprehension, Gordon and Braun (1983) recommended the following steps be taken for instruction:

1. Beginning with a story that follows all the structural components of story grammar to provide an overview of structure and to introduce story grammar terminology. Use a diagram of the story and fill in story information under each category as content is elicited from the students. Give each student copies of the

diagram minus the story information. They then write the paraphrased story content on their own copies.

2. Set reading purposes by posing schema-related questions prior to having children read a story segment. Elicit responses to the questions after the reading.

3. Use well-organized stories initially and the inductive teaching approach. Have students identify the major setting in each of three different stories, then the starter event of the first episode in each of three different stories, and so on, before trying to identify all story components in one selection. The story structure element is held constant while the content can be varied.

4. When students are able to associate story content with specific text structure categories on the diagrammed stories, begin asking story-specific questions. Continue to expect paraphrased story content as answers.

5. Gradually introduce less well-organized narratives, so students will learn that not all stories are perfect in structure.

6. In order to help students understand the differences in story structure, diagram less organized stories on an overhead leaving out some of the story content and have the students complete the missing parts.

7. As a pre-reading lesson, guide students to ask or write their own schema related questions. Then have them read to find their answers. Knowledge of story grammar will provide a framework for the development of pre-reading questions.

8. Use story schema as an aid to the development of story writing. Students should generate story content in relation to story grammar. Start by writing a brief, well-structured group story of one or two episodes. The teacher can provide a story starter and some schema-general questions.

9. Progress to writing a well-organized group story without teacher guidance.

10. Analyze a class-produced story by having students identify story components. Make any changes necessary to model the story grammar structure.

11. Have students apply their knowledge of story grammar to the writing of individual stories.

When Gordon and Braun (1983) field-tested their instructional technique, they found that the effect of story grammar was transferable scaffolding by which reading comprehension was improved.

In addition to the use of story schema as an aid to reading comprehension described by Gordon and Braun (1983), enhancing children's reading comprehension through instruction in narrative story structure was investigated by Fitzgerald and Spiegel (1983). They found that direct instruction in schematic aspects of narratives had a positive effect on development of knowledge of narrative structure and on both literal and inferential comprehension for average to below average fourth-grade readers. They recommended that educators use direct instruction of story components and their relationships to enhance children's knowledge of story structure. They noted that if knowledge of structural

aspects of narratives is highly related to comprehension, then enhancing children's story knowledge might also improve their comprehension of narratives when reading.

Story grammar represents the important parts we remember about stories including the basic elements of characters, events, actions, and the relationships among these elements (Beck & McKeown, 1981; Shanahan & Shanahan, 1997; Whaley, 1981). Researchers hold that those children who become familiar with these elements are more proficient at predicting what should take place in other stories of similar format (Beck & McKeown, 1981; Ruetzel, 1986; Vallecorsa & deBettencourt, 1997). The major purpose of research into story grammar was to describe the cognitive processes that are involved in remembering and understanding stories (Schmitt & O'Brien, 1986). Schmitt and O'Brien noted that story grammar provides educators with an organizational framework to guide student's interactions with stories. They recommended that the framework of story grammar be used as a basis for questioning strategies to encourage students to put information together to develop cause and effect relationships, to make predictions, and to relate personal experience to character motives, problems, and goals. They held that story grammar provides a tool that can be used to lead discussions about stories both as a pre-reading lesson and a post-reading lesson. They advocated story grammar be used as a guide to prompt the retelling of stories and that educators use the grammar as a checklist for assessing students' understanding of a story. Schmitt and O'Brien proposed that

when story grammar is taught on a consistent basis, students might internalize the structure for understanding narrative stories.

Story Mapping

Research has indicated that the human memory follows a semantic organization. This means that random bits of information are stored in short term memory only temporarily. An association is formed from two or more related bits of information, and an idea or concept is formed from two or more associations. The information can then be stored into long-term memory. This concept is the backbone of research into the validity of the use of story mapping as a reading comprehension strategy (Barclay, 1990; Ruetzel, 1984; Ruetzel, 1986). Ruetzel advocated that story maps could incorporate all of the major characteristics associated with improving reading comprehension through schema building. He claimed that story maps hold the structure of story grammar and graphically build on the relationships between concepts and events. He wrote that story maps provide the framework for representing new concepts or events, and actively involve the reader with the content of the narrative text. In a study with fifth-grade students, he found that the instruction of story mapping aided the reading comprehension of narrative stories.

The most effective strategies for developing reading comprehension are those that have the flexibility to address the reading instructional process as a whole (Davis & McPherson, 1989). Davis and McPherson claimed that story maps provide such a strategy and provide a practical means of helping students

organize story content into coherent wholes. They suggested the following steps

be taken in constructing a story map:

1. Start the story map construction by making a list of story elements such

as setting, characters, events, themes, actions, consequences, and reactions.

2. Construct a sequenced list of the main setting, major characters, main

events, and the primary theme. Arrange the list in chronological order in which

the elements occur within the story.

3. There are different types of story maps to construct such as literal,

inferential, and cause/effect. Decide which one to construct based on students'

needs.

4. Write the main idea in a bubble in the center of the story map.

5. Write the second level information about the main setting, major

characters, and events in bubbles on ties projecting from the main idea. The

logical flow of information should be from the uppermost left of the story map and

clockwise around it.

6. Write the third-level information in a clockwise sequence around the

second level information to which it pertains most directly.

7. The final step is to examine the map to judge how it will direct students'

attention and make any modifications according to students' needs.

Davis and McPherson (1989) recommended that students' first

introduction to story mapping should be done with a literal story map after a story

has been read. The teacher could focus questions around the elements of the

story map. When students are more familiar with story maps, the teacher

proceeds to pre-reading story map instruction and the questions not only focus on the elements of the story map, but should also aim at establishing links between events and ideas that unify the story. They offered the following explanations of variations on story maps and story map instruction:

1. Cause/effect story maps can be used as a cloze map during any stage of the reading process. The teacher can give information in the center bubble and the first bubble and then guide students to develop the rest.

2. Inferential story maps are designed to help students recognize explicit information and then to use that information to infer unstated ideas. The literal details are supplied in the map. Students are to read to verify, modify, or elaborate inferences and supply missing information.

3. Reconstruction of story maps could be accomplished by students in small groups following the reading of a story. The students could write each story element on an index card allowing for easy manipulation of various arrangements.

3. The teacher could use a cloze procedure either during or after reading. In macro cloze story maps, some information is omitted before the story map is presented to students. The students supply the missing information by completing the story map.

Davis and McPherson (1989) concluded that it was more advisable to begin the instruction in story mapping with literal information presented and then moving to maps that require inferential information. They wrote that the reconstruction of story maps would be a good beginning activity. Once students

are more familiar with the structure of narrative stories and story maps, they could be ready for more elaboration of the story map.

Immature readers, in contrast to mature readers, often do not monitor their own comprehension and frequently seem unaware that they are not connecting the information together in a logical way (Emery, 1996; Sahu & Kar, 1994). In order to improve reading comprehension for students, we need to increase their control over strategic methods of dealing with stories. Story maps supply the scaffolding that students may use for dealing with narrative stories (Barclay, 1990; Oakhill & Patel, 1991; Simpson, 1996; Vallecorsa & deBettencourt, 1997; Whaley, 1981).

When used as a pre-reading strategy, story maps can guide and enforce reading comprehension as students read the story. This method has been found to improve reading comprehension for upper elementary children (Barclay, 1990; Davis, 1994; Reutzel, 1985). One of the primary emphases in reading education is to help readers to develop as thinkers and not just performers (Barclay; Emery, 1996; Shanahan & Shanahan, 1997; Simpson, 1996). Research has shown that when used as a pre-reading strategy, story mapping builds a bridge between the known and the new as readers tap into prior knowledge and relate it to the new information presented in the story. This technique will give children a support beam from which the new information can be attached and helps guide children into thinking of the narrative story in a more meaningful way (Barclay; Davis; Ruetzel, 1986; Whaley, 1981).

Some research studies have found that questioning strategies used by educators that focused on various levels of literal, inferential, and evaluative questions for the promotion of reading comprehension actually had the opposite affect intended by interrupting the natural cohesiveness of the story. The purpose of asking questions should be to help develop the central framework of the story. Most narrative stories follow a predictable pattern and comprehension questions that are focused upon this sequential pattern have been found to enhance children's reading comprehension (Beck & McKeown, 1981; Sadow, 1982).

Ruetzel (1986) and Sorrell (1990) found that reading comprehension was enhanced when children of upper elementary age were taught the components of narrative stories. In their studies, children completed story maps either while reading or at the conclusion of reading a narrative story. Vallecorsa and de Bettencourt (1997) also found that with direct instruction on the components of narrative story maps (setting, characters, problem, goal, events to reach the solution, and the solution) that children of upper elementary age improved in their reading comprehension and continued to improve without further direct instruction.

With the knowledge gained from the review of the literature, I was ready to design my research investigation. From the review of literature, it was determined that instruction in narrative story structure with the strategy of story mapping yielded positive results in reading comprehension. Therefore this present study focuses on how fifth-grade students used story mapping to aid their reading comprehension. The study I designed was emergent in that I began with an initial

focus of inquiry and an initial sample, and refined my focus of inquiry and

sampling strategy as I became involved in an ongoing process of data collection

and analysis (Maykut & Morehouse, 1994). Another attribute of an emergent

research design is that the researcher does not know the outcome of the study

beforehand, therefore lending a shaping or evolving image to the investigation

(Lawrence-Lightfoot & Davis, 1997). In the following chapter, the design of the

research project is further detailed.

CHAPTER III

METHODS

Introduction

This chapter will provide detailed information about the methodologies employed in data analysis that led to the research outcomes presented in Chapter IV. The aim of this study is to describe from the perspective of the participants their experience with reading comprehension through the use of qualitative case study and arts-based methodology. Multiple methods of data collections were employed and then analyzed using the constant comparative method of analysis as interpreted by Maykut and Morehouse (1994). It is my hope that through describing what the participants were saying, doing, and how they were behaving, this study will add to the knowledge base and inform practitioners who seek to enhance and improve learning for their students (Lawrence-Lightfoot & Davis, 1997).

Beginnings

My interest in the topic of reading comprehension grew from my twelve years of teaching reading and noticing that there were a small number of students who read and wrote fluently but had difficulty understanding what they read. I personally can identify with these students since I too have experienced similar difficulty. I have focused much of my graduate work in the area of reading in hopes of becoming a more successful reader and a more skilled teacher of reading. My aim in this study is to research a reading comprehension strategy and to document through the use of rich description, employed by arts-based

methodology, the reading comprehension experience of my research participants. The reading comprehension strategy that I chose to implement is narrative story mapping.

In my study, I wanted to bring to the reader, a depth of understanding into the reading experience of my fifth-grade participants. I adopted the work of case study research, data collection, interpretation, and analysis from the methodology of Merriam (1998), Lawrence-Lightfoot and Davis (1997), and Maykut and Morehouse (1994). Lawrence-Lightfoot and Davis call their method of case study "portraiture." I chose this paradigm of methodology because it was most similar to the methods that I employ in my classroom.

Qualitative Case Study Methodology

The design of this study follows a pattern most like that of a qualitative case study. My research aims to gain insight into the process of reading comprehension of the participants that I purposively selected for the study. I wanted to be able to conduct the study with as little disruption as possible to the student participants involved in the study and be sensitive and understanding to their experiences. Because of the nature of the research and the questions being asked, I chose the methodology of a case study design. Merriam (1998) described a qualitative case study as an intensive, holistic description and analysis of a single phenomenon. The phenomenon is a unit around which there are boundaries. The case could be an individual student or a whole class of students. If the phenomenon can't not be bounded, such as there not being an end to the number of people who could be interviewed or observations that could

be conducted, then the phenomenon is not bounded enough to be considered a case. The decision to focus on qualitative case study methodology generated from the desire to discover meaning from the participants rather than test a hypothesis. In this study the case included an entire class from which a purposive sample of three students was identified.

Qualitative case studies can involve more than one case being studied (Merriam, 1998). I chose this method after the selection process of testing and observation revealed that only 3 students met the profile. I wanted to develop and implement an effective teaching strategy for low-achieving students not qualifying for special education services. The focus question was: How will low-achieving students not qualifying for special education services use story mapping to aid their reading comprehension? My aim in choosing a multiple case study approach was to use what Merriam (1998) called rich thick description in analyzing and interpreting the phenomenon that I chose to study. In using a multiple case study approach to my study, I was able to observe and analyze similar and contrasting findings, lending an increase in validity and strength to my conclusions.

My orientation to qualitative case study research was interpretive (Eisner, 1994). My goal was to discover from the perspectives of my participants how they used story mapping to aid their reading comprehension. As the researcher, I conducted interviews, recorded observations, and kept field notes during the development and process of the study. Merriam (1998) noted that the key to understanding the phenomenon being studied is to consider from the

participants' perspectives, not the researcher's. It is for this reason that I formulated open-ended questions to gain insight from my participants into their reading comprehension process.

Since this study was conducted in my classroom with the students that I taught for one school year, I was able to document the lived experiences in the classroom. This field study approach to case study has the potential to provide an understanding of the interactions observed and interpreted in a setting that can be easily applied and tested in other classrooms. My intent is to create for the reader, the sense of being there and experiencing my students.

Arts-based Methodology

In addition to the influence of Merriam (1998), I was also greatly inspired by the arts-based methodologies of Lawrence-Lightfoot and Davis (1997). In their book *The Art and Science of Portraiture*, they state that the qualitative researcher seeks to record and interpret the perspectives and experiences of the people they are studying. They describe the relationship between the researcher and the participant as an encounter between the two to bring meaning and depth to the study. I found the dialogue between the participants and myself to be crucial to the interpretation of what I was observing, thus giving authenticity to the study. I wanted the participants to feel my concern and respect for what they were telling me, along with the sense of discovery.

Lawrence-Lightfoot and Davis (1997) claim that the essence of meaning can be derived from art. I was looking for what children understand about what they read, I chose to adapt a data collection, analysis, and interpretation process

of case study research that Lawrence-Lightfoot and Davis called "portraiture." I also chose this method because it was most like the teaching style that I already employed in my classroom. During this study, I encouraged all of my students to use illustrations to convey what they understood about what they read. In essence, they were making meaning through art.

Through the use of art as an analysis and interpretation process, I looked for patterns and the repetitive refrains in my research participants' drawings. Lawrence-Lightfoot and Davis (1997) state that through art a person uses internal symbols or representations that are the vehicles of thought. I have found that for some children it is difficult for them to express the meanings they have for what they have read, whereas through the drawing of a picture, they are able to bring a quality to their understanding that would otherwise be absent in their writing.

Finally, as a researcher making meaning from organizing, sorting, and interpreting data, I was looking for connections and coherence to bring to the reader useful information that could be applicable or even replicable to their situation. Interpretive description is at the core of the methodology that I employed. Michael Parsons (cited in Lawrence-Lightfoot & Davis, 1997), a cognitivist who studies the development of aesthetic perception said, regarding interpretation that "If what we are finally interested in is the meanings children grasp, then we must ourselves interpret them as we study their artworks, choices, and explanations" (p. 30). Therefore, the use of an arts-based research methodology with a focus on the students' drawings was a logical choice.

The Research Instrument

Qualitative inquiry, which focuses on meaningful information in context, requires a data collection instrument that is sensitive to underlying meaning when gathering and interpreting data (Merriam, 1998). Therefore, the research instrument best suited for this task is the researcher himself. The participants in this research study were students in my classroom that I established relationships with over several months. Because of the amount of time spent with the research participants, I would be more likely to recognize discovery, insight, and meaning from the interviews, observations, and analyzing activities that are part of qualitative research (Merriam). Merriam describes the qualitative researcher as one who can establish rapport with the participants and is able to demonstrate warmth and empathy. I think my experience as a counselor and a teacher has shaped me into the type of researcher that seeks to establish a meaningful relationship of trust with my students.

I feel that it is important to reflect upon what I am doing in my classroom, to be self-critical, examining, and always looking for ways to improve my practices in my classroom. Since I was the primary investigator in this study, I was able to maximize the opportunities for data collection. I also had my students for all of their main subjects allowing me to see them interact over the span of the day. This afforded me a clearer and deeper understanding of my students, their strengths, weakness, and special talents. As Merriam (1998) noted, the researcher needs to be sensitive to the context and all the variables within it,

including the physical setting, the obvious and the hidden agendas, and the nonverbal behavior.

Purposive Sampling

Demographics

The setting for this study was a community of about 2000 population in a mid-western state. I have lived in this community for eleven years and taught fifth-grade there for nine years. There were two elementary buildings in the community. The one that I taught in was built in 1989.

Personnel

The elementary building where I conducted this study housed students in grades 2-5. There were 24 certified personnel. Along with these teachers, were four full-time paraprofessionals to assist students. There was also a full-time elementary counselor to serve student needs.

Student Population

The student population in the building where this study took place was 340 students. The racial percentages were as follows: White, 98%; Black, 0%; Hispanic, 1%; Native American, 1%; and Asian, 0%. Male students made up 53% of the student population and female, 47%. Students receiving free/reduced lunches were 21%. Students who were served by an Individual Education Plan were 11%.

Participants

The participants for this study were chosen from my fifth-grade class of 19 students. I had 13 boys and 7 girls in my class. I taught all of the core subjects

including: math, reading, social studies, science, language, spelling, and technology. I had the same group of students throughout the school year.

The study aims to answer the question, how do fifth-grade students use story mapping to aid their reading comprehension. My major concern was towards those students who are fluent readers, but have difficulty remembering and understanding important details about what they read. I began the selection process by giving a comprehension pre-test to all of my fifth-grade students and identified those performing below grade level in reading comprehension. For six weeks thereafter, I listened to my students read orally in the classroom and collected field notes. I discovered through the process of listening to their oral reading, giving reading comprehension tests, and evaluating their writing, a small group of 3 students read and wrote fluently but had difficulty remembering and understanding what they read. Prior to the instruction in story mapping, it was discovered through observations and interviews that the research participants did not use any strategy to help them remember or understand narrative stories.

The 3 participants that were selected for the study fit the following criteria: (a) they scored below grade level on the district mandated reading comprehension test, (b) they read and wrote fluently, and (c) they had families that were willing for them to participate in the study. All 3 participants talked openly without hesitation to me and had demonstrated the ability to express their thoughts orally, visually, and in writing.

The purposive sample that I chose from my class represented a group that I have been concerned about over my twelve years of teaching reading. I

wanted to help students who read and wrote fluently but struggled understanding what they had read. I have not been able to increase their comprehension with the teaching strategy that I was using which is described in the Procedures. My purpose was to research a new strategy and try it in my classroom to see how students would use it, and if their reading comprehension would improve. This describes the process I used in selecting the purposive sample for my study.

I also wanted to select from the group of students that fit the profile, students who would feel comfortable with me in a taped interview and able to express themselves fluently without feeling overly stressed and inhibited from talking. This was determined by the interactions I observed with my students for a six-week period during which I kept field notes in my research journal. From these field notes, I was also able to create profiles to have a fuller understanding of who the research participants were. These profiles are provided in Chapter IV.

Focus of the Study

After the process of selecting the participants was completed, the researcher contacted the families of each participant by phone. Each family received a brief explanation about the purpose of the study and what research tells us about the effects of the use of story mapping on children's reading comprehension. The researcher described the process that resulted in the selection of their son as a participant in the study. Roadrunner's mother thought the study sounded like a good idea and hoped that his reading grade and other grades would improve. She agreed to her son's participation without any hesitation.

When I talked to Terrell's mother, she was very concerned about his reading comprehension difficulties and said that he hardly remembers anything that he reads and that she would approve for him to be in the study. However, she called me back the next day after receiving the consent form to sign to tell me that her son did not want to be video taped. I informed her that I did not think that I would need to but included that on the consent form just in case it was decided at a later date that videotaping would be a necessary form of data collection. I assured her that her son, if the situation would arise, would not be video taped or put into any situation that made him feel uncomfortable. She also expressed concern on the behalf of her son that no other classmates know that he was involved in my study. I told her that I would not divulge that information, however, if he chose to tell someone, I could not control that. She was concerned about his grades being available for other teachers to see. I explained to her that the review of students' grades and test scores were a common practice of many teachers in our school district. She expressed concern regarding her son being pulled-out away from the rest of the class for any teaching or testing to be done. I assured her that all of the students in my class would be receiving the same teaching in story mapping simultaneously and that all would be given the same evaluations based on district approved assessment tools. Additionally, I informed her that my principal, superintendent, and the district school board had approved my study. She seemed concerned that her son was selected as needing special help. She told me instances where he did demonstrate comprehension of reading material, such as passing the hunter's safety test. I assured her that her decision

whether or not to allow her son to participate in the study would not have any effect on his grade. That he would receive the instruction in story mapping regardless of participation in the study. I informed her that she was making a decision on whether or not I would be writing about him and using his information in my report under a code name that he would be able to choose. I also told her that neither his nor the school's identity would be divulged in my report. She decided that she did want him to participate in the study and sent the consent form signed the next day following our conversation.

When I contacted Cartman's mother about my study, she did not know who I was at first even though I had been her son's primary teacher for six weeks of school and had had conversations with Cartman's father. I think that her initial reaction to me could have been precipitated by the fact that Cartman had a history of problems in school and she was probably called frequently regarding his negative behavior. When I mentioned a study, she became immediately defensive, wanting to know why I had chosen her son and who I was. We were able to get through this misunderstanding at the beginning of our conversation and she agreed for her son to be in the study. She expressed interest in how the study would be conducted and what would be done with the findings. She said that she wished I could help her older son in high school with his reading comprehension. I told her that I could share my findings with his teachers at the conclusion of my study. I assured her that Carman would not be put into any situations that would make him feel uncomfortable nor would he be treated any differently than any of the other students in my class. The main difference being

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that I would write about him in my study and report on his interaction and progress with story mapping. His identity would be hidden with a code name that he could choose for himself. She sent back the consent form, signed, the next day. An example of the participant consent form is in Appendix E.

I did not expect the defensive reaction that I received regarding the consent from the parents of 2 of the 3 participants I chose for the study. I decided to include their reactions as part of the narrative so that future researchers would be apprised to the issue of parental consent. Possibly the idea of a study had a negative connotation to it that caused a distrust with the parents. After I talked through their concerns and fears, they became more at ease with the purpose of the study.

All the parents expressed much more concern over the study than I expected. This was evident to me in my conversations with them and in the way the 3 boys acted when they returned to school the day after I had talked to their parents. All 3 seemed to be very self-conscious, and quiet towards me as if I was recording everything they said and did. That lasted several days and then their behavior returned to normal. I did not teach story mapping nor collect data the week after I received parent consent due to the self-conscious reaction that I observed with the participants. This is an important note, I feel, for future studies to consider.

Using qualitative case study and arts-based research methodology, data were collected in order to identify how 3 fifth-grade students used story mapping to aid their reading comprehension. The primary focus of the research analysis

was the interaction of the participants with story mapping used as a comprehension guide, the effect of the use of the story mapping activities, and the feedback of the participants. In qualitative research, analysis of the data is conducted as an early and ongoing research activity (Maykut & Morehouse, 1994). The data collection methods are outlined in the next section.

Data Collection Methods

This study combined multiple methods of data collection to achieve a better understanding of the participants, and to increase the validity of the findings (Maykut & Morehouse, 1994). Methods of data collection included observations, researcher notes, interviews, and documents including journals, pre and posttests, and student records from cumulative files. This study was based on the qualitative research of Lawrence-Lightfoot and Davis (1997), Maykut and Morehouse, and Merriam (1998).

The study was conducted within the context of the participants' setting which was my classroom. Profiles of each participant were developed from informal interviews with the participants, their parents, and past teachers, along with my impressions and interpretations (Lawrence-Lightfoot & Davis, 1997). The participants kept reading journals with artwork in the form of interpretive pictures related to main ideas read in narrative stories. Data analysis took shape through triangulation of the data and the constant comparative method of analysis. This type of analysis involved simultaneous comparison of all units of meaning obtained from the data (Lincoln & Guba, 1985).

Observations

Merriam (1998) asserts that observations represent a first-hand encounter with the phenomenon of interest and when combined with interviewing and document analysis, allow for a more complete interpretation. The field notes were written during observations in my classroom while the participants were actively working with story maps. All of my students were working on the same assignments. As I walked around my classroom, I wrote descriptions of what I saw the participants doing. I also asked questions and recorded the participants' responses in direct quotations whenever possible. These field notes were than typed and became part of the constant comparative method of data analysis (Lincoln & Guba, 1985). Field notes from one entire observation appear in Appendix G.

Researcher Notes

I kept a researcher's journal for data collection purposes. In the journal I recorded what I observed along with my reflections and interpretations of what I was observing during the students' interactions with story mapping and journaling. I was looking for how students were using story mapping to aid their reading comprehension. I utilized my journal for recording responses that the participants would make in reference to the questions that I asked them regarding their writings, drawings, and story maps.

Interviews

In qualitative research, interviews can be thought of as a conversation with a purpose (Lincoln & Guba, 1985). Interviews can range on a scale from highly

structured, where the interview questions are carefully formulated beforehand, or

an unstructured format, where the interviewer asks and actively listens in order to

understand what the interviewees are experiencing and communicating in their

own words (Maykut & Morehouse, 1994). The type of interviews chosen for this

study was semi-structured. Merriam (1998) explains that the semi-structured

interview is halfway between the structured and unstructured interview with some

of the same open-ended questions asked of all the participants in order to gain

some standardization. Mostly, time was spent during the interviews responding to

how the participants were interacting with the reading lessons. I was seeking to

understand a phenomenon from the participants' perspective. I kept my focus of

inquiry in mind as I navigated each interview. I did not want my own biases to

interfere with what information the participants could bring to the interview.

Moreover, I wanted to discover, from them, their thoughts, feelings, and ideas

related to how story mapping was aiding their reading comprehension.

Interviews were recorded in two ways, notes taken during the interview,

and tape-recorded interviews. In addition, interviews were recursive or ongoing in

the data collection procedures. Recursive interviews are interviews that continue

repeatedly throughout a study, not just on one occasion. They help to enhance

the validity of the interpretation process. One complete interview transcript is

found in Appendix H.

In order to gain a more complete picture of each participant, I interviewed

them regarding what they liked to do in their free time, who their friends were,

what they wanted to be when they grew up, and what they thought their strengths

and weaknesses were in school subjects. I blended this information together with a description of their character into a profile dedicated to participants (Lawrence-Lightfoot & Davis, 1997).

Brief interviews, usually consisting of one or two questions during observations, occurred in order to gain new insights into the thoughts and actions of the participants. I recorded the participants' responses to my questions, along with my interpretations in my researcher's journal. It was a usual occurrence for me to discuss students' work with them during class and to ask questions about other activities in their life. I did this to establish a rapport with each student and to stay current in what was happening in their lives so that I might reflect on any changes that I may have discerned in their schoolwork, attitude, or social behavior. Lawrence-Lightfoot and Davis (1997) explained that it is through relationships between the researcher and the participant that access is sought and given, connections made, contracts of reciprocity and responsibility (both formal and informal) developed, trust built, intimacy negotiated, data collected, and knowledge constructed. This statement describes one of the most important aspects of teaching being the relationship between the teacher and student. The first principal I worked for said to me that children will perform for you, their teacher, based on their relationship with you, not just because they are interested in the material you are presenting to them. This was a truth that stood the test of time in my teaching career. It was important to me to establish and enhance my relationships, not only with my research participants, but all the students in my classroom.

Recursive interviewing, or repeated interviewing, of each participant was done during this study for the purpose of documenting any changes that the participants may have experienced during the course of the study, and to enrich the understanding interpreted from each participant as they interacted with the reading lessons centered on the use of story maps. Audiotaped interviews were done with the convenience and the privacy of the research participants in mind. I interviewed each participant for the study about stories that we had already worked with in class and that they had recorded in their journals. I chose this method because I thought it would give the participants and myself a clear reference point from which to draw the data. I made it clear to the participants that I would keep their participation in the study confidential.

Documents

Maykut and Morehouse (1994) emphasized the importance of documents such as journals, tests, and past records, as an integral part of data analysis. The participants in the study kept daily reading journals along with all of the other students in my class. They recorded illustrative maps of the stories they read along with reflections and interpretations, which could be in any form the participants chose as a means of representing the story. This methodology was chosen because some children have difficulty fully expressing themselves with writing, whereas they find clarity for their thoughts through the use of illustrations or drawing. The students were encouraged to share their reflections with the class and I asked them questions based on their illustrations, drawings, or written

summaries to gain further insight into their reading involvement and how they might be using story mapping to aid their reading comprehension.

Written, open-ended tests were administered through the course of the study to further evaluate and document the progress of the reading comprehension of the participants. The beginning and concluding tests that were given came from the school district's mandated reading test (Davis, 1994; Vallecorsa & deBettencourt, 1997). Tests given during the training period were made by me and covered information in the narrative stories that were selected for the study. A list of the stories used for the reading lessons appear in Appendix I. The participants' reading scores from the California Achievement Test that was given during the spring of their fourth-grade year was a document that was also reviewed as part of the purposive sample selection process.

Procedures

As part of the data collection process, I administered our district mandated reading pretest and posttest to all my students. The tests are given by all the elementary teachers in my building and are part of the Quality Performance Assessment that we document for our state assessment and accreditation. There is a major concern in our district that teachers prepare students to do well on these tests. Narrative stories are a major part of these tests, and I wanted to investigate if the teaching of story mapping to students would improve their reading comprehension. I also had a personal interest in narrative stories. The test is titled the Benchmark Progress Test Booklet (Houghton Mifflin, 1997). The pretest story given was *How Jadu Became Himself* (Hamilton, 1980) that is a

narrative story. The story was introduced using a teaching strategy outlined in our district's adopted basal series by Houghton Mifflin (1997). In this series, each story was introduced by developing prior knowledge or background, introducing vocabulary, creating interest, and establishing a purpose for reading (Davis, 1994). Having students discuss the title, pictures, and any personal experiences related to the story, developed the background. Vocabulary words that build the main idea were also discussed. Reading a short summary of the story created interest and established a purpose for reading. This describes the teaching strategy that I used prior to my research into the use of story mapping.

At the end of each story in the Benchmark Progress Tests were five open-ended questions and five multiple choices that had one or more correct answers to them. As part of the introductory pre-reading lesson, these questions were discussed and students were instructed to highlight key words. Students were encouraged to look back at the story to find their answers using the key words as clues. The purpose of the pretest was to establish a baseline from which to measure reading comprehension progress through the study. The Benchmark Test is also mandated by our district and is targeted as a focus point for the measure of reading progress in our school. I wanted to research a reading comprehension strategy that would help my students' performance on these tests, and share my findings with my colleagues.

When devising a plan for the training sessions involving the teaching strategy of story mapping, I gave consideration to my goal of equipping students for the Benchmark Progress Tests. Therefore, I structured the training sessions

with stories that would be short narratives that followed a pattern of main characters, setting, problem, goal, and events leading to reaching the solution (Vallecorsa & de Bettencourt, 1997). I wanted to find out how students would use story mapping to aid their reading comprehension. Data collection methods were designed around this question. To implement this strategy, I prepared and planned reading lessons for four stories that I felt would help build some of the main topics that we had previously studied in science. I feel that teaching with connected themes helps children develop a deeper understanding of subject matter. Since I also wanted to better prepare students for the evaluation process of the Benchmark Progress Tests. I also prepared three open-ended comprehension questions, and three multiple-choice questions that had one or more correct answers for each reading lesson. I felt that if students were more familiar with the format of the Benchmark Progress Tests and had more practice with this format, they would be better prepared to take these tests. I realized that this strategy could improve their performance on the posttest of the Benchmark Progress Tests. I also realized that the process of interviewing, journaling, and questioning students during the data collection process could also raise the students' comprehension through greater interaction with the stories that they read.

The initial training began with a story map that I prepared for the story *James and the Giant Peach* (Dahl, 1996). I put the story map on the overhead projector and gave a copy to each student. I used the first story map as a pre-reading lesson to initiate discussion and to introduce the structure of narrative

stories. I asked my students if they remembered using story maps from previous classes and they said only for writing, not reading.

Following the teaching of the story elements, I encouraged students to record in their reading journals illustrations, poetry, words, or any visual representation of their thoughts as I read aloud to them from *Morning Girl* (Dorris, 1994), a historical fiction novel that is full of vivid images and related to our study of Christopher Columbus. I wanted them to experiment with thought recordings that would help them to begin to relate to the information in the story in a graphical way. As pointed out in Chapter II, when students have more than one way of relating to the information they are reading, such as verbally and visually, comprehension is enhanced (Barclay, 1990; Oakhill & Patel, 1991; Simpson, 1996; Vallecorsa & deBettencourt, 1997; Whaley, 1981).

From these initial reading lessons in story mapping, I proceeded to teach my students more about the use of story mapping. Each reading lesson took approximately one hour, and the training sessions lasted over four weeks. During this time four more stories were implemented into the reading instruction using the story map strategy. The stories were all narrative type that followed a pattern conducive to story mapping (i.e. having main characters, a setting, a problem, events leading to a solution, and a conclusion or final solution to the problem, see an example of a story map in Appendix J). The stories were also selected to integrate with other subject areas that the students were learning. In this case, I chose to focus on science. All four of the stories were narratives that directly related to the main content area of my district's science curriculum. A six-

question comprehension tests was administered that all my students completed following the reading and mapping of each story (see an example of a test in Appendix K). Field notes were taken and questions asked of the participants during each reading lesson and test. Taped interviews were held with each research participant after the first reading lesson and the last lesson. There was a posttest given at the conclusion of the reading lessons from my school district's mandated reading assessment.

The next story implemented was *The Great Protozoan Mystery* (Boyle, 1992). The story followed a study about one-celled animals that my students had completed prior to reading the story. Although the students had some background knowledge related to the story, the story was written as an extension of this knowledge, more than a literal representation of the information, making the story challenging reading. The story was introduced using a story map that I had prepared for a pre-reading lesson. Each student was given a copy of the map and told that they could use the map to help guide their reading and their illustrations of the story. After a discussion of the contents of the map that I had done along with discussing the pattern of narrative stories, the students were given a choice of either writing a summary of the story, drawing pictures to retell the story, or a combination of both. The retellings the students completed were in their reading journals. The students were told that a test would be given the following day over the story they were going to read and that they could use the story map, their story retellings, and the storybook to complete the test. During the time that the students were reading, journaling, and taking the test, I wrote

observation notes and asked informal questions of my research participants to gain insight into what they were thinking and doing. The notes were later transcribed into my researcher's journal.

Following the teaching of *The Great Protozoan Mystery* (Boyle, 1992) with the use of the story map as a pre-reading procedure, formal taped interviews were held with all 3 participants. These interviews were then transcribed. Three more stories were taught using a similar method described in the preceding paragraph except I no longer prepared a map for the students to follow. It was my intent to have students become familiar with the patterns of narrative stories that were graphically organized with a story map so that they would internalize the structure of narrative stories. I wanted to first model and teach the organization of narrative stories and then allow practice and exploration in using the story maps. Once students seemed to understand the main elements of narrative stories, I encouraged them to create their own story maps. They were only allowed to use their books for the first test to make them feel comfortable with the entire procedure. I didn't want to overload them with too many new methods all at once and wanted to keep a procedure with which they were familiar.

Following the training sessions, a posttest was administered from the Benchmark Progress Tests (Houghton, Mifflin, 1997). The posttest consisted of one story: *The Four Donkeys* (Alexander, 1972) that was a narrative story. Students were encouraged to create their own story maps or illustrations that would help them to make sense of the story. Students then answered five open-

ended questions and five multiple-choice questions with one or more correct answers. These questions were then scored with our school district's mandated Benchmark Progress Tests Rubric Scoring Guide (Houghton, Mifflin, 1997). The results are discussed in Chapter IV.

The Constant Comparative Method of Analysis

The constant comparative method of data analysis (Lincoln & Guba, 1985, as interpreted in Maykut & Morehouse, 1994) served as the model for interpreting the data collected during the duration of the study. Maykut and Morehouse described the constant comparative method of data analysis as a simultaneous comparison of all units of meaning obtained from the data. As each new unit of meaning is chosen for analysis, it is compared to all other units of meaning and then grouped with similar units of meaning. My approach to data analysis as a qualitative researcher was to stay focused on the research participants' thoughts, ideas, words, and visuals as closely as I could without allowing my own interpretation to interfere.

Indwelling

Indwelling (Maykut & Morehouse, 1994) is characteristic of qualitative research in that it involves the researcher as the primary instrument of data collection along with any experiences, preconceptions, or biases that the researcher may hold. Indwelling, for me, was the process of getting close to my research participants to understand the phenomenon under study from their perspective, to empathize rather than sympathize with them about their

experiences in order to more fully understand what they were experiencing.

Indwelling was also a process of deep reflection; to look at what was unfolding

before me during the study and to ask myself questions about what I was

experiencing. During reflection, as a qualitative researcher, I also thought about

my own preconceptions and biases, which could influence the interpretation of

the data. Before beginning the data analysis phase of the study, I compiled a list

concerning the preconceptions and personal biases that I held regarding the

phenomenon understudy and then set these concepts aside to assume a posture

of indwelling ready to listen, ask questions, and enter into an experience through

my research participants' perspective (Maykut & Morehouse). The list of possible

preconceptions and biases can be viewed in Table 1.

Preparation of the Data for Analysis

In order to make the data collected during the duration of the study

readable, workable, and to provide for trustworthiness, all the taped interviews

and comments were

Table 1

<u>Possible Biases Affecting the Researcher</u>

1. I am a teacher working with my students as participants.

2. I have designed the study.

3. I have taught reading for 12 years.

4. I have my own understanding of what reading comprehension looks like.

5. I have my own interpretation of what a story map is used for and how to make

one.

6. I am a male.

transcribed, the researcher's journal was typed, and the participants' journals were photocopied. Each page of data was coded in the upper right hand corner and included the type of the data, the source of the data, and the page number (Maykut & Morehouse, 1994). Since the method of recursive interviews was employed, the number of the interview was also written next to the type of data.

Unitizing

The next phase of data analysis was to identify the units of meaning contained within the data. Lincoln and Guba (1985) describe a unit of meaning.

> The smallest piece of information about something that can stand by itself—that is, it must be interpretable in the absence of any additional information other than a broad understanding of the context in which the inquiry is carried out" (p. 345).

Unitizing is part of the constant comparative method of qualitative data analysis. Maykut and Morehouse (1994) explain that the constant comparative method, identifying and categorizing specific units of information and comparing the units to previous information, "provides the beginning researcher with a clear path for engaging in analysis of substantial amounts of data in a way that is both challenging and illuminating" (p. 127).

Once all the data was put into a workable form, I gathered several packages of blank 4" x 6" index cards, scissors, tape, pencils, and colored highlighters. I carefully read through and scrutinized the documents three different times looking for repetitive refrains (Lawrence-Lightfoot & Davis, 1997). Within the repetitive refrains, I discerned the units of meaning (Maykut & Morehouse, 1994). When a unit of meaning was identified, I circled it with a pencil, and in the margin noted the following: the data source, date, participant,

page number (if from an interview transcript), interview number, and a word or phrase to indicate the essence of the unit's meaning (Maykut & Morehouse). Each participant's transcription was also color coded with a different colored highlighter for each participant. The documents were kept intact during this phase of the data analysis so that each source could be read in its entirety should further clarification be needed. When all of the documents had been unitized, I cut each unit of meaning from the text and taped them onto separate index cards. The next phase of the constant comparative method of analysis was discovery (Maykut & Morehouse).

<u>Discovering</u>

The discovery process actually began when I first started to record my reflections about what I thought might be the recurring ideas I was seeing from the participants during the study. The discovery process was the beginning search for the important meanings that the participants had conveyed to me through the interviews, observations, and documents collected and reviewed during the span of the research project (Maykut & Morehouse, 1994). The beginning of data analysis started with the first data that I recorded and continued throughout the research process. I began to analyze the data more formally at the conclusion of data collecting by rereading all of the information that I had collected and becoming very familiar with its content. My focus was on the recurring words, phrases, concepts, and visuals (pictures, diagrams, lists, and notes that the participants put in their journals about the stories that they had read) that I saw repeated throughout the data. The discovery list was constructed

and reconstructed three different times or "taking multiple soundings," as I searched for the subtle meanings and complex perspectives expressed in the data (Gilligan, Brown, & Rogers, 1989, p. 108). The completed discovery list will be presented in Chapter IV.

The Process of Writing Rules of Inclusion

Following the discovery process, where the data is stated, the process of writing rules of inclusion, is completed to identify the major themes by which the data can be grouped (Maykut & Morehouse, 1994). This process was accomplished by choosing a prominent idea from the discovery list and writing on a separate index card the essence of the meaning contained within the statement on the card. This could be a word, a word phrase, or the idea that the participant is expressing. According to Maykut and Morehouse, this unit of meaning was called a provisional category. This card was then placed at the top of a large table. I then read through the remaining unit cards that I had unitized previously and looked for other cards that had a similar relationship to the provisional category that I had chosen. If a relationship was decided to exist, then that card was placed underneath the provisional category and included therein. If a card did not seem to relate by what Maykut and Morehouse (1994) called the "look/feel alike" criteria (p. 136), I examined my discovery list to see if the card fit under any other provisional category. Before a card was included into a category, it was compared to all of the other cards that already had been chosen for that category. This process continued until all of the cards had been categorized.

When a category had 6 to 8 unit cards included within it, I analyzed the units to decide if a rule of inclusion for that particular category could be determined and wrote the rule on the provisional category card at the top of the row of cards. Maykut and Morehouse (1994) explained that a rule of inclusion was the meaning interpreted from the data within a category or group of related data cards. Once the rule for inclusion was written, each data card within the category was compared to the rest of the cards to determine whether it fit the rule of inclusion or if it should be categorized within a different group. The categories that contained a rule for inclusion will be presented in Chapter IV.

Coding Data Cards

Once a rule for inclusion was summarized from the data cards within a certain group and written at the top of that row of cards, the remaining cards in that row were coded with an abbreviated cue to identify them as belonging to that category group. For example, the abbreviated cue for the category group "Pictures Convey Meaning" became PCM. This code was then written at the top of all the data cards included in that particular cluster. This was done to allow for ease in moving the data cards from place to place without having to worry about them falling in a heap on the floor and wasting time trying to put them in order again (Maykut & Morehouse, 1994).

Examining Relationships and Patterns across Categories

At this point in the constant comparative analysis process, I had several categories containing three or more data cards and the rule of inclusion that summarized the meaning contained in each category. The focus for the next

phase of analysis was to look closely at the relationships between categories and study the propositions for those that stand-alone or form salient relationships and patterns (Maykut & Morehouse, 1994). During this process, it became evident that some of the categories shared ideas that were related. These ideas were grounded in the data and stood as evidence of what I was learning from my participants in the study, and is what led me to the outcomes of the research study.

<div align="center">**Provisions for Trustworthiness**</div>

<u>Triangulation</u>

Triangulation is the process whereby multiple sources of data, multiple investigators, or multiple methods of investigation are used to confirm the emerging findings of a phenomenon under study (Merriam, 1998). In the case of my study, I compared the categorical rules with the research participants' journal entries, my journal entries, which contained notes from observations and interviews, the participants' interviews, and the review of literature. According to Lawrence-Lightfoot and Davis (1997) the researcher looks for points of convergence among the data sources. The points of convergence then become emergent themes, "When different lenses frame similar findings" (p. 204). The method of triangulation strengthened the trustworthiness of the findings along with internal validity and intra-rater reliability that was established through multiple times of classifying the data.

Participant Checks

The aim of this study was to discover information and the meaning of that information from the participants. To accomplish this task, I frequently checked with my research participants about my interpretations regarding the information that I was gathering from them. This was done through all phases of data collection as well as during the formation for the propositions that emerged from the data. I wanted to be sure that my interpretations accurately described the actions and thought processes of the participants. Lawrence-Lightfoot and Davis (1997) advocate that the research study is co-constructed by the researcher and the participants as they negotiate perspective. In addition to lending trustworthiness to the findings in the study, I found that working closely with my participants frequently uncovered ideas and areas of understanding that might have otherwise been missed.

Long-Term Observation

According to Merriam (1998) the gathering of data over a long period of time or observing the same phenomenon increases the trustworthiness of the findings. In this study, I was the classroom teacher and the participants were my students. I had contact with them during the complete school day since my fifth-grade classroom was self-contained except for music and physical education. Relationships develop over time, and because of the researcher/teacher relationship that I had with my participants, I felt that we were brought even closer. Ideas, feelings, and thoughts were shared with each other developing a

closer intimacy. Lawrence-Lightfoot and Davis (1997) pointedly explain the dynamics of the relationship between researcher and participant.

> It is through relationships between the portraitist (researcher) and the actors (participants) that access is sought and given, connections made, contracts of reciprocity and responsibility (both formal and informal) developed, trust built, intimacy negotiated, data collected and knowledge constructed. (p. 135)

Peer Examination

Once each week, during the 8 months of this study, I discussed and presented my actions and findings to a group of colleagues that also taught at my grade level. Their feedback helped me to discover insights into meanings, identify discrepancies, and generate more critical reflection into my research (Kochendorfer, 1994).

Summary

There were four things that were built into the design of this research project to increase the trustworthiness of the outcomes. Triangulation occurred through the process of comparing the categorical rules with the research participants' journal entries, my journal entries, which contained notes from observations and interviews, the participants' interviews, and the review of literature. Participant checks were accomplished throughout the study by asking the research participants to tell me whether I had accurately described their experience (Maykut & Morehouse, 1994). The study lasted for an eight-month period, which provided for long-term observations of the research participants and their experiences with story mapping. This helped to increase the trustworthiness of the outcomes (Merriam, 1998). Another process that added

trustworthiness to the outcomes was peer examination. Peer examination was

accomplished by asking my teaching colleagues to comment on the findings of

the study as they emerged. This process helped me to be more critical of my

research and to reflect on the outcomes. The outcomes of the study are

presented to Chapter IV.

CHAPTER IV

OUTCOMES

Introduction

This study was conducted in my classroom and I was the researcher. The 3 student participants selected for the study were observed within the context of their school and classroom environment. Through the observations, participant profiles were developed that contributed to the outcomes of the study. The focus of inquiry was to investigate how low-achieving students not qualifying for special education services use story mapping to aid their reading comprehension. Lawrence-Lightfoot and Davis (1997) explained participant profiles as narrative writing that interprets the perspectives and experiences of the research participants. Eisner (1994) described participant profiles as writing that is descriptive, interpretive, and evaluative in character. The participant profiles that follow are presented to help the reader develop an understanding of each participant. Roadrunner is presented first, followed by Terrell, and then Cartman.

Participant Profiles

<u>**Roadrunner**</u>

Living in a small town and teaching in a small school, it is common to have had prior relationships with the students in my classroom before they actually entered my class. This happened to be the case with Roadrunner (this is the code name he chose for himself). My daughter and one of his older sisters had been friends ever since his family transferred to the school from a private Christian school in a nearby city. At that time, Roadrunner and his twin sister

were beginning kindergarten. He is one of five children; he and his sister are the youngest. Roadrunner is a rough and tumble sort of boy, loving to play soccer, which he wants to do professionally some day. Jeans and t-shirts are his usual attire, and he wears them in a very comfortable way. He is a medium-sized boy when compared to the rest of the boys in my class. He has an athletic, tanned appearance and keeps his light-brown hair cut in a popular style of clipped short around the sides and slightly longer on the top that would have caused kids to say when I was a boy, "Did your mom put a bowl on your head and cut around the sides." But, this style has been popular for a few years, and it still amazes me. He has a chiseled angular look to his young face that is similar with most other members of his family, including his twin sister who is in another section of fifth-grade.

Roadrunner's eyes and facial expression have a questioning look about them most of the time. He is usually trying to figure out the social interactions that are going on around him. This is a challenge for him. He also has a sensitive side that is easily bruised. He is eager to please me and is concerned about what I think of him. He doesn't hesitate to ask questions whenever he doesn't understand something. Other teachers and peers are attracted to his warm, friendly, and unassuming personality. He doesn't like to stand out in anyway and is easily embarrassed if any special attention is drawn to him. It's difficult for him to present in front of the class, and he tries to get out of this whenever he can. He does, however, like to play around-the-world with multiplication facts at which he is extremely good, and enjoys peer recognition of his ability.

Roadrunner has particular talent in the area of drawing and enjoys using this talent to enhance his schoolwork and to communicate his understanding of subject matter. However, he stated that he does not usually draw in his free time and has not done much drawing for schoolwork in the past. In my classroom, I employ the use of art to convey key concepts that I am teaching. Roadrunner said that he likes to do the drawing. I noticed that he also pays careful attention to the appearance of his writing, and works on it meticulously. His work is always extremely neat, organized, and well thought out. He often volunteers to read aloud in class, joins in class discussions, and makes his requests known. I would expect that he would be able to remember what he reads and answer questions accurately over what he reads, but this is not the case. He often is confused about the information he reads and cannot remember enough to do well on comprehension questions.

He fit the profile of the students whom I sought for this research. He has a comfortable relationship with me and is able to explain his thoughts descriptively to me, which is what I needed in order to understand how he used story maps in the study to aid his reading comprehension.

Terrell

Another participant that I chose for the study was Terrell (the code name that he chose for himself). Although he has attended our district all of his school career, I do not remember having any contact with him prior to his being in my classroom this year. Terrell appears studious, and older than the other boys. His glasses are not a common sight in the fifth-grade classes. He is usually dressed

more formally than the other boys with slacks and button-up shirts. He wears his reddish brown, straight hair in an older fashion with two to three inches on the top, bangs angled down his forehead, and trimmed around the ears. His freckled face and intense eyes have a seriousness about them that commands your attention. His voice however, even though it is deeper than most of the other boys', has a whining, begging tone that demands you listen to him above anything else. He is medium-sized and has a stocky build.

When I asked Terrell about his friendships, he said that he had a best friend that moved to a different city last year, but they stay in contact by calling each other. He told me that he doesn't feel that he has a best friend at school anymore, but feels that he does have friends. I see him as fitting in with his peers in our classroom as well as in his grade level.

Terrell has developed good problem solving skills with his peers and has a tolerance for others who are not just like him. He rarely comes to me with any problems regarding any of the other students in the school, and usually is not involved in any misbehavior at school with others. Terrell stated that he enjoys playing football with his friends at recess. There are usually two football games happening at the same time at the fifth-grade recesses. One game involves many of the boys who play for the city's junior football league. The other game is made up of the boys who are not on this team, and that is the game in which Terrell usually plays. When I talked to his mom, she said that he would like to play in the junior football league but that he already plays for the city soccer league. She felt that that was enough for him to be involved with because of

homework and practicing his trombone. When I talked with Terrell, he did not mention anything about soccer nor do I remember him playing soccer at recess. He said that he would like to play football but said he couldn't for a couple of reasons but would not elaborate what those reasons were, I got the impression from his downward cast eyes, that I should not press the issue further.

When I asked Terrell about his life at home, he said that he is an only child. He said his activities at home are playing football and vacuuming the house, which his mother takes over for him if he is gone with his dad on an errand. He said that he will soon have a bedroom in the basement and he is excited about this. When I asked him what he wants to be when he grows up, he said that he has no idea. I found this unusual, because most children have some idea what they want to be when they grow up.

Terrell does not demonstrate much confidence in himself. He seems to need constant reassurance. He takes very few risks, and demonstrates little creativity without a lot of encouragement from me. After I teach a lesson on a new concept, I can count on him to raise his hand for further clarification of the directions. Soon after he starts to work on the task he will ask me if he is doing the right thing. He will go a third step, show me the work he has done so far, and ask if he is doing what I want and will he get full points. He works methodically on his school tasks paying close attention to how his work looks and asking me if it is neat enough. One time I gave a writing assignment that the students were going to share in class and told them that they did not have to make final copies of the writing if they felt that they could read well enough from their rough drafts.

After writing a neat, fluent, and organized rough draft, Terrell asked me three times in less than 15 minutes, if he should recopy it neatly, and I replied that it was not necessary. He seemed obsessed with doing it over again.

When I talked to Terrell's mother about his schoolwork, she said that he requires one-on-one attention from her to do his homework. She said that he would not do anything unless she was right there with him to give him guidance and direction. Although Terrell's mother knows that many children are not like this and will complete their homework independently, she feels that Terrell's dependence on her is just part of his personality. I got the impression from talking to her that she feels somewhat exasperated over the amount of time that he requires from her during his homework studies, but she feels that this is just necessary in order for him to do well in school. When I talked to both parents, each said repeatedly how important it is to them that Terrell do well in school. According to Terrell's past grade records, he has received mostly Cs and Bs on his report cards and has received similar grades in my classroom as well. I decided to talk to some of his past teachers to find out more about him. His fourth-grade teacher said that he had a serious problem with reading fluency when he began fourth grade and that she focused her teaching on this area. When I expressed my concerns regarding his reading comprehension, she said that she did not concentrate on reading comprehension strategies with him because fluency was the main concern. When I asked her about Terrell's parents, she said that they were very much involved in his education and watched carefully every grade and assignment that he received.

Terrell's first-grade teacher said that she would never forget his first day in here class because she had to take Terrell to the principal's office screaming and crying to go home. She said that they let him talk on the phone to his mother and he was screaming at the top of his lungs demanding that she come and get him to go home. This incident was all that she could remember about him.

Terrell feels at ease with me as his teacher. He talks openly and frequently with me, and does not hesitate to express himself with me. He fit the profile that I thought was necessary for the study.

Cartman

I selected Cartman, the code name he chose for himself, as my third participant not only because of his ability to express himself openly to me, but also because he fit the other areas of the profile I desired. He can read and write fluently but has difficulty remembering and understanding what he reads.

I remember talking to Cartman when he was in fourth grade, mostly casual conversation about who won the latest football game and his favorite sports teams. He appears very relaxed and comfortable in his usual attire of jeans and t-shirt. He did have long straight brown hair that came past his ears until after the seventh week of school, when he came to school with his hair shaved off. He said that he had this done because a lot of the football players he watches on TV have their heads shaved. He also came to school one day with a pierced ear and earring, but that only lasted for a few days and then the earring disappeared. I asked him what had happened and he said that his dad found out about it and had him take the earring out. He said that his mom had allowed him to have it

done without his father's knowledge. An earring would have drawn attention to Cartman since there are very few boys in our school that have one, but I don't think Cartman minds standing out from the others. He has a warm broad smile that melts the hearts of some of the female staff in our school, and Cartman is aware of this and uses this to his advantage. His dark eyes glance only but fleetingly into mine when I am speaking to him, and not at all when I am confronting him about his negative behavior, which is at least once a day. His face is very round, and his mouth forms a thin line that tightens to his right when he talks.

Cartman forms friendships but then manipulates and uses these friendships to his advantage. I have witnessed Cartman form friendships with two boys in our class who struggle with diagnosed emotional and psychological disorders that they receive medications and weekly treatment sessions for from licensed professionals. In both friendships, I have watched him display two types of interactions. One would be protective, guiding, and helpful, and the other would be manipulating, then laughing at them, and scapegoating them. He gets close to these boys and gains their trust, and then he manipulates them and takes advantage of them. The two boys he chose also suffer from low self-esteem and have trouble fitting in with the other boys. I know that Cartman has stayed over night with these boys and plays with them after school and on weekends. Special arrangements and efforts by the parents of all parties must be involved since all 3 boys' families live far apart from each other. One family lives in town, and the other two live in the country. The other boys in the class treat

Cartman with an air of indifference. They don't especially like him, but they don't dislike him either. I think that they want to keep their distance from him; maybe they perceive how he treats his friends or have been mistreated by him in the past. I have not seen him form friendships with any boys who would be closer to his social intellectual ability. He plays on the city's junior football league, but I have not been able to see him play and interact at recess. Either the principal or aids usually take his recess from him as a punishment for his misbehavior in other areas of the school setting besides my classroom.

During the first six weeks of school, Cartman appeared to be a model student. His schoolwork was usually done on time. However, I do not think that he put his best efforts into completing his assignments. I had heard from other teachers in our building that Cartman was probably the worst behaving student in this class during his fourth-grade year. To find out more about him and as part of the participant selection process, I talked with Cartman's fourth-grade teacher. She said that Cartman's most serious behavior problems happened outside of her classroom as they did with mine. She said that he did his schoolwork and was fairly well behaved in her classroom; however, she felt that he had stolen things from her such as mechanical pencils and desk supplies. She said that his family had many difficulties related to gang behavior with older siblings and that they had moved to our district to relieve some of these pressures. The principal of our school confirmed this information when I discussed Cartman with him, adding that two of the older children had dropped out of school. He said that I needed to involve Cartman in school related activities with other children that

would help to "connect" and encourage him to remain in school and not drop out. He suggested a tutoring program where Cartman would tutor a younger student. He said that our school counselor would make these arrangements.

In spite of the troubles that Cartman got himself into, most of which occurred outside of our classroom, I would describe our relationship as friendly and amiable. He frequently shares his life with me and discusses his schoolwork with me. He enjoys answering questions about himself. He likes football a lot, but wants to be a fireman when he grows up because he likes to put out fires. His favorite subject in school is language because he said he has always been good at it. He said that he has difficulty understanding social studies. This may be because of the difficulty he has with understanding what he reads. He was a perfect fit for the profile of students that I have been concerned about. He reads and writes fluently but has difficulty understanding what he has read. He is able to articulate to me his thoughts without being inhibited by me. He and his family agreed to be in the study.

The development of the participant profiles contributed to the outcomes of the study. The profiles helped me to understand the participants' perspectives and gave me clues into their behavior. From the participant profiles, I learned about the participants family and school life. This information helped me empathize with them and increase the depth our relationships. Trust was built and intimacy developed between the participants and myself as I asked them questions about themselves to develop the participant profiles. Since I wanted the participants to explain to me how they were using story maps to aid their

reading comprehension, I thought it would be important for them to be able to express themselves to me so that I could gain more of an understanding from them. Roadrunner, Terrell, and Cartman all fit this description as determined from the profiles. In addition, the profiles added an additional triangulation point from which further data was confirmed.

The Outcomes of Discovery

In Chapter III, discovery was presented as the initial step in identifying the important meanings that the research participants were conveying to me through the interviews, observations, and documents collected and reviewed during the span of the research project (Maykut & Morehouse, 1994). The completed discovery list is presented in Table 2.

The Rules of Inclusion

In Chapter III, the process of writing the rules of inclusion were presented as part of the constant comparative method of data analysis (Maykut & Morehouse, 1994). Maykut and Morehouse described the constant comparative method of data analysis as a simultaneous comparison of all units of meaning obtained from the data. As each new unit of meaning is chosen for analysis, it is compared to all other units of meaning and then grouped with similar units of meaning. The outcomes of this process are the major themes that the discovery outcomes can be grouped. The rules of inclusion represent the meanings that were embedded in the data and reveal what I was learning about the phenomenon under study. The rules of inclusion are presented in Table 3.

Table 2

<u>Discovery List</u>

1. pictures convey meanings

2. details are connected

3. stories have main parts

4. story maps can be personalized

5. facts are important

6. important information is repeated throughout the story

7. stories have central themes

8. poor readers should draw pictures

9. story maps and story retellings are similar

10. look for major details

11. ownership

12. creativity

13. illustrate vocabulary

14. words attach to pictures

15. writing promotes comprehension

16. thinking can be made visual

17. details relate to story parts

Table 3

Categories That Contained a Rule of Inclusion

1. Pictures convey meaning

2. Stories have main parts

3. Details are connected to the main parts of stories

4. Story maps can be personalized

Outcome Propositions

The outcome propositions were the result of the process of synthesizing and refining the data. They represent what I have heard and seen during the course of the investigation and now understand (Maykut & Morehouse, 1994). The outcomes are related in meaningful ways to each other and together build a more complete understanding of the experience of the research participants. It is the voice of the research participants that I wanted to bring to the forefront. It is the thoughts, ideas, and explanations of the student participants that I wanted to convey. The outcome propositions were prioritized for relevance and prominence to the focus of inquiry. There were four main themes that emerged from the data. The data cards that contributed to these themes were reread and excerpts were chosen to support them. The four main themes are presented in the order of their progression to what the research participants were demonstrating as evidenced in the data, they are: (a) pictures convey meaning, (b) stories have main parts (c) details are connected to the main parts of stories, and (d) story maps can be personalized.

Pictures Convey Meaning

The initial theme supported in the data was that pictures convey meaning. The pictures that the participants drew and the meanings attached to them were purely the choice of each participant, no direction was given to them in this endeavor other than to allow them to draw as they read or after they read. Interview questions during observations or during taped interview sessions

frequently centered on the pictures and visuals that the research participants generated during the study.

When asked during a taped interview what advice he would give to another fifth-grader about drawing pictures related to a story that they have read, Cartman responded, "They should try to think of something that relates to what the story said." Cartman's illustration of *The Great Protozoan Mystery* (Boyle, 1992) can be viewed in Figure 1. He explained this illustration.

> I drew a clock to stand for a.m. and a star to stand for an officer, the person at the bank. I drew and wrote, all the hard words that I can't remember, and I wrote and drew a magnifying glass because they found a clue. Then I drew a hammer breaking into a steel box, and it says no breaking into.

Terrell developed a story map that used a combination of pictures and words to covey what he thought was important in the stories that he read during the study. When asked during an interview why he chose this method he stated:

> Because when Mrs. Wellman did that thing [a test to determine what type of learner you are], she said I was a visual learner, so I draw pictures. I always draw pictures because I can label the pictures and I think and stuff. I draw pictures better than I write words.

Terrell's illustration for the *The Great Protozoan Mystery* (Boyle, 1992) can be viewed in Figure 2.

Roadrunner held the opinion that illustrating is the best strategy to aid comprehension of a difficult story or if a student has difficulty with reading fluency. He commented, when asked during an interview, if he would recommend writing a retelling (summary) of the story or illustrating with pictures and diagrams to be the best way to understand and remember narrative stories:

Figure 1 *The Great Protozoan Mystery* response by Cartman
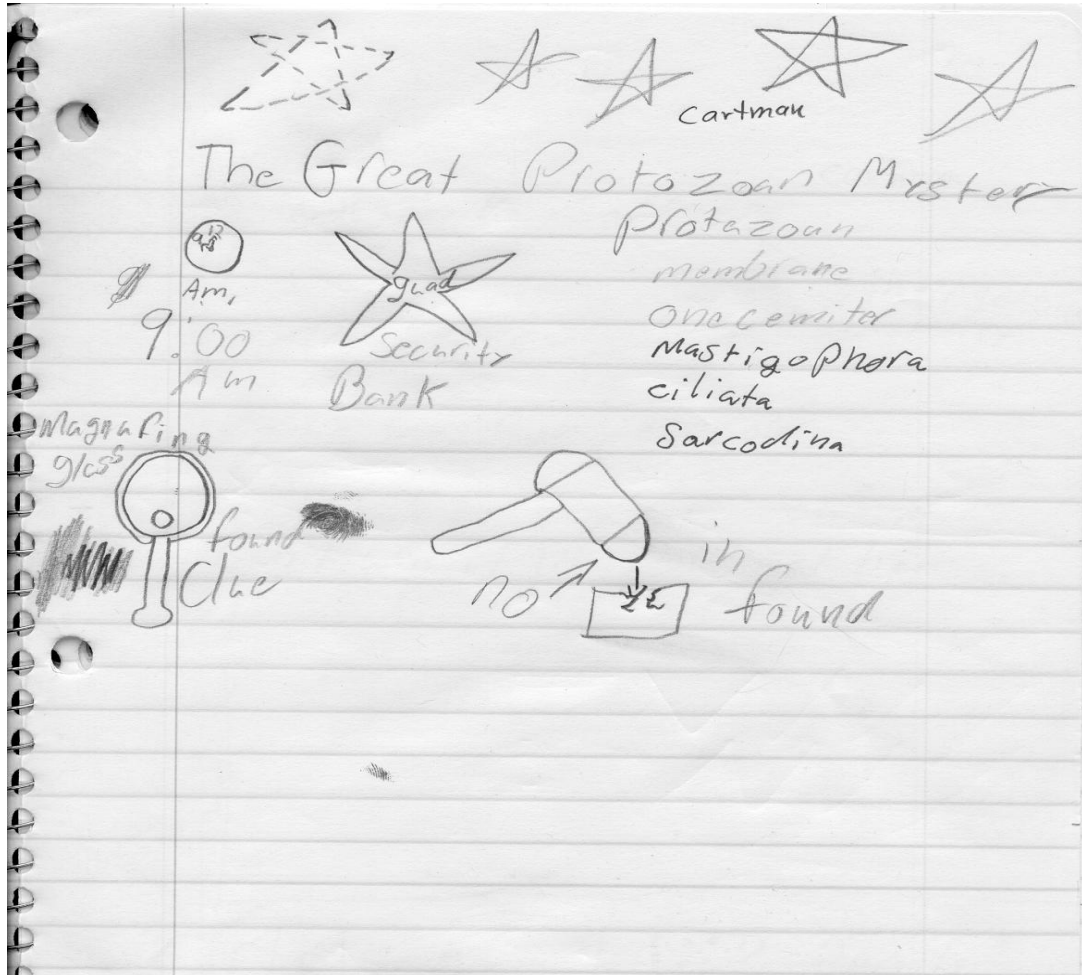
Figure 2 *The Great Protozoan Mystery* response by Terrell

The Great Protozon MYSTERY

Terrell

lokingjat Protozon's | 2. Ridding The bos

3. ABoot the worlds smallest zoo and somthing bing stolen it to

4 it takes place at the bank littlean bus and at the school laboatory house
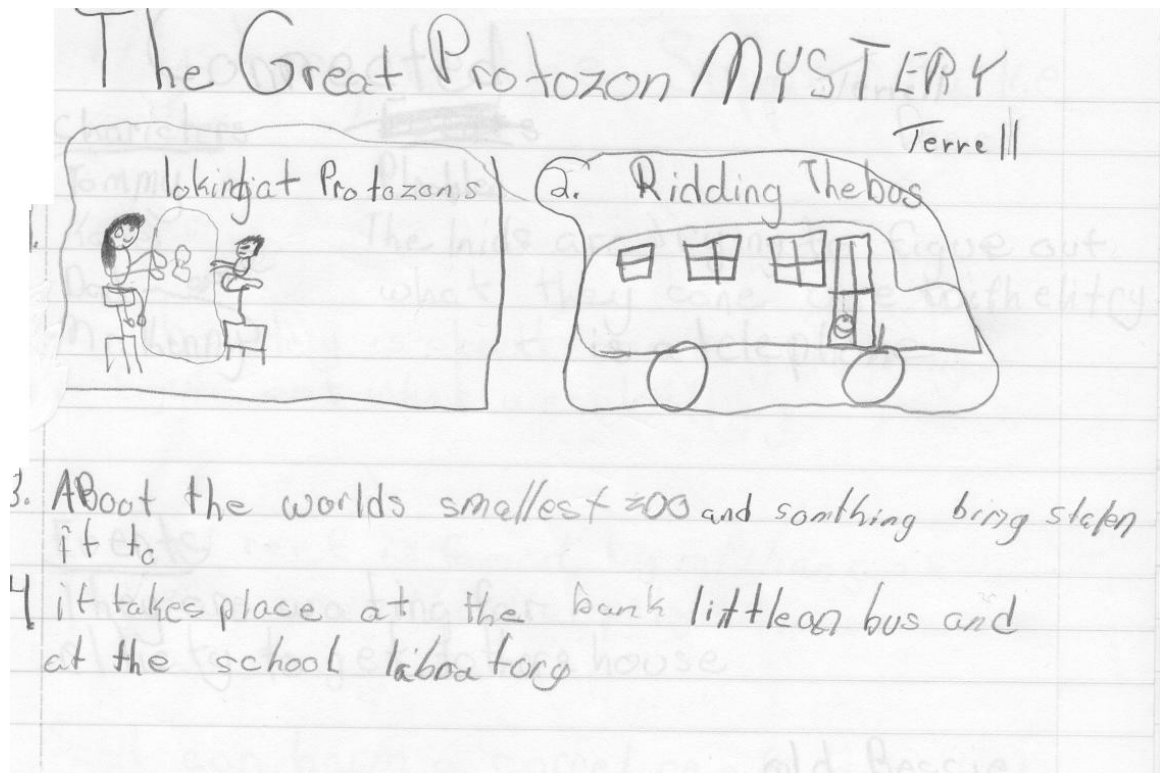
"It depends whether or not I got the story as well as I did this one (*The Great Protozoan Mystery*, Boyle, 1992) then I would probably write a retelling. If I did not get the story, I would just draw." He also explains that students should, "Write down the facts. If they are not that good at writing, then they should draw facts or parts of the story that they would have written about." When asked how students are to distinguish facts from a narrative story, Roadrunner replied, "They are the parts of the main parts of the story." This idea is further explained in the next theme that was emphasized in the data.

Stories Have Main Parts

The second theme that evolved from what the participants were demonstrating in the data was that stories have main parts. The participants pointed out in interviews, observations, and in their journals that if they wrote about the main parts of the story that they were reading or drew illustrations, they would understand and remember the story better than if they did nothing. During an interview, Terrell illuminated this recurring theme.

> Researcher: What did you do to help you remember the important parts of the story?
> Terrell: Well, I wrote the characters' names down. I wrote kind of what happened in the story, and then I drew a couple pictures. In the back of the book it has some questions in it, and I just wrote down some things from that. I wrote a short story about it so that if there were (on the test) any questions about it, I could read that, and maybe it would help me.
> Researcher: Tell me about the retelling you wrote.
> Terrell: Well, I just made it short and wrote about what happened, how it took place, and all the things that happened, sort of like events, but in a story.

Terrell's illustration of the story *Josie and the Hurricane* (Wood, 1992) can be viewed in Figure 3.

Figure 3 *Josie and the Hurricane* response by Terrell

Josie and the Hurricane   Terrell

                                                12-16-99
                          huricon
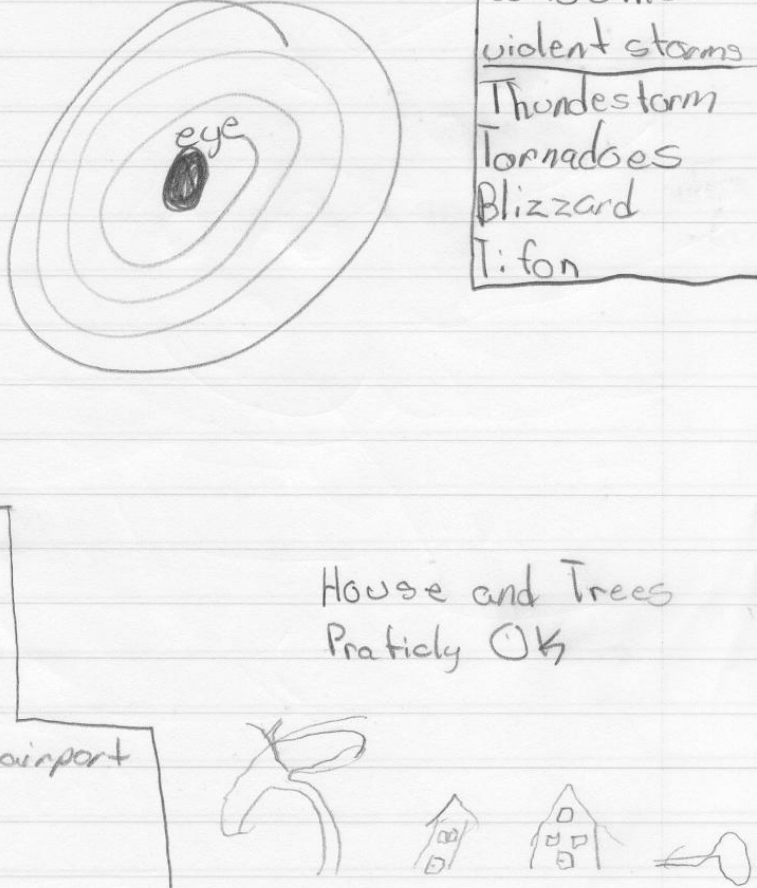
characters
Josie   some other
Mrs. Fbres   violent storms
Mr. Sanchez   eye   Thundestorm
Alicia   Tornadoes
                                                Blizzard
                                                Tifon

story take place in
Floria
Josie house   House and Trees
The school   Praticly OK
The airport
The weather lab in the airport
the beach

The story was about a girl who lived In Ohio
and moved to florida and her best friend
came to see her and there was a huricane
when her fried Alicia was there, and about how people
track henicans and toutght Josie about how they
fallow them

Figure 3 shows that Terrell's story map included a list of the main characters, the setting, a list of other violent storms that he knows of, some illustrations, and a short retelling of the story. He appears to be organizing the information from the story into a map or visual tool that he can use for making sense of the story, and for remembering the story. With the use of boxes around certain information, and the overall balance to the organization of the information, it looks as if he is illustrating his own thought process. He seemed to understand the story better after using this process to map-out his thinking. Prior to the instruction of story mapping, it was discovered through teacher observations and interviews that Terrell, along with the other research participants, did not use any strategies to help them remember or understand stories.

Through the reading lessons, it looked as if a progression of understanding was occurring with the participants. They began to understand the concept that many narrative stories have a similar pattern and to identify information in the stories that they read according to this pattern. Terrell stressed the difference between important and unimportant parts of narrative stories in the following interview excerpt.

> Researcher: If you were going to tell another student about what to put down about a narrative story to help them remember the important parts, what would you tell them?
> Terrell: Put down the main things about the story and a little bit of other stuff.
> Researcher: What main things do you mean?
> Terrell: Like the characters and certain things that took place, a few extra things, and then just write a little bit of stuff about it so that you will remember, and then draw a couple pictures. That way, if it has a picture, you will be able to label it. Don't waste your time just putting things that weren't really meaningful in the story.

Cartman also demonstrated understanding of the main parts of narrative

stories. When asked during an interview what he put into the story map of *Josie*

and the Hurricane (Wood, 1992) to help him with the story he replied:

> Well, for the problem I put a hurricane was coming and they knew it before everybody else. She kept a map with the hurricane's course. The main events were watching the hurricane and where it moved. The solution was when they went to a shelter and stayed there overnight.

Roadrunner too, displayed an understanding of the basic elements of

narrative stories after the lessons on story mapping. When asked during an

observation what he thought about while reading a story he replied, "I think about

the problem and what the character's are doing." I found it interesting that of the

3 participants in the study, Roadrunner was the least verbal during the interviews

and observations, but the most prolific when it came to writing about the stories.

His story retelling can be seen in Figure 4. In this retelling he identified the main

elements of the story as he wrote about it. He also made it evident that he

connected details to the main elements of a story. This is the next theme to be

considered.

Details are Connected to the Main Parts of Stories

After the research participants seemed to establish that narrative stories

have main parts, they began to demonstrate that they were connecting details to

the main parts of stories. This is evidenced in an interview with Terrell.

> Researcher: Terrell, I would like you to explain the pictures you drew for the story *Josie and the Hurricane* (Wood, 1992).
> Terrell: I just decided to draw them, and I drew a hurricane and the eye (the drawing can be viewed in Figure 3), and I kind of knew that. Mostly I knew about hurricanes and I just drew one. Then I drew the houses, the trees, and how it showed it in the picture, how they fell over and stuff.

Figure 4 *The Great Protozoan Mystery* response by Roadrunner

roadrunne
p1

The Great Protozoan Mystery

First they were looking in the newspaper then they figured out out that one of the protozoans were missing. They helped with them. They went to the security gaurd to see which one was missing. They figured out that the missing one was a Sporozoan. They went to the school lab and looked at there notes. Once they find out exactly which protozoan we choose as an exampal of sporozoan, they can make another illistation to replace the missing one. So they went to the school. When they were thore they still knew what 3 slides they used. They finally found the Sporozoa. It was a plasmodiam. Now they can make a new illistration. And now the exhibit will be complete. And it turns out that Mrs. Woo had borowed the plasmodiam to show at a meeting of comunity business representave.

The houses were a little battered so I drew the houses crooked and I did that in pictures instead of words because it gave me an idea.

Researcher: What would you tell another student to pay attention to when drawing pictures?

Terrell: Well, just pay attention to like what you draw, because if you draw something that you think maybe could have happened then it might get you something wrong on the test.

In an interview with Cartman, he discussed the identification of the main parts of stories and the details that connect to them.

Researcher: How do you decide what the important parts of the story are?

Cartman: Usually what happens more, like if they just talk about it in a paragraph or two, or if they talk about it all through the story.

Researcher: What advice would you give to another student about what to pay attention to when they read a story that would help them remember the important parts?

Cartman: I would tell them to watch out for tricky stuff like what exactly does a meteorologist do, and they ask that in the questions on the test. I would tell them to watch out for the easy stuff like what does a hurricane warning mean? They may think that they know that and skip it.

Researcher: What should they do with that information?

Cartman: They should either write it down or draw it into picture.

Roadrunner emphasized the recording of important facts along with the main elements of stories as he wrote story retellings or summaries after he finished reading a story. He said that the retellings he had done helped him to make sense of the story and to remember information to be used on a test. When asked how he decided what to write, he replied, "I put in all the important facts that's in the story." His story retelling for one of the reading lessons over Connected (Taylor, 1992) can be read in Figure 5.

Figure 5 *Connected* response by Roadrunner

Connected

Katie was swinging on the
old porch swing while she
was reading in 1926. She would
read from dinners end and the sunset
she loved to read. She saw Tommy
racing up the road. Katie he cried.
they're putting up the poles
up. Hopping over the gate.
Tommy gasped, were going to have
electricity soon. His dad said, it
will change our lives even more
then old Bessie did. We'll be connected
in two weeks. Tommy was looking
in the mail for things he could
buy. Mom said that they allready ordered
something already. If they can figure
out you can use it first. The next
morning they started to figure out
the puzzle. After that she was
ironing while she was ironing she
was thinking of the solution. It had
been a month after the poles reached
Jimmy's house have they already bought
what you and Dad bought.

Figure 5 Continued *Connected* response by Roadrunner

Jimmy's parents have one the same. They need electricity to do things around the farm. They are uesing energy now buy burning wood to heat our house and cook our food. They use kerosene to light our house. filiment is inside a bulb. They figured out that it was a telephone because her mom said it did not use heat or move

Personalized Story Mapping

The fourth theme that was evidenced in the data was personalized story mapping. This occurred when the research participants demonstrated their own interpretation of a story map that made sense to them. In essence, it looked as if they were creating their own method of learning the information contained within the stories that they were reading. Their maps seemed to represent their own unique thought processes as they recorded their interpretations of the stories. In an interview with Cartman, he explained this phenomenon.

> Researcher: Cartman, when you read *Josie and the Hurricane*, what did you do to help you remember the important parts of the story?
> Cartman: I made like this little chart so I could separate the stuff I didn't understand and the stuff I did understand. I listed hard words that I didn't understand. I put notes so I don't have to write a lot and draw pictures more than I need to.

His personalized story map can be viewed in Figure 6. A pattern emerged in Cartman's retellings. He demonstrated this in his use of labels such as "Notes and Other Stuff," "Pictures and Notes," and "Hard Words." This was representative of all his mappings that he did for the story lessons with the exception of the first lesson. Since story mapping was new to him, his development of his own questioning and recording techniques had not fully developed until subsequent stories were taught. This stood as evidence as to how he was learning a system to comprehend stories, a system that he seemed to lack previous to this study. Cartman explained further about his own story mapping techniques during an interview.

Figure 6 *Josie and the Hurricane* response by Cartman
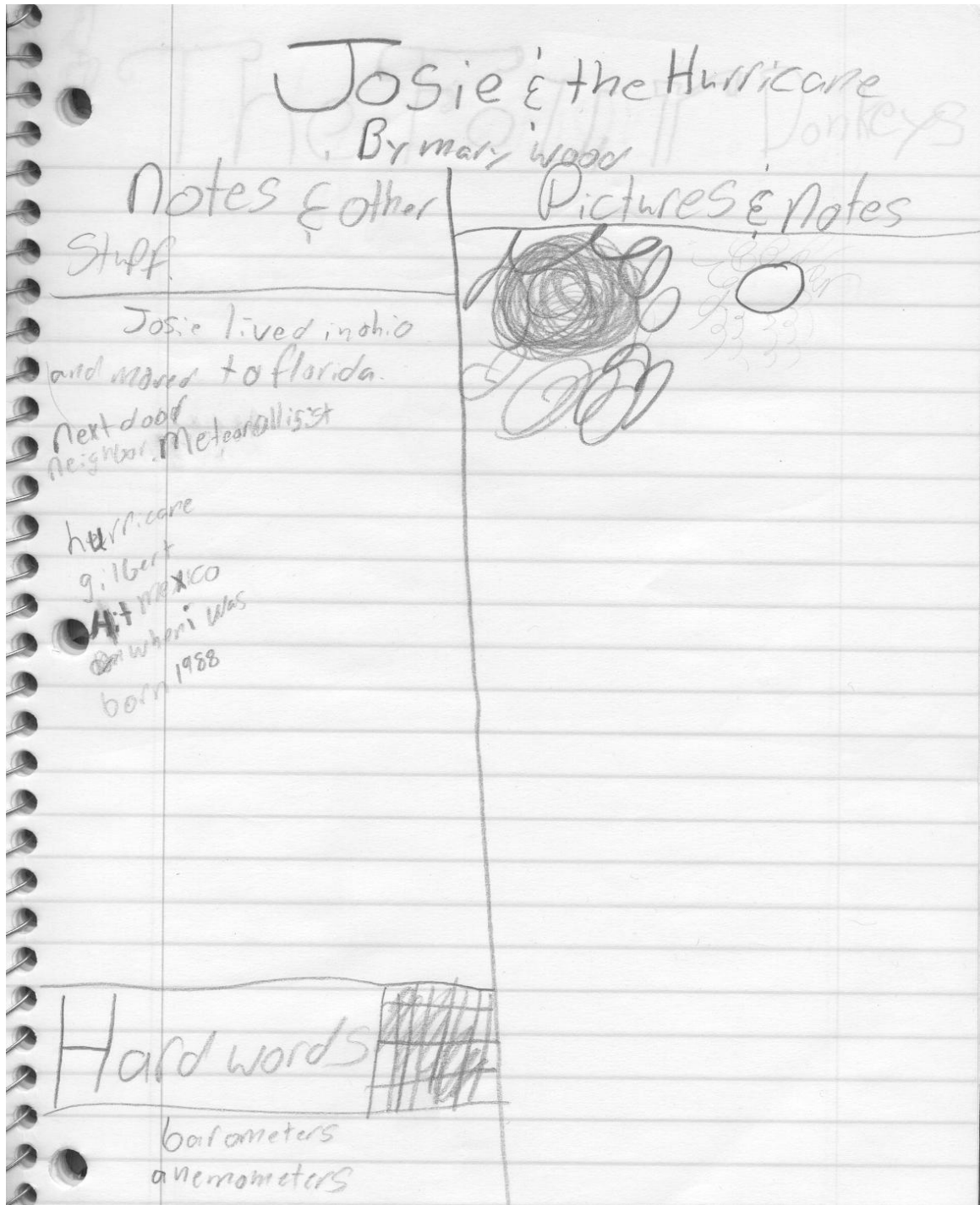
Researcher: Can you tell me why you decided to make your own form of a story map in your journal rather than use the form that I gave you?

Cartman: I didn't feel that this was enough for me (the headings on the researcher made story map, see Figure 7) to do well on the test. I needed more.

Researcher: When you took the test, what did you use to help you with answering the questions?

Cartman: I used my journal and both story maps, the one I filled out in class and the one I made.

Terrell, like Cartman, preferred to invent his own personal method of mapping a story. He appeared to be discovering his own way of thinking about the stories that he was reading. He expressed his opinion about why he chose to develop his own method of mapping during the following interview.

Researcher: How did you decide what characters to put down in your journal, and why did you use your journal instead of the story map outline that was given to you during the lesson?

Terrell: I like using my journal instead of the story map because I have more room, and I just write down all the characters instead of just the important ones. That way if there are any other ones that have questions [on the test] about them, I will have them.

Roadrunner also developed his own personal method of recording the information that he read from stories. He preferred to write a story retelling and did not use pictures, diagrams, or lists. He said that the pictures took too long for him to make and he also liked to use his journal. As the reading lessons progressed, he did seem to move in a progressive manner to a structure in his recordings that was similar to that of the main elements of a narrative story. This idea is evidenced in Figure 7.

Figure 7 *Mystery at the Supermarket* response by Roadrunner

Mystery at the supermarket

Characters: Ross, Sara, and Jennifer

Setting: Caribbian Sea.

The Problem: The Caribbian Seas reefs dont have much fish because theres to much sand and the tug was stirring up thesand.

Main Eevents: Ross, Sara, and Jennifer Went diving they figured out that that something was wrong with the sand.

Solution: The water was dirty brown, Sara finally figured out that the tugs were stirring up thesand.

As described in Chapter III, I gave the district-mandated posttest after all of the reading lessons had been taught. These data demonstrated that the research participants experienced the following gains in their reading comprehension scores when comparing their pre and post tests: Cartman gained by 50%, Roadrunner gained by 28%, and Terrell by 20% (see Table 4). The average gain for the class was 18%. These gains are discussed in Chapter V.

The final phase of the qualitative data analysis was to share the themes and ideas that emerged from the data with the research participants. I shared information about the major themes: (a) pictures convey meaning, (b) stories have main parts, (c) details are connected to the main parts of stories, and (d) personalized story maps with them to validate that I had correctly interpreted the information they had expressed. As their words were read and their pictures discussed, they agreed with the outcomes that I had interpreted from them. In the next chapter, I will discuss how these outcomes are similar to the knowledge base concerning reading comprehension cited in Chapter II.

Table 4

<u>Benchmark Progress Tests Scores</u>

Participant	Pretest	Posttest
Cartman	40%	90%
Roadrunner	67%	95%
Terrell	75%	90%

CHAPTER V

DISCUSSION AND SUMMARY

Focus of the Study

The main objective of this research study was to investigate how fifth-grade students used story mapping to aid their reading comprehension. The findings indicated that the research participants demonstrated enhanced reading comprehension throughout the course of the study. Regardless of the outcomes, this study led to an enhanced understanding of narrative stories for students and gives insight into the reading experience of children who are fluent readers and writers but have difficulty with comprehending what they read.

This thesis investigated the thoughts and actions of 3 fifth-grade boys as they interacted with the reading and mapping of narrative stories. The study sought to describe this interaction by exploring the question: How do fifth-grade children use story mapping to aid their reading comprehension? Using an arts-based approach to data collection and analysis, I developed a qualitative case study that described the reading experiences of 3 fifth-grade boys from their perspective and in the context of their classroom. The ideas and themes that emerged from the data during the case study of 3 fifth-grade students support the current knowledge base concerning reading comprehension as discussed in Chapters II and I. The findings are consistent with those in the literature as related to the outcomes of the study (Carriedo & Alonso-Tapia, 1996; Reutzel, 1985).

Story maps are considered visual, spatial material that graphically display important information gleaned from narrative stories. Barclay (1990) found that when students construct meaning from a narrative story into a visual representation, their reading comprehension increased. The results of this study support these findings. The emergent theme that related to this study was that pictures conveyed meaning. As the participants graphically displayed their representations of the stories they were reading, their understanding of the story and their story recall was enhanced. As pointed out in Chapter II, when students have more than one way of relating to the information they are reading, such as verbally and visually, comprehension is enhanced (Barclay, 1990; Oakhill & Patel, 1991; Simpson, 1996; Vallecorsa & deBettencourt, 1997; Whaley, 1981). Students seemed to have fun with this strategy and were eager to share their illustrations with each other. The sharing also allowed for a valuable exchange of ideas and methods for recording. This case study will add to the knowledge base of research concerning reading comprehension regarding the outcomes of story mapping strategies.

The Research Instrument

In a qualitative study the primary research instrument is the researcher himself (Merriam, 1998). I found it beneficial to have been researching in my classroom with the students that I have established a relationship with over a nine months period. Because of this relationship, there existed a comfort and ease between the research participants and me, as I sought an accurate interpretation of the data that I was collecting from them. As Lawrence-Lightfoot

and Davis (1997) pointed out that meaning is negotiated between researcher and participant, so it was in this study.

Participants

Data were obtained from 3 male fifth-grade students who fit the research profile of students who read and wrote fluently but had difficulty with remembering and understanding what they read. Reading comprehension was enhanced for all 3 participants during the teaching of story mapping. The data collection process of the study was enhanced from the relationships that developed between the research participants and me. I think that the process of developing the participant profiles established an intimacy between the participants and me that helped in the interpretation of the participants' perspectives and gave clues into their behavior. The additional time spent talking with the participants on a one-to-one basis helped to establish a trust between us. The participants looked forward to our time together and were eager to talk and share with me and seemed disappointed when the study drew to an end. If I were to do this study again, I would include participant profiles. I found that they were beneficial in establishing the relationship between researcher and participants and an invaluable tool in interpreting the outcomes of the study. Although data analysis revealed that all the research participants improved in remembering and understanding narrative stories following the treatment lessons in story mapping, it is necessary to reflect that the research participants could have been more motivated to try harder due to the added attention focused on them. The improved posttests scores could have been related to the extra

practice the students had with the questioning format during the treatment lessons in story mapping. I felt that if students were more familiar with the format of the Benchmark Progress Tests and had more practice with this format, they would be better prepared to take these tests. I realized that this strategy could improve their performance on the posttest of the Benchmark Progress Tests. I also realized that the process of interviewing, journaling, and questioning students during the data collection process could also raise the students' comprehension through greater interaction with the stories that they read.

Another reason for the outcome of the study could have been the increase of amount of time spent on narrative stories and reading, which could have caused improved comprehension. However, triangulation of the data (Maykut & Morehouse, 1994) substantiated the findings of the study. Therefore, the results obtained support past studies in story mapping.

Methodological Issues

Much of the current research into reading comprehension and story mapping has been done with adult made story maps used as a pre-teaching lesson or for students to fill-out either during the reading activity or at the end (Emery, 1996; Shanahan & Shanahan, 1997; Vallecorsa & de Bettencourt, 1997). By encouraging my research participants to develop their own system of mapping stories, I saw an opportunity to learn about their thought processes as they engaged in learning about the stories that they read. Then, through retrospective questioning and ongoing data analysis, I discovered the strategies that the students were developing to aid their reading comprehension. The

observations, interviews, and documents that constituted the data collection methods of this study were beneficial in arriving at the outcomes. If I were to do this study again, I would use these methods of data collection. The qualitative approach to research design was advantageous in obtaining the data that was necessary to the interpretation of how the research participants were using story mapping to aid their reading comprehension. I had the freedom to observe and inquire about the participants' experience from their perspective. In effect, the research participants discovered their own reading comprehension strategies.

Educational Implications

The results of this research investigation supported past studies suggesting that reading comprehension increases when students become familiar with the way narrative stories are structured (Reutzel, 1985; Sorrell, 1990). As discussed in Chapter IV, the research participants echoed the refrain that stories have main parts. Once they were able to identify the main parts, understanding was evidenced in their illustrations and comments.

Research has demonstrated that when students are taught to focus on the main ideas of stories and their basic elements, they remember more details as well as understand what it is they have read (Carriedo & Alonso-Tapia, 1996; Reutzel, 1985). The findings in this study support this concept also. It was found that the participants connected details graphically to the main ideas and story elements as they read or after they read a narrative story.

All of the participants developed their own unique method of illustrating and mapping out the stories that they were reading. This is was an exciting

discovery for me to experience. I did not realize how much students were transferring the story map instruction into their own thinking until the visual representations were evidenced. Once they had a pattern established, they continued the pattern, adding to it as each story unfolded. One of the primary emphases in reading education is to help readers develop as thinkers and not just performers (Barclay, 1990; Emery, 1996; Shanahan & Shanahan, 1997; Simpson, 1996). The development by the participants of their own unique story maps suggests that they were growing and expanding in their thinking processes about the stories they were reading.

The outcomes of my case study may provide educators with insight into the strategies used by students as they develop reading comprehension. When asked at the conclusion of the study how they viewed their reading ability, all of the research participants felt that they could remember and understand stories better than they could previous to the study. It was also noted that their overall performance improved in other areas as well. Their writing and reading grades improved and their literary discussion involvement increased. Both Cartman and Roadrunner won an essay contest and read their essays during a public performance in front of an audience of approximately 300 people. All 3 participants improved in their grades, accomplishments, class involvement, and academic assertiveness. The results of the study were illuminating for me as well as the participants.

The data collected from the participants implied that students who struggle with reading comprehension might benefit from story mapping. The average gain

for the class of 18% derived from the pretest and posttest scores implied that all of the students that received story map instruction, improved in their reading comprehension. A month after the conclusion of the study, most students continued to map narrative stories that they read in preparation for tests. When asked if they would continue to use the strategy of story mapping to help them remember and understand narrative stories in the future, 12 out of 19 students stated that they would. It became a strategy that they had found success with and enjoyed.

The results of this study suggest that story mapping instruction could be used as a viable method for teaching the structure of narrative stories, particularly for students who read and write fluently but experience difficulty remembering and understanding what they read. The design of the story map will require that teachers become more actively involved with the stories they ask their students to read. Teachers will need to read and analyze the stories they have students read in order to evaluate the story maps that the students develop. Teachers may benefit as much from becoming involved in the production of the story map as their students. This heightened level of involvement may open new avenues of insight for teachers on how to help students with reading comprehension (Reutzel, 1984). I feel, as a teacher, that the study could be a useful tool to aid educators in the instruction of reading comprehension.

The results of this study should not be generalized to a larger population. However, the findings of the study do suggest that story mapping, as an instructional strategy may be useful for improving reading comprehension. There

are several questions that remain unanswered for future research to address.

First, since story mapping uses a visual representation, would research

participants manifesting a visual learning style preference benefit to a greater

degree from the use of a story map in the improvement of their reading

comprehension than would participants with other learning style preferences?

Second, would the story map strategy have proven more effective compared to

other comprehension strategies if they had been implemented? Finally, does

story mapping cause long-lasting retention? Answers to these questions may

help to further reveal the potential use of story mapping as a strategy to improve

reading comprehension.

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APPENDIXES

Appendix A

Review of Literature Search Documentation

Key Words Searched	Years	Data Base	Total Hits	Relevant Hits
10-6-98 preliminary searches				
Low achievers	1996-1998	ERIC	34	6
Low achievement and Elementary in DE not Secondary	1996-1998	ERIC	291	13
Low achievement & ch'n	1996-1998	Psychinfo	4	0
IQ-achievement	1996-1998	Psychinfo	4	1
Low achievement and Elementary	1996-1998	Sociofile	47	1
Retention and achiem't	-/10-98	Educational Research Service	16	2
Low achievement in DE	-/10-98	Netscape	10	0
Slow learners in DE and Elementary not secondary	1996-1998	ERIC	1	1
Remedial education	-/10-98	LYCOS	100	0
Low achievement	-/10-98	Infotrac	0	0
Low achievement and Elementary	-/10-98	Yahoo	13	0
3-10-99 Updated Review of Literature				
Reading comprehension	**1992-1999**	**ERIC**	**2157**	**-**
Reading comprehension Elementary	1992-1999	ERIC	321	15
7-17-99 Updated Review of Literature				
Thesis and reading	any	LUIS	69	2
Reading comprehension	any	LUIS	152	8
Reading comprehension Assessment	1992-1999	ERIC	8	1
Reading and compre'n	1992-1999	ERIC	2,635	-
Reading and comprehension And elementary	1992-1999	ERIC	927	-
Reading and comprehension And elementary journals	1996-1999	ERIC	97	8
Thesis and reading				

| And comprehension | any | LUIS | 3 | 1 |
| Dissertation and reading | any | LUIS | 3 | 1 |

7-22-99 Updated Review of Literature

Reading and assessment

| And comprehension | any | LUIS | 5 | 0 |
| Elementary and Reading | any | LUIS | 88 | 10 |

8-11-99 Updated Review of Literature

| Story grammar | any | ERIC | 500 | - |
| Story mapping journal only | any | ERIC | 91 | 15 |

The Wichita State University
Application for Project/Proposal Approval
Institutional Review Board (IRB)

Name of Principal Investigator(s): Tonya Huber, Ph.D.

Departmental/Program Affiliation: Curriculum and Instruction / Department of Education

Campus Address: 1845 Fairmount, Box 28   Phone: 978-3322

Name of Co-Investigator(s): Tammi Joseph, Rod Kline, Tim Weih, and Michele Windler

Co-Investigator is: __Faculty Member   X   Graduate Student   Undergraduate Student

Type of Project: X Class Project   X Capstone Project/Portfolio   X Thesis (Tim Weih) or Dissertation   __Funded Research   X Unfunded Research

If student project, address of student: Tammi Joseph, 8407 W. 2nd St. Wichita, KS 67212; Rod Kline, 3249 S. St. Paul, Wichita, KS 67217; Tim Weih, 131 S. Tracy, Clearwater, KS 67026; Michele Windler, 10429 W. 16th St. N., Wichita, KS 67212

Title of Project/Proposal: Researching Effective Teaching Strategies for Low-Achieving Students not Qualifying for Special Education Placement

Expected Completion Date: May 2000

Funding Agency (if Applicable): _____

1. A brief description of research in non-technical language:

Develop and implement effective teaching strategies for low-achieving students not qualifying for special education services.

2. A description of the benefits of the research to the participants, if any, and of the benefits to other educators:

Results will increase achievement in lower achieving students not qualifying for special education.

Results will provide teachers with more effective strategies to reach lower-achieving students.

3. A description of the participants, how the participants are to be selected, how many are to be used, and indicate explicitly whether any are minors (under the age of 18 per Kansas law) or otherwise of "vulnerable" populations, e.g. prisoners, elderly, handicapped, etc:

Students not meeting district goals and objectives or teacher expectation at grade level. Each co-investigator will involve 3 participants per classroom, all of which will be minors.

4. A description of how the participants will be used:

Participants will be involved in focus groups, recursive interviews, questionnaires, assessment, and teacher observation. Interviews will be conducted for no longer than 15 minutes per interview.

5. A description of the risks and discomforts, if any, to the participants. Risks or discomforts may be physical, psychological, or social. Some research involves neither risks nor discomforts but rather violations of normal expectations of daily life. Such violations, if any, should be specified:

For all participants there will be no risks or discomforts, they will not miss instruction or have discomfort within their peer group.

6. A description of the means to be taken to minimize each risk or violation, including the means by which the participant's personal privacy is to be protected and confidentiality of information received maintained (e.g. disposition of questionnaires, interview notes, recorded audio or videotapes, etc.):

For three years, all data will be maintained confidentially. Information will be locked and secured for three years. Codes will be used.

7. If a waiver of written informed consent is desired, a justification of that request:

Not Applicable

8. A copy of any consent form that is to be used with the participants, including a line for signature and date must be attached. The consent is to be placed on WSU departmental letterhead. Consent forms must be retained for three years.

See attached consent form. All consent forms will be retained for three years.

9. Any other information pertaining to the researcher's ethical responsibilities to the participants:

We are enrolled in a site-based Master of Education Program. All three of our site facilitators have Doctorates and have conducted research. We have discussed the ethical issues of educational research.
Our personal professional experience is as follows: Tammi Joseph, certified K-9, with 8 years of experience teaching grades 3 and 4; Rod Kline, certified K-9, with 11 years of experience teaching grades 3, 5, and 6; Tim Weih, certified K-9, with 11 years of experience teaching grades 3 and 5; Michele Windler, certified K-9, with 21 years of experience teaching grades K-3, and E.M.R.

10. Any questionnaire or survey forms used for actual administration or as guides for interviews must be attached.

Possible interview or survey questions will be submitted to IRB as they evolve from preliminary data collection.

The Principal Investigator agrees to abide by the federal regulations for the protection of human subjects and to maintain raw data (including audiotapes and videotapes) and consent forms for a minimum of (3) years beyond the completion of the study. If the data collection or testing of subjects is to be performed by student assistants, the Principal Investigator will assume full responsibility for supervising the students to ensure that human subjects are adequately protected.

_____   _____
   Signature of Principal Investigator   Date

WICHITA STATE UNIVERSITY

Office of Research Administration

April 30, 1999

TO: Dr. Tonya Huber, Tammi Joseph, Rod Kline, Tim Weih, Michele Windler, C&I

The University Institutional Review Board (IRB) has reviewed your statement concerning the research proposal entitled:

Researching Effective Teaching Strategies for Low-Achieving Students not Qualifying for Special Education Placement

The IRB has found that, as described, it complies with all the requirements established by the University in accordance with the Federal Policy for the Protection of Human Subjects.
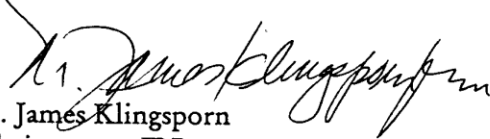
☑   The human subjects will not be at risk.

❑   The human subjects will be at risk but the importance of the objective outweighs the inherent risk to the subject.

❑   A waiver of written informed consent has been approved.

The following three procedures are required for continued supervision of this research project:

1.   Any significant change in the experimental procedure as described should be reviewed by the IRB prior to altering the project.

2.   If your project continues for longer than 12 months you will receive a renewal application form to complete; all on-going projects are subject to annual review by the IRB.

3.   At the completion of your research you are expected to submit a final report; the form is attached.

Thank you for your help and cooperation. If you have any questions, please feel free to contact me (ext. 3745).

Sincerely,

M. James Klingsporn
Chairperson, IRB

Wichita State University
College of Education
Curriculum & Instruction

September 1, 1999

Dear _____:

I am writing to receive your written consent to proceed with a research project that I will be conducting in my classroom this school year. The research study will fulfill part of the requirement for masters in curriculum and instruction that I am pursuing at Wichita State University. I have submitted my research proposal to the Institutional Review Board at Wichita State and received approval in April 1999.

The study will involve all of my students in a teaching strategy to improve reading comprehension. I plan to select four of my students on a voluntary basis to collect specific data from. Data collection procedures will include taped interviews, photographs, journals, portfolios, and field notes. Although the data collected will be part of my concluding report, the participants' names will be coded and protected from disclosure.

A letter explaining the study will be given to the parents of the four fifth grade students that I select. The letter will contain an area for a signature to give consent for the child to participate in the study.

If you have any further questions or comments, please do not hesitate to contact me. Thank you for your time and consideration.

Sincerely,

Tim Weih, Fifth Grade Teacher

_____
Signature of Building Principal (Name)   Date

_____
Signature of District Superintendent (Name)   Date

Appendix E
Research Audit Trail and Timeline

Name: Tim Weih
Site: WSU
Activity Description and Project Title
Proposed event dates are underlined

Audit Trail & Timeline:	Date
Preliminary review of literature began	10-6-98
Annotated review of literature	10-18-98
Review of literature in Noll (1999)	11-1-98
Review of literature in Hubbard & Power (1993)	2-5-99
Wrote IRB with group	3-1-99
E-mailed IRB to Dr. Huber for feedback	3-2-99
Faxed redrafted IRB to Dr. Huber for feedback	3-6-99
Dr. Huber replied regarding IRB, need consent forms	
And questions for focus groups	3-8-99
Drafted consent forms and focus group questions	3-8-99
E-mailed consent form to Dr. Huber for feedback	3-9-99
Handed-in completed IRB with consent form and focus	
Group questions	3-11-99
T-BAR project completed	3-18-99
IRB officially approved by WSU	4-27-99
Text analysis-Lawrence-Lightfoot & Davis (1997)	6-3-99
Article review for CI 717 (3) Davis & Butler-Kisber	6-5-99
Article review for CI 717 (3) He	6-5-99
Text reading-Maykut & Moorehouse (1994)	6-8-99
Text analysis-Merriam (1998)	6-16-99
Ablah Library research for thesis	6-24-99
Thesis review by Parscal (1996)	6-30-99
Thesis review by Stephens-Johnson	6-30-99
Drafted research proposal and table of contents	7-1-99
Research overview updated	7-6-99
Review of literature updated	July-99
Redrafted research proposal and table of contents	August-99
Rough-drafted chapters 1-3	August-99
IRB submitted to district	9-1-99
IRB approved by district	9-7-99

Timeline for Research Audit Trail and Thesis Development   1999

Thesis committee development	September
Created story maps for lessons	September
Interviewed RR's parent over phone	Sept. 28

Interviewed Cartman & Terrell's parents over
phone   Sept. 29
Sent consent forms with participants   Oct. 4
Received signed consent forms back   Oct. 5
Thesis defense proposal meeting   Oct. 6
Thesis proposal approved   Oct. 6
Transcribed tape from thesis proposal defense   Oct. 7
Participants selected code names   Oct. 11
Informal unstructured interview of all 3 for profiles   Oct. 14
Informal unstructured interview of all 3 for profiles   Oct. 15
Interviewed past teachers for profiles   Oct. 19
Wrote profiles of participants   Oct. 20
Cartman suspended from school   Oct. 20
Introduced story mapping lesson 1 with GPM   Oct. 26
Taped story map lesson 1 and wrote observations   Oct. 26
Test over first story map lesson 1 GPM wrote observations   Oct. 27
Taped interview with RR over GPM interview 1   Oct. 28
Transcribed interview 1 with RR   Oct. 28
Taped interview 1 with Cartman over GPM   Nov. 2
Taped interview 1 with Terrell over GPM   Nov. 4
Transcribed interviews 1 with Cartman & Terrell   Nov. 5
Story mapping lesson 2 *Connected* wrote observations   Nov. 8
Submitted thesis updates to Dr. Huber   Nov. 8
Test over story map lesson 2 *Connected* wrote obs.   Nov.9
Story mapping lesson 3 MSM wrote observations   Nov. 11
Test over story map lesson 3 wrote observations   Nov. 12
First attempt to unitize interview data   Nov. 17
Meeting with Dr. Huber thesis talk   Nov. 18
Received thesis revisions from Dr. Huber   Nov. 18
Story mapping lesson 4 *Josie and the Hurricane*
Wrote observations   Dec. 15
Test over *Josie and the Hurricane* wrote observations   Dec. 16
Interview 2 with Cartman and Terrell   Dec. 16
Benchmark test "The Four Donkeys" wrote observations   Dec. 20
Interview 2 with Roadrunner   Dec. 20

Timeline for Research Audit Trail and Thesis Development   Jan. 2000

Transcribed second interviews from participants   Jan. 20
Unitized interview transcripts/read and scrutinized phase 1   Jan. 21
Unitized interview transcripts/read and scrutinized phase 2   Jan. 22
Unitized interview transcripts/read and scrutinized phase 3   Jan. 23
Wrote the discovery list phase 1   Jan. 24
Wrote the discovery list phase 2   Jan. 25
Wrote the discovery list phase 3   Jan. 26
Category coding   Jan. 28

Wrote rules for inclusion	Jan. 29
Edited narrative over data analysis	Feb. 1
E-mailed Dr. Huber regarding committee update	Feb. 1
Wrote/edited narrative over trustworthiness	Feb. 2
Emailed Dr. Huber with thesis defense dates	Feb. 6
Drafted Chapter IV	Feb.
Presented outcomes to participants	Feb. 21
Drafted Chapter V	Feb. & March
Received Graduate approval for defense dates	March 20
Thesis oral defense	April 3
Revisions from committee	April
Full approval from thesis committee	May 4
Graduate approval for thesis to be bound	May 4
Graduation	May 12

**Wichita State University
College of Education
Curriculum & Instruction**

Informed Consent Form

You are invited to participate in the study of uses of effective teaching strategies in the area of reading. We hope to learn more about which effective teaching strategies are the most helpful to our students. You were selected as a possible participant in this study because you are a student in my class.

If you decide to participate, you may be involved in focus groups, recursive interviews, questionnaires, and assessments. The teacher will insure that the participant will not miss instruction time, be involved in an interview for more than 15 minutes, or experience any undo risk or discomfort.

Any information obtained in this study in which you can be identified will remain confidential and will not be disclosed only with your permission. We will not use real names when reporting the information collected. The information collected will be used in our portfolio project and/or thesis which is part of the work for our Masters Degree.

Participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your future relations with our school, Wichita State University, or your grade in any way. If you decide to participate, you may withdraw form the study at any time without affecting your status as a student.

If you have any questions about the research, please ask. If you have any additional questions during the study, we will be glad to answer them. You can call us at: Tammi Joseph and Rod Kline, 794-4260; Tim Weih, 584-2081; and Michele Windler, 833-3540.

You are making a decision whether or not to participate. Your signature indicates that you have read the information provided above and have voluntarily decided to participate. You will be given a copy of this consent form to keep.

_____   _____
Name of Participant   Date

_____   _____
Signature of Parent or Legal Guardian   Date

_____   _____
Signature of Co-Investigator (Tim Weih)   Date

_____   _____
Signature of Principal Investigator (Tonya Huber, Ph. D.)   Date

_____   _____
Signature of Building Principal (Name)   Date

Observer: Tim Weih
Participants: Cartman, Roadrunner, and Terrell
Key Descriptors: Story Map, Characters, Problem, Events, and Solution
Day & Date: Wednesday, December 15, 1999
Location/Setting: The Participants' Classroom
Beginning & Ending Observation Time: 1:05 P.M. to 1:45 P.M.
Event Observed: Story Map Lesson over *Josie and the Hurricane*

This was the last reading lesson that was taught using the story mapping comprehension strategy. The story elements common to many narrative stories (main characters, problem, events, and solution) were reviewed. The story was introduced as one that fit this pattern and an outline was given to the students that they could follow. They were also allowed and encouraged to create whatever illustrations they wanted to that would represent the story elements in a way that would be beneficial to them. The students were informed that they would have a test over the story the following day and that they could use their story maps that they created or filled out on the test. They would not have the story itself to refer to.

When the students were allowed to begin, I walked around the room recording what I saw them doing and asked a question periodically to clarify what I thought was happening. Roadrunner read the story and did not illustrate anything or write anything until he was done reading. Once he was done, he wrote a summary of the story in his reading journal. He asked me if he could use more than a page to write the summary of the story and I told him that he could write or draw as much as he wanted to. He did not write anything on the story map outline that I had provided; his entire recording was done in his journal. I asked him why chose to write a summary instead of drawing pictures and he said that pictures took him too much time and that he could record the important facts of the story better in a summary. His summary included the main elements found in narrative stories.

During this observation, Cartman had the story map outline that I provided in front of him along with his reading journal. As he read the story, he would periodically stop and write in his journal. I inquired into his recordings. "I write down all the hard words, and I make drawings with labels so that I remember the clues. I also write notes about the story." When he was finished with the reading the story, he went over his journal entries and added more drawings.

Terrell like Roadrunner, read the story through before writing anything in his journal. However, when he was finished with the story, he first filled in the story map outline that I had provided. He would refer back to the story frequently as he made entries in his reading journal. His recordings were short written notes and small, labeled drawings that had the headings of the main story elements.

He also included a short written summary at the end. He said that he wanted to get all the important information recorded in his journal that would help him on the test.

In summary, all the participants created their own version of a story map. All of their maps included the main elements commonly found in narrative stories and emphasized throughout the reading lesson instruction. The maps that the participants created were not more than one page in their reading journals.

Interviewer: Tim Weih
Interview Number: Two
Informant: Terrell
Key Descriptors: Story Map, Characters, Problem, Events, and Solution
Day & Date: Thursday, December 16, 1999
Location/Setting: The Informant's classroom
Beginning & Ending Interview Time: 7:35 A.M. to 7:50 A.M.
Story: *Josie and the Hurricane*

Interviewer (I): What did you do to help you remember the important parts of the story?
Terrell: Well, I wrote the character's names down. I wrote kind of what happened in the story, and then I drew a couple pictures. In the back of the book it has some questions in it, and I just wrote down some things from that. I wrote a short story about it so that If had any questions about it, I could read that, and maybe it would help me.
I: Tell me about this short story that you wrote?
Terrell: Well I just made it short and wrote about what happened, how it took place, and all the things that happened, sort of like events, but in a story.
I: How did you decide what characters to put down in your notebook, and why did you use your notebook?
Terrell: I like using my notebook instead of the story map because I have more room, and I just write down all the characters instead of just the important ones that way if there are any other ones that have questions about them I will have them.
I: We took a test today over the story *Josie and the Hurricane*. What is your opinion about what you choose to put in your journal or notebook to help you prepare for the test we had?
Terrell: I kind of remembered most of the questions. I really didn't have to use my journal, but I did a little bit. But if I didn't have it, I would need it, but I used it a little bit.
I: If you were going to tell another kid about what to put down about a narrative story to remember the important parts, what would you tell them?
Terrell: Put down the main things about the story and a little bit of other stuff.
I: Like what main things?
Terrell: Like the characters and certain things that took place, a few extra things, and then just write a little bit of stuff about it so that you will remember, and then draw a couple pictures. That way, if it has a picture you will be able to label it.
I: What would you tell another kid not to waist their time doing?
Terrell: Don't waist your time just putting things like weren't really meaningful in the story.

I: Can you tell me how they would tell the difference between what is or is not meaningful?

Terrell: Well, if it didn't really talk about it very much. If it just talked about it for 4 or 5 sentences then you probably wouldn't want to write it down. But if it talked about it throughout the whole story or a page or just half a page then you might still want to write it down.

I: Terrell, I am going to ask you about the pictures you decided to draw in your journal. Did you copy the pictures from the story?

Terrell: No, I just decided to draw them, and I drew a hurricane and the eye, but it didn't have much description about hurricanes except the eye, and I kind of knew that. Mostly all I knew about hurricanes and I just drew one. Then I drew the houses, the trees, and how it showed it in the picture how they fell over and stuff. The houses were a little battered so I drew the houses crooked and I did that in pictures instead of words because it gave me an idea.

I: If you were going to tell other kids about pictures, what would you tell them to pay attention to?

Terrell: Well, just pay attention to like what you draw, because if you draw something that you think maybe could have happened then it might get you something wrong on the test.

The interview ends.

Appendix I
List of Stories Used For Reading Lessons

1*. James and the Giant Peach* (Dahl, 1996)
2*. Morning Girl* (Dorris, 1994)

Horizon Plus Science Stories (Boyle, Taylor, Frost and Wood, 1992)

3. *The Great Protozoan Mystery* (Boyle, 1992)
4. *Connected* (Taylor, 1992)
5. *Mystery at the Supermarket* (Frost, 1992)
6. *Josie and the Hurricane* (Wood, 1992)

Name _____

Date _____

Title: _____

Characters: _____

Setting: _____

The Problem: _____

_____

_____

Main Events: _____

_____

_____

_____

_____

Solution:_____

_____

_____

Story Quiz

Questions for Story Maps
Story Title: *Connected* !

Name_____

Date_____

Read the questions, and write your answers on the lines. You may use your story map to help you with your answers.

1. In the beginning of the story, why was Tommy so excited?

_____

_____

_____

2. Why does Katie refer to the problem as a mystery?

_____

_____

_____

3. What clues finally helped Katie and Tommy guess correctly?

_____

_____

_____

Read the questions, and fill in the circles next to your answers. One, two, or three answers could be correct. You may use your story map to help you with your answers.

4. What will happen after the electric wires reach the Kenney farm?

○ a. They will have a new car.

○ b. They will have a new dishwasher.

○ c. They will have electric lights.

○ d. They will have their house wired.

5. Why did Tommy go to Jimmy's house?

○ a. He wanted to help him do chores.

○ b. He wanted to help solve the mystery.

○ c. He wanted to see what was new.

○ d. He wanted to ride in Old Bessie.

6. What did Katie learn about electric energy?

○ a. It can be used to make heat.

○ b. It can be used to make things move.

○ c. It can be used to make light.

○ d. It can be used to operate appliances.