Visualization and Drama-Based Techniques to Impact Reading Comprehension of a Fourth-Grade Student with a Cognitive Disability

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Visualization and Drama-Based Techniques to Impact

Reading Comprehension of a Fourth-Grade Student with a Cognitive Disability

By

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ABSTRACT
This case study explores the impact of visualization and drama-based techniques on the reading comprehension of a fourth-grade student with a cognitive disability. Existing literature has indicated that reading comprehension is an area of struggle for many students and that visualizing and using drama can be highly effective in improving understanding of a text. Eighteen interventions were designed to work on three strategies, using a graphic organizer to document sensory information, drawing a scene from a story, and finally acting out a scene using props over the course of 6 weeks. This case study found that visualization and drama-based strategies are highly effective in improving reading comprehension and other areas of reading for students with cognitive disabilities improving recalling and fluency skills.
CHAPTER 1: INTRODUCTION TO RESEARCH

Introduction to the Child and Connection to Common Core Essential Elements

Danielle, a fourth-grade student with a cognitive disability was selected for this case study. Danielle is a recipient of a public education in an urban environment, and has attended 5 schools within her current school district. While in a self-contained environment for students with significant disabilities, Danielle is extremely capable with her speech and ability to express herself. She has an excellent sense of humor and a great imagination, making her an ideal candidate for the drama and visualization-based approaches implemented in this case study.

Having worked with Danielle as her classroom teacher for over a year, I determined that this particular intervention would be beneficial in meeting some of Danielle’s reading needs. While her fluency is her strongest skill in reading (around the kindergarten-first grade level, through observations and testing), I have found that Danielle comprehends very little of what she reads or what is read to her. She relies heavily on pictures in books to recall events, and without the book in hand to refer back to, struggles to remember names and main ideas in stories.

The purpose of this study; therefore, is to help bridge these gaps for Danielle by playing to her strengths, her enthusiasm for learning, her fluency ability, and her vivid imagination. Since Danielle takes the Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD), this study will address the Wisconsin Common Core Essential Elements EERL.4.1 Use details from a text to recount what the text says, EERL.4.2 Determine the main idea of a text, and EERL.4.3 Use details from a text to describe a character in a story (Wisconsin Department of Public Instruction, 2012).
Connection to Special Education Law

Danielle is in a unique situation, as she is a student with a disability in a most-restrictive placement. Per the Individuals with Disabilities Education Act (IDEA), students with disabilities should be given a placement that is least restrictive (or removed from non-disabled peers) given their needs demonstrated in their Individualized Education Program (IEP).

As determined in her IEP meetings and her most current re-evaluation (11/2012) for Special Education services, Danielle requires a curriculum that goes beyond the scope and sequence of the general curriculum. She also requires a small environment that supports functional, behavioral, organizational, and social skills also beyond the scope and sequence of the general education curriculum and environment. Therefore, per IDEA as documented in her goals, it has been determined that an alternate curriculum, alternate test, and an alternate and most-restrictive setting meet the needs of this particular student and that this is the least restrictive environment in which Danielle can be successful.

Operational Definitions and Acronyms

Below is a glossary of all acronyms, key terms and definitions necessary to understand this case study:

Cognitive Disability- According to the “Cognitive Disability Evaluation and Decision-Making” Evaluation Guide published by the Wisconsin Department of Public Instruction, a cognitive disability means, “significantly subaverage intellectual functioning that exists
concurrently with deficits in adaptive behavior and that adversely affects educations performance” (2002).

**Drama**- For the purposes of this study, I define drama as acting out a scene using props and putting oneself in the shoes of a character.

**IDEA**- Individuals with Disabilities Education Act

**IEP**- Individualized Education Program

**Intervention**- For the purposes of this study, intervention is defined as spending substantial 1 on 1 time working on deficient skills in attempt to improve upon those skills that are lacking.

**MAP**- This is a test designed by the Northwest Evaluation Association and stands for Measures of Academic Progress (Northwest Evaluation Association).

**Most-Restrictive Placement/Self-Contained**- Per IDEA law, students with disabilities are required to be in a setting of least restriction to their general education peers. A most-restrictive placement indicates the child’s disability and needs go beyond the scope and sequence of the general education curriculum and environment therefore requiring them an alternate placement removed for more than 60% of the day from their general education peers.

**QRI**- This is another test designed by Leslie and Caldwell that stands for Qualitative Reading Inventory (2011).

**Visualization**- For the purposes of this study, visualization is imagining a scene in one’s head and then communicating this vision either through words or drawing.

**WAA-SwD**- Wisconsin Alternate Assessment for Students with Disabilities
Conclusion

Chapter one has served to introduce Danielle, the student receiving drama and visualization interventions in this particular case study. Her education needs have been described in detail and according to Special Education Law. Finally, this chapter provides a glossary of all key terms and acronyms used in this study. The following chapter will be a review of literature pertinent to this case study including a look at reading comprehension theory and practice, reading comprehension for students with disabilities, and finally, literature and studies surrounding drama and visualization strategies and their effectiveness.
CHAPTER TWO: REVIEW OF LITERATURE

Introduction

The purpose of this study was to examine the effects of visualization and drama-based strategies on reading comprehension for a student with a cognitive disability. Research suggests that interventions can be highly successful in students with disabilities especially teaching strategies such as self-questioning and teaching students to create maps documenting main ideas. Research also suggests that visualization and drama-based strategies can have positive short and long-term effects on reading comprehension. The first section of this chapter focuses on the theory and practice behind reading comprehension as a whole. The second section focuses on reading comprehension strategies and interventions for students with disabilities. Finally, the third section focuses on studies involving visualization and drama-based techniques.

Reading Comprehension Theory and Practice

In this first section, four research studies are presented. These studies provide insight into reading comprehension theory and practice. This includes examining research conducted on strategies that improve reading comprehension, difference in reading comprehension based on gender, possible benefits of teaching reading comprehension strategies to toddlers, the effects on reading comprehension when questions are asked during or after a passage and the effects when a passage is read aloud versus silently, and challenges that upper elementary students face with reading comprehension. These studies illustrate the multi-faceted and multi-layered nature of
reading comprehension necessary to understand in order to effectively conduct an intervention in the area of reading comprehension.

In their study on reading comprehension, Prado and Plourde asked and explored two important questions:

“will there be a difference between students’ pre- and post-Northwest Evaluation Association (NWEA) reading test scores after teaching the following reading strategies: (a) questioning to clarify meaning; (b) using background knowledge to make connections; (c) making inferences and drawing conclusions; (d) visualizing or creating mental images from what is being read; (e) determining the most important ideas or themes; (f) synthesizing information; and (g) using “fix-up” strategies such as skipping ahead, rereading, using a dictionary, and reading passage aloud” (Prado & Plourde, 2011, p. 34).

They furthermore wondered if there would “be a significant different in NWEA reading pre- and posttest scores between boys and girls in all of the above areas” (Prado & Plourde, 2001, p. 34).

The independent variable of this study was “the explicit teaching of reading” and the dependent variables were the pre and posttest of the reading portion of the NWEA test (Prado & Plourde, 2001, p. 38). A total of 57 students participated in the study during the 2008-2009 school year. 32 were males and 25 were females and all students were in the fourth grade. The demographics showed mostly Caucasian and Hispanic participants with a small percentage of African American students.

Students were given the NWEA reading test in October followed by 3 months of reading instruction (targeting the reading strategies listed in the first research question).
Students were then retested using the same NWEA reading test in January. The researchers found that there was a significant increase in the means of scores between the mean of the pretest (mean=201.82) and mean of the posttest (mean=207.1) at p<.001 (Prado & Plourde, 2001, p. 39). Both boys and girls showed significant growth from the pretest to the posttest; however, the mean of the girls’ scores was higher than the mean of the boys’ scores. That being said, the researchers found that this difference was not statistically significant.

This research demonstrates that specifically teaching reading strategies such as clarifying by using questions, connecting using background knowledge, making inferences and drawing conclusions, visualizing, finding main ideas, and using “fix-up” strategies play a role in improving students’ reading ability. This study also serves as a reminder that despite research on differences in ways that boys and girls learn, gender does not play a role in reading comprehension.

The previous study explored some reading comprehension strategies and provided data showing there is no significant difference between genders when it comes to reading comprehension. The next study takes reading comprehension strategies one-step further by focusing on one component of reading, the use of comprehension questions during or after a text is read, and how this affects reading comprehension. The following study also uses this data to determine that early interventions can positively influence a child’s reading comprehension later in life.

In their study conducted in the Netherlands, van den Broek, Kendeou, Lousberg, and Visser (2011) explore the reading comprehension strategy of questioning with toddlers and young readers, wondering if these interventions are beneficial for long-term
reading comprehension based on working memory and developmental stages. The independent variable in this study was reading comprehension questions given either during or after reading, and the dependent variables were a recall of a story and a working memory capacity test.

Two studies were conducted, one for 40 children between the ages of 2 and 3. The second study had 42 participants between the ages of 8 and 9. Both groups had an equal number of girls and boys.

In both studies, girls and boys were equally divided into two groups, either a group where questions would be asked during the time a narrative was read aloud (at the end of paragraphs or at natural breaks in a story) or a condition where questions would be asked following a narrative. Each participant was then tested individually for approximately 30 minutes and was “asked to recall the whole story while looking at pictures from the narrative” (van den Broek, Kendeou, Lousberg, & Visser, 2011, p. 263).

The researchers found that both age groups showed higher reading comprehension when questions were presented during and not after the reading of a text. They also found that there was a positive correlation between students’ scores on the recall task and their performance on the working memory capacity test. The researchers interpreted this data as a sign that early reading comprehension interventions could help students to be more successful with reading comprehension later, in elementary or high school.

This study displays another reading comprehension strategy, the use of questions to interpret a text and suggests that even at an early age, students can be taught to use this
strategy during reading to increase their overall comprehension. It also shows that memory plays a large role in being able to recall events from a story.

Another reading comprehension strategy, whether a text is read aloud or silently, can help provide insight into the ways in which reading comprehension should be taught so that students are best able to process and access reading materials.

Hale, Skinner, Williams, Hawkins, Neddenriep and Dizer (2007) designed a study that examined “the relationship between silent-reading comprehension and aloud reading comprehension” (Hale et al., 2007, p. 11) in order to determine if reading comprehension was affected by how a student reads a text. The independent variable in this study was words correct per minute (WCM) on a passage written at the student’s grade level. The dependent variables were three subtests from the Woodcock-Johnson Achievement Tests, 3rd edition (WJ-III Ach; McGrew & Woodcock, 2001).

The participants in this study were 51 fourth and fifth graders and 42 tenth through twelfth graders. Eighty-two percent of the elementary students and 100% of the secondary students read at an instructional or mastery level. The participants in the elementary study were from a rural school in the Southeastern United States, and the secondary students were from an urban high school, and Caucasian, African American, Asian, and Hispanic populations were represented.

During the study, researchers provided each student with passages and multiple-choice comprehension questions based on their ability level. Students were exposed to three passages and questions that they could read aloud, and three passages and questions that they read silently. Students were also given three subtests from the Woodcock-Johnson Achievement Tests, 3rd edition (Letter-Word Identification, Reading Fluency,
and Passage Comprehension) to find a Broad Reading Grade-Equivalent for each participant. In all but four special cases, students were tested over the course of three sessions (the first for the aloud reading passages, the second for the silent reading passages, and the third for the WJ-III), and sessions were audio-recorded; 20% of the sessions were then listened to and scored by a second observer in order to preserve integrity.

Hale et al. (2007) found that comprehension was significantly higher when students read aloud than when they read silently. Because the relationship or correlation between silent and aloud reading comprehension was very low and therefore not significant, the researchers determined that aloud and silent reading are two separate skills that need to be taught in different ways. Furthermore, the researchers found that elementary students had significantly higher reading comprehension than secondary students.

This study provides insight into reading comprehension in general, showing that reading aloud will lead to better reading comprehension for students. It also suggests that reading and comprehending during aloud and silent reading are separate skills that must be taught in different and separate ways.

While important to look at specific reading comprehension strategies such as how a student reads a text, it is also critical to examine why students struggle with reading comprehension. The following study explores elements of texts that lead to difficulties in reading comprehension for students, helping to further understand both the theory and practice of reading comprehension.
In examining the reasons behind the “fourth grade slump,” a time when students typically begin to struggle with reading, McNamara, Ozuru and Floyd (2011) conducted research to further understand “the factors that lead to comprehension difficulties among elementary school children” (McNamara, Ozuru, & Floyd, 2011, p. 233). Looking at the differences in comprehension between narrative and expository texts as well as low cohesion (texts that require more inferences and previous knowledge) and high cohesion texts (provides more examples and requires less inferences and prior knowledge from the reader), the researchers hypothesized that comprehension depends on the characteristics of a text as well as the reader’s knowledge; therefore, they expected that science texts and low cohesion texts would be more difficult for students to comprehend.

The independent variable in this study was scores on either the Woodcock Johnson III Academic Knowledge or on the Woodcock Johnson III Word Attack and the dependent variables were “multiple-choice questions, free recall questions, and cued recall questions” (McNamara et al., 2011, p. 240) to test comprehension of texts.

Sixty-five fourth-grade students participated in this study. The students were from a large metropolitan school district and came from four different public schools. The demographics were as follows: 54% Caucasian, 40% African American, 3% Hispanic.

Participants were each given a 2-hour assessment battery administered by trained graduate students. The battery consisted of silently reading eight texts (two of which were science and high-cohesion, two were science texts and low-cohesion, two were narrative and high-cohesion and two were narrative and low-cohesion), answering 12 multiple-choice questions, free, and cued recall questions after reading each text, and
taking reading competency tests, either the Woodcock-Johnson III Academic Knowledge Test or the Woodcock-Johnson III Word Attack Test (WJ-III Ach; McGrew & Woodcock, 2001).

This study found that despite high or low-cohesion, the biggest factor affecting children’s comprehension was genre; the results indicated that all students performed higher on the multiple-choice questions, free recall, and cued recall for narrative texts than science texts. The study also found that students performed better when recall was cued as opposed to the free recall task only for narrative tasks; the type of recall (cued or free recall) did not matter in science texts demonstrating the “larger effect of knowledge for the science texts than for the narrative texts” (McNamara et al., 2011, p. 243). The researchers also found that students who were stronger decoders understood all texts better than students who were not.

The study demonstrates some important data concerning fourth-grade readers showing that fourth-graders are more likely to comprehend narrative texts than science texts regardless of the cohesion, because they may lack prior knowledge on the topics. Taking this idea one step further, it is clear that prior knowledge is pivotal to reading comprehension. Another important take-away is that decoding skills also help in reading comprehension for fourth graders, providing more insight into the multi-faceted task of understanding what you read.

Section one provides a framework of reading comprehension drawing from sources that display theory behind reading comprehension as well as some specific reading comprehension strategies and practices that inform the teaching and implementation of reading comprehension strategies. Prado and Plourde (2011) show
that there is no difference in reading comprehension between genders and also outline seven reading comprehension strategies. Van den Broek et al. (2011) also add to the theory behind reading comprehension suggesting that reading comprehension strategies can be taught as early as ages 2 or 3 to significantly benefit a student’s reading comprehension abilities later in life. These researchers also explore one specific reading comprehension strategy, the use of questions, determining that the most effective use of this strategy is to teach and implement it during reading. Hale et al. (2007) also examine one specific reading comprehension strategy and their data indicates that students are more likely to understand a text if they read it aloud versus silently. Finally, McNamara et al. (2011) finds that students may struggle with reading comprehension because they are not provided with prior knowledge that some genres (namely science-based) require.

**Reading Comprehension for Students with Disabilities**

Having examined some research regarding reading comprehension, it is critical to consider research regarding reading comprehension for students with disabilities, as the student in this case study has a cognitive disability. This section explores five studies including two meta-analyses, focusing on data regarding special education reading growth, current reading comprehension strategies taught in special education classrooms, the use and effectiveness of story mapping in reading comprehension for students with disabilities, and overall reading comprehension strategies and their effectiveness for students with disabilities between the years of 1995 and 2006, and finally, the impact of disability on memory in areas of academics.
In their study of the “reading growth trajectories of K-to-12 students classified under different IDEA disability categories at a national level,” (Wei, Blackorby & Schiller, 2011, p. 91), researchers Wei, Blackorby and Schiller (2011) address fundamental issues regarding reading achievement and disability in America. Their study served to answer the following 3 questions: what were the reading growth projections for students with disabilities ages 7-17, how the projections or trajectories differ between students with LD and other students with disabilities, and finally, how these trajectories differ within the field of disability by gender, race, and socio-economic status (SES). No hypothesis was presented; however, the introduction to the paper suggested that by placing all students with disabilities into one category, No Child Left Behind (NCLB, 2006) has missed important differences in students with disabilities, which they expected to find in this study.

The researchers used the SEELS (Special Education Elementary Longitudinal Study) data to answer their research questions. The independent variable of this study were phone interviews with parents, mailed surveys of school staff and direct assessments of students’ abilities (consisting of two subtests of the Woodcock-Johnson Test of Achievement), and the dependent variable was the growth trajectory for students with disabilities. There were three waves of data collection for the sample population that took place within the course of four years, from 2000 to 2004.

The sample of students with disabilities was weighted to “ensure accurate representation in each disability category in the U.S. population” (Wei, Blackorby, & Schiller, 2011, p. 92). About 3,421 students with disabilities ages 7-17 participated in this study over a four year time period. 3,011 students were male, 473 of the students had
learning disabilities (the largest disability category within the U.S. population) and 1,567 students lived in poverty with their families making less than $25,000 a year.

Given the data gathered in the three waves of phone interviews, surveys, and reading assessments, the researchers used HLM software to determine reading growth curves. The researchers found that “the results of this study showed comparable rates of growth but differential mean reading achievement across disability categories” (Wei, Blackorby, & Schiller, 2011, p. 95). The researchers found that the “reading achievement level of students with learning disabilities with significantly lower than that of students with speech impairments, emotional disturbances, visual impairments, orthopedic impairments and autism” but found that the growth trajectories for reading were far higher for students with learning disabilities than students with intellectual disabilities or multiple disabilities (Wei, Blackorby, & Schiller, 2011, p. 100). The researchers also discovered that males with disabilities scored significantly higher than females with disabilities, and that Black and Hispanic students with disabilities had significantly lower scores than White students with disabilities. Wei, Blackorby and Schiller also found a deceleration in reading growth over time with all disability categories with the sharpest decline in students with speech impairments. Gaps were also found between high-SES families and low-SES families in reading achievement levels.

As the researchers state, “these findings shed light on how accountability systems should include students with disabilities” (Wei, Blackorby, & Schiller, 2011, p. 102). The study shows that “gender and racial achievement gaps in reading persist over time” (Wei, Blackorby, & Schiller, 2011, p. 100) as well as large gaps in reading growth based
on SES. Given this data, evidence is provided for creating new and less homogenous frameworks (such as NCLB) for students with disabilities.

Researchers Klinger, Urbach, Golos, Brownell and Menon (2010) conducted observations to study how reading comprehension is taught to students with disabilities in grades 3-5. Though a great deal of research has been conducted in the years regarding reading comprehension, the researchers found that very little was known about how reading comprehension was taught in special education and therefore stated “the purpose of this study was to determine the extent to which and in what ways special education teachers promote their students’ reading comprehension” (Klinger, Urbach, Golos, Brownell, & Menon, 2010, p. 61). The independent variable in this study was teacher observation and an evaluation tool and the dependent variable was students’ reading achievement scores.

Forty-one fully certified special education teachers from Florida and Colorado agreed to participate in this study. Most teachers were Caucasian and over half of the teachers taught in schools with free or reduced-lunch. Three of the forty-one teachers were male and thirty-two of the teachers had their master’s degree. All teachers taught third, fourth, or fifth-grade students with learning disabilities, and had between 1 and 32 years of experience (mean=15.3 years).

The student sample consisted of 244 students, 59% boys and 41% girls. All students were in grades 3-5 and were identified as having a learning disability and reading difficulties. The demographics of the students were as follows: 43% White, 27% Hispanic/Latino, 27% African American, and 3% other. 175 of the students received free or reduced-lunch.
The researchers observed 40 of the teachers three times each and one of the teachers four times. Teachers were instructed to teach a typical lesson and were observed for the entire reading lesson. The observation evaluation tool looked at 22 items within the lesson including, “instructional practices, general instructional environment, phonological awareness, decoding, fluency, reading comprehension, classroom management, and overall classroom practice” (Klinger et al., 2010, p. 64). During the time of the observation, field notes were taken which were later reread to find all comprehension-related activities. Trainings, videotapes, and comparing of evaluation sheets were used to create the most reliable study possible.

Klinger et al. (2010) found that of the 124 lessons that they observed, 82 lessons included at least one reading comprehension activity. Of the 82 lessons, the researchers found that most reading comprehension activities were surface-level, factual questioning that mostly dealt with vocabulary. Furthermore, there was very little interactive dialogue found between teacher and student that might enhance reading comprehension and almost no instances of promoting meta-cognition in students. The researchers found that making predictions was the most commonly used strategy followed by making connections and using prior knowledge (though, it is noted that this strategy was not seen enough in classrooms). Strategies such as summarizing, retelling, visualizing, previewing questions, finding the main idea and paraphrasing were hardly ever observed, and the researchers found that many teachers seemed to be unclear as to what these strategies were.

On the teaching evaluation rubric based on observations, the mean rating was 2.5, which was the exact midpoint between the lowest possible score (1) and the highest score
Seven teachers received either a 3.5 or 4 and five teachers received a 1.5. Three teachers did not teach or include any reading comprehension activities or strategies and received no score.

This study shows clear gaps in instruction of reading comprehension for students with special needs, the students who need the most instruction and practice in reading comprehension. The study is important to note as a special educator because it shows the lack of instruction currently implemented in the field.

The previous study determined many gaps in teaching reading comprehension to students with disabilities. The following study conducted by Stetter and Hughes (2010), a meta-analysis, explores teaching strategies as well, but shows the effectiveness of certain strategies when teaching students with disabilities about story grammar.

Using information from reviewing current literature on reading comprehension in special education, the researchers posed the following questions: “(1) What is known about the story grammar abilities of students with LD? and (2) What is the effectiveness of teaching students with LD to use story grammar to comprehend narrative text” (Stetter & Hughes, 2010, p. 117). The researchers define story grammar as teaching plot, character, setting, and theme.

In order to conduct this meta-analysis, the researchers used the Education Resources Information Center (ERIC) database and found approximately 200 abstracts related to reading comprehension, story grammar, and students with learning disabilities. All studies included in this meta-analysis contained some intervention as the independent variable and an assessment (or multiple assessments) as the dependent variables. The review itself contained 18 studies that “focused on investigating the effectiveness of
using a story grammar strategy to improve the comprehension of students with LD…and other struggling readers” (Stetter & Hughes, 2010, p. 134).

The meta-analysis determined that 3 teaching strategies positively impacted students with LD’s reading comprehension. The first strategy is modeling which requires teachers to “talk through their own thinking about the strategy and demonstrating aloud how students might employ it” (Stetter & Hughes, 2010, p. 135). One study conducted by Dimino, Taylor and Gersten (1990) examined the effects of story grammar instruction with ninth-grade students with learning disabilities, finding that the direct teacher instruction of story grammar led to students being better able to answer story questions and understand the theme of a story.

The second strategy that Stetter and Hughes found to be effective in teaching story grammar and enhancing reading comprehension for students with learning disabilities was the technique of story mapping, or creating an outline or picture that include the main parts of a story. One such study showing the effectiveness of story mapping was conducted by Boulineau et al. (2004); six students with severe learning disabilities were taught to map stories, and five out of the six students showed improvement in their ability to identify story elements and therefore better comprehend what they were reading.

The final teaching strategy found in the literature is focusing on metacognition, or the ability to think about one’s thinking. One study that was cited, conducted by Faggella-Luby, Schumaker, and Desher (2007) demonstrated that by teaching self-questioning, story structure analysis, and summarizing techniques, students with learning
disabilities made significant gains in reading comprehension from a pre-intervention test to a post-intervention test.

Having conducted an in-depth analysis of literature surrounding reading comprehension and story grammar for students with learning disabilities, Stetter and Hughes found that students with LD “can benefit from explicitly, effective instruction in story grammar and how to use it” (Stetter & Hughes, 2010, p. 143). Some effective ways of teaching story grammar are modeling, story mapping, and teaching students to think about their own thinking, or teaching metacognitive strategies.

This study highlights the importance of teaching story grammar to students with disabilities and some highly beneficial ways of doing so. The information gathered by Stetter and Hughes is useful in designing and implementing intervention strategies that aid in the reading comprehension of students with disabilities.

Showing an even bigger picture of reading comprehension strategies taught to students with disabilities, the following meta-analysis conducted by Berkeley, Scruggs, and Mastropieri (2010) looked at all studies from 1995 to 2006 that showed the effects of reading comprehension strategies for students with disabilities.

Berkeley, Scruggs and Mastropieri (2010) conducted a meta-analysis of forty studies between 1995 and 2006; these studies all examined reading comprehension instruction for students with learning disabilities and served the larger purpose of “synthesizing findings of research for improving reading comprehension of students with learning disabilities” (Berkeley, Scruggs, & Mastropieri, 2010, p. 423). The independent variable in all studies was a reading comprehension intervention, and the dependent variables were tests or assessments used to measure reading comprehension growth.
In order to create this meta-analysis, researchers looked at a variety of online databases and used combinations of the following keywords: “reading disabilities, learning disabilities, reading comprehension, and strategies” (Berkeley et al., 2010, p. 425). The researchers coded all variables of studies in order to later interpret them and created four categories of reading comprehension intervention, self-questioning, text structure, fundamental reading skills, and other.

Berkeley et al. (2010) found that interventions that taught self-questioning and text structure showed the most improvement in reading comprehension for students with learning disabilities as indicated by criterion-referenced measures as well as norm-referenced tests. The meta-analysis also found that the mean treatment effects were higher for middle or high school students than for students in elementary school. Overall, the researchers determined that a variety of reading comprehension interventions can be successful for students with disabilities.

In general, this meta-analysis is important because it shows the importance of intervention for students with disabilities and demonstrates that reading comprehension interventions can be effective. Based on this research, intervention strategies that include teaching self-question or text structure could be beneficial in showing significant reading comprehension progress.

Pertinent to the study of reading comprehension for students with disabilities is the discussion of memory and the role it plays in reading which plays a role in this particular case study. Kibby and Cohen (2008) examine the implications of short-term memory (STM) and long-term memory (LTM) deficits of students with reading disabilities (RD) and Attention deficit/hyperactivity disorder (ADHD) and how these
deficits affect overall academics. The independent variable in this study is the disability
type, and the dependent variables are the STM measures, the LTM measure and the
executive function measure.

One hundred and thirteen children between the ages of 6-15 participated in this study. Of these children, twenty-three had met criteria for RD, thirty had ADHD, thirty
children had met criteria for RD/ADHD, and thirty participants had no disability label.
All students with a disability label were outpatients in a pediatric neuropsychological
clinic. The thirty control students were selected based on their comparability to the
clinical group in age, gender and ethnicity. Furthermore, the control students had to be
reading at or above grade level, could not have repeated a grade, could not have been
referred or currently receiving special education services, could not have a neurological
disorder, and finally, could not have sustained a brain injury.

All students were given the Children’s Memory Scale (CMS) which contains six
subtests, three optional subtests, three domains, and an overall memory score. Students
were also given a battery of tests to “assess linguistic functioning. These include the
WISC-III/IV Verbal Comprehension Index (VCI) and NEPSY Phonological Processing”
(Kibby & Cohen, 2008, p. 531). The researchers furthermore stated that because this was
a clinical sample, not all participants were given all measures.

The research found that “children with RD present with reduced verbal STM but
intact visual STM, CE, and LTM functioning” (Kibby & Cohen, 2008, p. 540).
Therefore in teaching students with RD, verbal material should be provided during
introduction to new material and it should be linked to what students already know.
Other interventions for students with RD could be to present visual aids with
supplemental verbal instruction. The research also found that participants with ADHD not on medication had reduced spatial WM but students with ADHD on medication had “intact spatial WM” (Kibby & Cohen, 2008, p. 538). Students with both RD and ADHD were found to have “deficits consistent with both disorders without addition deficits” (Kibby & Cohen, 2008, p. 540). The researchers also found that CE functioning is related to success in reading and math and that by working with and supplementing WM, CE will be positively impacted.

This study is critical to exploring the role that memory plays in reading comprehension for students with disabilities and provides many strategies to work on and improve memory that will impact central executive functioning and therefore all reading skills.

This section demonstrated the extensive research that has been conducted with regards to reading comprehension and students with learning disabilities, showing interventions to have a positive effect on text comprehension. While Klinger et al. (2010) document significant gaps in direct teaching of reading comprehension for students with disabilities which cannot be ignored, Stetter and Hughes (2010) and Berkeley et al. (2010) show that many studies have been conducted on these subjects, and most indicate reading comprehension growth, be it from teaching story-grammar or from teaching self-questioning and overall text structure. These studies, especially the study conducted by Wei, Blackorby and Schiller (2011) showing actual gaps in reading based on disability, race, gender, and SES, combined provide a better understanding of what is missing in teaching reading comprehension to students with disabilities, and what is working, informing best practices. Finally, Kibby and Cohen (2008) demonstrate that disability
does affect memory which also affects academics and more specifically, reading, important data to this particular study.

**Reading Comprehension Strategies: Visualization and Drama-Based Techniques**

Having gathered and explored general research surrounding reading comprehension and research surrounding reading comprehension for students with special needs, it is then critical to examine the research pertaining to the strategies that will be implemented in this case study, visualization and drama-based strategies. The section contains three studies that explore the benefits of visualization strategies and drama-based techniques on reading comprehension, indicating that these are highly effective in improving students’ reading comprehension.

In a study on reading comprehension, DuPont (2009) examined the effects of Creative Dramatics as an intervention for 5th grade students. DuPont hypothesized that after 2 months of intervention in Creative Dramatics, a “strategy that allows children to think aloud and verbally express their thoughts and feelings without depending on teacher’s hints” (DuPont, 2009, p. 292), students would perform higher on comprehension tests than students who did not receive the intervention.

The independent variable in this study is the Creative Dramatics intervention and the dependent variable in this study is the reading comprehension test. A classroom of 25 5th grade students in an urban school environment were selected for this study conducted by an elementary education reading profession and veteran 5th grade teacher. The class consisted of 15 males and 10 females, 52% ethnic minority students, and an 88% free and
reduced lunch rate. The comprehension scores of this class were compared to another 5th grade classroom in the same school with the same demographics.

All students were administered the 4Sight Test which consisted of 6 subtests, all related to reading comprehension. The classroom receiving intervention then received 1 month of typical reading instruction, retook the 4Sight Test, and then received 1 month of drama intervention followed by a final 4Sight posttest. The drama intervention required students to act out objects or actions, put on costumes pretending to be a character, and extending a text using drama by making inferences and predictions.

The results of the study were as follows: both classes began with very similar 4Sight scores; however, after the regular reading instruction in month 1, the control group scored higher than the experimental group in 5 out of the 6 subtests showing a 22.25% greater overall. That being said, after the 2nd month of drama intervention, the intervention group showed significantly higher reading comprehension growth in all areas compared to the control group. The results show that creative dramatic activities are highly effective in teaching reading comprehension and seeing growth in reading over time.

While DuPont contributes some of the reading growth to changing reading instruction routine and the novelty of drama-based instruction for students, she also uses her data to show the importance of using drama-based interventions to improve reading. DuPont believes that given this research, creative drama is an effective teaching method that “involves the participant intellectually, emotionally, physically, verbally, and
socially” (DuPont, 2009, p. 298) and that by using this method, teachers provide students with opportunities to make inferences and predictions.

Drawing upon the technique of visualization, Radar conducted a study that determined “whether visualization and oral language skills increase when students have knowledge and usage of a specific set of nine questions” (Radar, 2009, p. 126). This study contained the independent variable of a self-designed visualization and oral language program and the dependent variables were pre and post-test scores from a self-created assessment and a state benchmark, the Developmental Reading Assessment (DRA) (Beaver, 2004).

Radar conducted her research over a 2-year period where she piloted this visualization and oral language program in an urban elementary school. The sample population consisted of 69 first-grade students identified as having Speech and Language Disabilities, being at risk for reading failure, or both. The students were matched based on skill, gender, race, and ethnicity; 33 received the intervention program and 36 did not.

The procedures for this study were as follows: all 69 students were given a pre-test which required that students orally describe an object they pictured in their heads. They were then orally presented with a paragraph and asked to retell the story in their own words. Students were scored based on the number of words used in their description and on the number of preselected concepts they used while retelling the story. Those students selected for the intervention program participated in weekly instruction by their classroom teacher over the course of 3 months, focusing on nine key questions that help students organize and visualize. The questions were taught in a sequenced and scaffolded way to provide students with enough time to practice and the intervention group was also
provided with instruction on additional comprehension techniques such as draw and label, visualization and alternate mind portraits. The lessons were scripted and a speech-pathologist monitored the lessons, making sure the teachers honored the script.

Radar found that the visualization and oral language intervention program had a significant impact on students’ comprehension: students who received the intervention program made more gains in their ability to verbalize and communicate the main ideas of a spoken paragraph as compared to students who did not receive the program. Furthermore, the number of students who were proficient on the state benchmark (DRA) was higher than the group that received no intervention. Finally, the authors found that students receiving the intervention program had higher rates of retention over the summer and long holidays, supporting the long-term effects of the visualization and oral language program on students with disabilities or at-risk for reading failure.

This research is pertinent because it calls upon teachers to consider program and curricular changes to meet the needs of students who are at-risk of reading failure or students who have learning disabilities. Finally, Radar demonstrated the importance of visualization and oral explanation in improving reading comprehension both short and long-term.

The next study also explores the visualization strategy but teaches, implements and documents it through drama-based instruction and practice. Just as Radar (2009) provided data to support the direct teaching of visualization strategies so to do Rose et al. (2000), further illustrating the impact these strategies can have on student reading comprehension.
Based on the consensus that imagery enhances reading comprehension, Rose, Parks, Androes, and McMahon (2000) studied the importance of visualization and imaging taught with drama-based techniques on reading comprehension. Because cognitive science research indicates that individuals are more likely to remember information if they can create images in their head, if they can find meaning in a text, and if they can elaborate on reading to find emotions and motivations, the researchers believed that drama would be an effective way to teach reading comprehension. The independent variable in this study was Reading Comprehension Through Drama (RCD) (Whirlwind, 1999) versus a control group that received traditional reading instruction. The dependent variable was the comprehension scores on the Iowa Tests of Basic Skills (ITBS) (The Riverside Publishing Company, 1997) and a performance assessment designed to test reading comprehension using visualization and drama techniques.

The authors randomly selected 2 fourth-grade classrooms from four Chicago Public Schools; classrooms that had students with special needs were not included in this study. The schools varied in their demographics, but all had poverty rates of at least 80%. At each school, one class was the experimental group and was therefore taught Reading Comprehension through Drama (RCD); the other class, the control group, was taught using traditional text-based methods and workbook activities. In total, 94 students received the treatment RCD program, and 85 did not.

In late February 1996, students were given the performance assessment testing reading comprehension. Students in the experimental group participated in a 10-week program designed by four arts educators to improve reading comprehension. This program consisted of 1 hour sessions 2 times per week, and was broken into 4 stages:
story, sequence, perception and evaluation. Each stage used a different story and required students to first read the story silently and then listen to the story read by the arts educator. Students were then taught different strategies for reading comprehension using props, re-telling a story using drama, and interviewing as a character in a story. Once the RCD program was completed in May, all students were given the performance assessment post-test to measure reading comprehension growth, including students who did not receive the treatment program. Finally, all students in both the experimental and control groups took the ITBS in the spring, and these scores were compared to their ITBS scores the previous year.

The researchers found that students who received the RCD program made greater improvement on the Reading Comprehension subtest of the ITBS than students who did not receive the intervention program; in fact, they improved on average 3 months more than students in the control group. Students in the experimental group also scored significantly higher from the pre-test to the post-test for the performance assessment than did the control group (9.55 point increase versus a 2.88 point increase). The correlation between the performance assessment and the ITBS was strong, showing that if a student had a high performance assessment score, they would also have a high score on the Reading Comprehension subtest of the ITBS.

This study demonstrates that arts-based approaches to teaching reading comprehension can be meaningful, especially in teaching students to visualize and elaborate on feelings and motivations of characters.

As shown in this section, visualization and drama-based techniques can be very powerful and effective for teaching students to comprehend what they read. DuPont
(2009) explores the effects of creative drama on reading comprehension, concluding that by teaching and incorporating drama into the classroom, reading comprehension is positively impacted. Radar (2009) uses nine key questions to teach students to visualize information they read, also providing students with long-term reading comprehension skills. Rose et al. (2000) also demonstrate the effectiveness of visualization strategies taught through a drama program, providing data that indicates higher performance on standardized and informal tests when students are directly taught these strategies.

Conclusion

Reading comprehension is critical to student success in school and beyond; however the literature proves it to be a complicated and multi-layered process where much instructive improvement is needed, especially in special education classrooms. Providing an instructional framework for reading comprehension Prado and Plourde (2011) identify specific reading comprehension strategies that work including asking questions, making predictions and inferences, activating prior or background knowledge, and visualization. With regards to the instruction of reading comprehension, research shows that posing questions during reading is more effective than after reading, and that such strategies can be taught and implemented at an early age to ensure success later on (van den Broek et al., 2011). Other research suggests that students better comprehend when they are able to read a text aloud as opposed to silently (Hale et al., 2007), providing yet another reading comprehension instructional technique. Finally, research indicates that reading comprehension difficulties may arise when students are
not taught the appropriate background and general knowledge needed to comprehend a text, more specifically, a science-based text (McNamara et al., 2011).

Once some important knowledge is gained regarding reading comprehension and some specific strategies are identified, it is important to look at research from a purely special education angle, as the student in this case study has a cognitive disability. Wei, Blackorby and Schiller (2011) examine laws such as No Child Left Behind and use their data to indicate that special education and reading growth need to be reexamined in the U.S. As indicated by Klinger et al. (2010), direct instruction of reading comprehension within the special education classroom is seriously lacking and in need of improvement, failing to provide students with learning disabilities with the tools and skills to comprehend what they read. Faggella-Luby, Schumaker, and Desher (2007) are slightly more positive in their meta-analysis of a specific reading comprehension component, story grammar, and how it is taught to students with special needs finding that modeling thinking processes, teaching students to map out stories, and encouraging metacognitive thinking can be very beneficial in improving reading comprehension. Berkeley et al. (2010) also conducted a meta-analysis of reading comprehension interventions in students with learning disabilities finding in most cases the interventions to be successful in reading comprehension. Finally, Kibby and Cohen (2008) display the importance of memory in all academics including reading, and that students with disabilities struggle in some areas of memory thus affecting performance. These studies provide insight into reading comprehension strategies that should be taught to students with disabilities.

The literature shows that visualization and drama-based techniques can be highly beneficial in improving reading comprehension, and, combined with previous knowledge
gathered from sections 1 and 2 of this chapter, these strategies can be implemented even more effectively. Drama-based techniques have been shown to be highly effective in improving reading comprehension for elementary students as shown by DuPont (2009). Teaching students to visualize by giving them nine key questions to consider while reading was found to not only be successful in improving students’ reading comprehension, but also showed long-term effects on reading comprehension (Radar, 2009). Rose et al. (2000) also indicate that visualization strategies are extremely effective, especially when they are taught in an arts-based manner that allows students to use props, act as main characters from a story, and re-tell a story using actions and drama.

The reviewed studies provide key information on reading comprehension strategies and interventions that are successful. Based upon these findings, it is possible to create and implement a drama and visualization-based intervention that meets the needs of a student with a cognitive disability.

In the following chapter the sample population, procedures and data collection will be discussed to provide insight into this particular case study.
CHAPTER THREE: PROCEDURES

Introduction

This study served to explore the effects of visualization and drama-based interventions on the reading comprehension of a fourth-grade student with a cognitive disability. Thus, understanding the student and her ability levels was critical to planning and implementing effective and meaningful interventions. This chapter contains a description of the sample population, a description of the procedures used in this study and finally, a description of data collection, all necessary to understand the overall implications of this study.

Description of the Sample Population

Danielle (name changed in order to protect confidentiality) is a fourth-grade born on April 12, 2003 with a chronological age of 9 years, 9 months and 22 days (calculated from the day Danielle took her first pre-test). She attends an inner-city public K-8 school in Milwaukee, Wisconsin. She is currently placed in a self-contained room for children with cognitive disabilities grades 3-5.

Documented in her cumulative folder, Danielle has attended 5 schools in her current school district. She attended her current school from 09/09/09-11/3/09 and again from 09/04/11-present.

Danielle was referred to special education in January of 2010. According to her regular education teacher, Danielle was “far below grade level in reading and math” and displayed defiant behaviors. In her initial evaluation in March, 2010 it was documented that Danielle had lead levels of 39.00 as of 1/25/05 when she was first tested, and these
levels decreased to 14.00 in 8/7/08. Danielle met the criterion for a cognitive disability determined by numerous formal assessments including the Woodcock Johnson Achievement Test (WJIII), The Stanford-Binet V, and the ABAS 11. Danielle’s WJIII scores were as follows: Broad Written Language standard score 68, a Broad Math standard score of 51 and a Brief Achievement standard score of 64. The Stanford-Binet V showed Danielle’s intellectual functioning to fall within the mildly impaired/delayed range (fsiq=66, 63-71) with her weakest area in Fluid Reasoning and her strongest in Quantitative Reasoning (ss=89). With her mother as a respondent for the ABAS 11, a test of functional independence and adaptive skills, Danielle scored 105 in Communication, her highest score, and <55 in Health and Safety, her lowest score. Due to her significant levels of lead, Danielle also met the criteria for Other Health Impairment. The team determined that Danielle required 60 minutes of reading, 30 minutes of writing, and 45 minutes of math provided by special education services to meet the needs of her disability.

According to her cumulative folder, an FBA/BIP was added to Danielle’s IEP in September of 2010 as well as 45 minutes of special education services in order to work on behavioral and social skills. In February of 2011, Danielle met criteria to take the Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD) and was moved into a most restrictive environment in order to meet her educational and behavioral needs.

I have had the pleasure of working with Danielle since the fall of 2011 as her special education teacher. Danielle has a vivid imagination and enjoys one-on-one attention, hence the reason she was chosen for this study. Danielle demonstrates a desire
and love for learning especially in the areas of reading and English Language Arts, and from my observations and informal tests over the past year and a half, has shown excellent progress in these areas. Danielle loves music, art, and drama, and enjoys incorporating these subjects into reading, math and other academic subjects in school.

Gathered from observations and from a brief interview with Danielle, she loves books that are funny and “cute.” She enjoys books that are about girls and also likes to read books about animals. Danielle enjoys the author Robert Munsch. This information was invaluable in choosing books and passages that Danielle would find interesting.

**Description of the Procedures**

The visualization and drama-based interventions were administered to Danielle from February 11, 2013 to March 20, 2013, a 6-week period. I administered the pre-tests the week before interventions began (February 4th and 6th, 2013) and post-tests the week after the interventions ended (March 25th and 27th, 2013). Intervention sessions were held three days a week for 45 minutes in a distraction-free area outside Danielle’s current classroom. A session-by-session anecdotal report can be found in Appendix 2 outlining the interventions, observations, and changes or concerns warranted.

The two pre-tests administered were the MAP: Reading Primary Grades NWEA 2006 (Northwest Evaluation Association) and the QRI-5 (Leslie & Caldwell, 2011) given on February 4, 2013 and February 6, 2013 respectively. Based on the information from these tests as well as information previously known about the student, I formulated interventions that would not only address gaps in reading comprehension for Danielle, but would also supplement gaps in decoding and vocabulary skills.
All 18 interventions were designed to fit the following format: Danielle and I would first begin by identifying and defining sight words and working on decoding strategies using phoneme and grapheme mapping, word segmenting and other word-attack strategies. The intervention would also include learning new vocabulary from the story we were about to read, and either learning or explaining the importance of each visualization or drama-based reading comprehension strategy we were currently working on. For the last 20-30 minutes of the intervention, Danielle and I would work on the specific reading comprehension strategy by reading a fictional story or passage and completing an activity.

The visualization and drama-based strategies for the intervention were as follows: using a graphic organizer to document sensory information in a text, using drawing to make sense of a piece of text, and using props to act out a part of a text, respectively. Each visualization or drama-based strategy was implemented for 6 interventions or 2 weeks to allow Danielle time to understand and practice the techniques. The first reading comprehension strategy of using a graphic organizer to document sensory information required Danielle to verbally dictate the information she wished to put on a specific graphic organizer (see Appendix A), but the other two strategies did not have a specific format that was specifically designed for this project.

Due to Danielle’s significant reading delays, the interventions were designed to provide at least 2 opportunities for a text to be read before the reading comprehension activity. Fictional books and passages were chosen based on the nature of this project, and these books and passages were chosen based on Danielle’s reading preferences.
Finally, following the 18 interventions, Danielle was re-administered the MAP: Reading Primary Grades NWEA 2006 (Northwest Evaluation Association) and the QRI-5 (Leslie & Caldwell, 2011) on March 25th and 27th respectively. These post-tests were administered to see if the reading comprehension strategies implemented were beneficial to Danielle’s overall reading skills.

**Description of Data Collection**

During the two pre-test and two post-test sessions, I used the MAP: Reading Primary Grades NWEA 2006 (Northwest Evaluation Association) test and the QRI-5 (Leslie & Caldwell, 2011) to document gains Danielle made from the beginning to the end of the intervention. The MAP pre-test provided me with an overall reading score for Danielle, and also provided me with scores on Danielle’s phonemic awareness, phonics skills, comprehension, print concepts awareness, and writing skills. While I only used the specific comprehension score in the data for this case study, all areas of reading contribute to the overall RIT MAP score. The MAP post-test showed me overall scores and scores for the individual areas so I could then compare them to document results of the intervention.

Similarly, the QRI-5 pre-test provided me with information about Danielle’s reading fluency, her ability to recall and sequence events from a story, her ability to recall details and information from a text, and her overall reading comprehension skills. The QRI-5 post-test allowed me to see if significant gains were made due to the intervention.
I additionally took observational notes from each intervention session, and kept all paper work as data, including graphic organizers and drawings gathered from the specific drama and visualization-based strategies taught and practiced.

**Conclusion**

Chapter three provides information critical to understanding this particular study of the effects of visualization and drama-based strategies on a fourth-grade student with a cognitive disability. In this chapter, the sample population was described in detail, and the procedures of this study were clearly outlined. Finally, this chapter explained the data gathered and how it was collected. The following chapter will show the results of the interventions based on pre- and post-test data.
CHAPTER FOUR: RESULTS

Introduction

Chapter four serves to present the data gathered from this intervention and provide detailed analysis into the impact of this intervention on Danielle, the subject of this study. Based on the data, I have drawn conclusions about the impact of the intervention on Danielle’s reading comprehension.

Daily Interventions

Following the administration of the pre-test (February 4th and 6th, 2013), Danielle participated in 18 intervention sessions three days a week for 45 minutes each. As described in the previous chapter, the sessions were designed to primarily teach and practice three specific visualization and drama-based techniques that were to improve Danielle’s reading comprehension, but also contained sight-word work, decoding strategies and vocabulary work. The specific instructional plan, observations and concerns are documented in Appendix B.

Danielle was very eager to begin intervention sessions, as she knew we would be working together one-on-one. As documented in the anecdotal report, Danielle responded well to the sensory graphic organizer and was able to use her memory to explain what characters in the story saw, smelled, tasted, felt and heard. It became immediately apparent that Danielle struggled with remembering what she read or what was read to her, and needed a multiple opportunities to read a page or book before being able to dictate sensory information from stories or passages. My notes also showed that Danielle was using pronouns when talking about characters instead of using names.
Danielle was furthermore able to identify senses that were explicitly stated in the text; however, needed prompts to identify the more implicit senses in stories and passages. By the 6th session, I had made the observation that Danielle’s fluency and sight-word recognition appeared to be improving, which was also helping her in comprehending what she read.

During the second reading comprehension strategy, drawing a picture of a scene or passage from a story, it became apparent that Danielle needed even more opportunities to read and listen to a book before she was asked to draw a picture. It also became clear that specific vocabulary instruction would be a critical part of this intervention, as it would contribute to Danielle’s ability to draw a detailed picture about a scene or passage. Danielle responded best to texts that were more straightforward about what items were in a specific scene, the color and size of objects, and texts that had less detail. During this portion of the intervention, I recorded again the improvement in Danielle’s fluency and sight-word recognition.

Danielle was most excited about the last reading comprehension strategy, acting out a scene from a story using props. As documented in the anecdotal notes, Danielle remembered more details and specifics during this portion of the intervention than the previous two, and was able to use simple props to retell stories in a more advanced way than was seen with the previous two reading comprehension strategies.

Data Presentation

Prior to 18 visualization and drama-based interventions administered over a 45 minute period 3 days a week, Danielle was given the MAP: Reading Primary Grades
NWEA 2006 (Northwest Evaluation Association) test and the QRI-5 (Leslie & Caldwell, 2011). Following the interventions, the same tests were re-administered to Danielle to use for post-test data. This section will present and summarize the data collected from the pre- and post-tests for both measures.

The MAP pre-test and post-test data are shown in Tables 1 and 2 respectively. Scores considered for this particular study was the overall RIT score (a compilation of all reading skills including comprehension), a reading level equivalent or Lexile level, a reading comprehension goal score, a reading comprehension goal range, and finally, the time it took for Danielle to complete the test. Other specific measures of the MAP test were not included as these 5 criteria were determined to be most pertinent to the case study.

<table>
<thead>
<tr>
<th>MAP Pre-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Score</td>
<td>158</td>
</tr>
<tr>
<td>Reading Level Equivalent/Lexile</td>
<td>BR</td>
</tr>
<tr>
<td>Reading Comprehension Goal Score</td>
<td>152</td>
</tr>
<tr>
<td>Reading Comprehension Goal Range</td>
<td>144-160</td>
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<tr>
<td>Time to Complete</td>
<td>11:15</td>
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</tbody>
</table>

Table 1

<table>
<thead>
<tr>
<th>MAP Post-test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Score</td>
<td>174</td>
</tr>
<tr>
<td>Reading Level Equivalent/Lexile</td>
<td>33-183</td>
</tr>
<tr>
<td>Reading Comprehension Goal Score</td>
<td>179</td>
</tr>
<tr>
<td>Reading Comprehension Goal Range</td>
<td>172-187</td>
</tr>
<tr>
<td>Time to Complete</td>
<td>16:08</td>
</tr>
</tbody>
</table>

Table 2

The QRI-5 data used to measure the impact of the interventions on Danielle’s reading comprehension were as follows: sight word recognition of words on pre-primer
1, pre-primer 2/3, primer, and first grade lists, and 5 narrative passages from levels pre-primer 3, primer, and first grade that examined the concepts familiar/unfamiliar percentage, total reading accuracy percentage, percentage of retelling, number of explicit questions answered correctly, number of implicit questions answered correctly, total comprehension percentage, and finally, based on these scores, if the particular passage was at Danielle’s independent, instructional, or frustration level.

On the sight word portion of the QRI-5 administered to Danielle she identified 100% of the pre-primer 1 words in both the pre-test and the post-test. On the pre-primer 2/3 list she identified 75% of the words during the pre-test and 90% during the post-test. During the pre-test for the primer words, Danielle correctly identified 80% of the words and 95% on the post-test. Finally, Danielle read 30% of the first grade list correctly during the pre-test and 60% during the post-test. A graph of these scores is shown below in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Sight Word List Level</th>
<th>Pre-test % correct</th>
<th>Post-test % correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Primer 1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Pre-Primer 2/3</td>
<td>80</td>
<td>90</td>
</tr>
<tr>
<td>Primer</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>First</td>
<td>30</td>
<td>60</td>
</tr>
</tbody>
</table>
The data gathered from the 5 narrative stories is documented in Table 4 (pre-test) and Table 5 (post-test) below.

### Pre-test QRI Scores

<table>
<thead>
<tr>
<th>Passage Name</th>
<th>Lost and Found</th>
<th>Spring and Fall</th>
<th>A Trip</th>
<th>Fox and Mouse</th>
<th>The Surprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readability Level</td>
<td>Pre-Primer 3</td>
<td>Pre-Primer 3</td>
<td>Primer</td>
<td>Primer</td>
<td>One</td>
</tr>
<tr>
<td>Concepts Familiar/Unfamiliar %</td>
<td>67</td>
<td>89</td>
<td>56</td>
<td>78</td>
<td>89</td>
</tr>
<tr>
<td>Total Accuracy &amp; Acceptability %</td>
<td>86</td>
<td>93</td>
<td>92</td>
<td>88</td>
<td>89</td>
</tr>
<tr>
<td>Retelling % Number of Ideas</td>
<td>67</td>
<td>75</td>
<td>41</td>
<td>27</td>
<td>20</td>
</tr>
<tr>
<td># Explicit questions correct</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td># Implicit questions correct</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Level % Total Comprehension</td>
<td>100</td>
<td>100</td>
<td>83</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Level (Independent/Instructional/Frustration)</td>
<td>Independent</td>
<td>Independent</td>
<td>Instructional</td>
<td>Frustration</td>
<td>Frustration</td>
</tr>
</tbody>
</table>

### Post-test QRI Scores

<table>
<thead>
<tr>
<th>Passage Name</th>
<th>Lost and Found</th>
<th>Spring and Fall</th>
<th>A Trip</th>
<th>Fox and Mouse</th>
<th>The Surprise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readability Level</td>
<td>Pre-Primer 3</td>
<td>Pre-Primer 3</td>
<td>Primer</td>
<td>Primer</td>
<td>One</td>
</tr>
<tr>
<td>Concepts Familiar/Unfamiliar %</td>
<td>89</td>
<td>89</td>
<td>100</td>
<td>78</td>
<td>100</td>
</tr>
<tr>
<td>Total Accuracy &amp; Acceptability %</td>
<td>100</td>
<td>100</td>
<td>97</td>
<td>98</td>
<td>97</td>
</tr>
<tr>
<td>Retelling % Number of Ideas</td>
<td>100</td>
<td>100</td>
<td>86</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td># Explicit questions correct</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td># Implicit questions correct</td>
<td>n/a</td>
<td>n/a</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Level % Total Comprehension</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>83</td>
<td>100</td>
</tr>
<tr>
<td>Level (Independent/Instructional/Frustration)</td>
<td>Independent</td>
<td>Independent</td>
<td>Independent</td>
<td>Instructional</td>
<td>Independent</td>
</tr>
</tbody>
</table>
Data Analysis

As shown in Tables 1 and 2, Danielle showed overall growth in her MAP test by 16 points. Furthermore, her reading comprehension goal scores increased by 27 points from the pre-test to the post-test. Due to both scores increasing, Danielle moved from a beginning reader level to a Lexile level of 33-183, and her comprehension goals increased. Both pre- and post-tests had the same number of questions; however, Danielle took approximately 5 more minutes to complete the post-test.

Danielle showed an increase in all areas of the QRI-5 from the pre-test to the post-test. Her prior knowledge of concepts in the texts (concepts familiar/unfamiliar %) increased in all passages with the exception of two where they stayed the same. Danielle’s ability to read a passage correctly (total accuracy & acceptability %) increased in all areas from the pre-test to the post-test by an average of 8.8%.

Regarding her reading comprehension scores from the QRI-5, Danielle’s ability to retell events from the passages increased by 44.6% from the pre-test to the post-test. During the pre-test, Danielle was able to recall no more than 75% of what she read, and in the passage “The Surprise” was able to recall 20% of the text. In comparison during the post-test, Danielle recalled 100% of the events in two passages, and her lowest recalling score was 83%. Danielle performed well on both the pre-and post-tests when asked between 4-6 comprehension questions about each passage, and these explicit and implicit questions determined the level % total comprehension. Overall, Danielle scored 20% higher on the level % total comprehension during the post-test, showing an increased understanding in both explicit and implicit details in each passage.
Conclusions

The data show that the visualization and drama-based interventions did in fact positively and significantly impact Danielle’s reading comprehension and also improved other areas of reading for her, namely fluency. The MAP test overall score shows that Danielle improved in all areas of reading, and the fact that the comprehension score showed an even bigger increase speaks to the fact that Danielle’s comprehension was most impacted by the 18 interventions. Furthermore, the data show that Danielle took longer to complete the MAP post-test than the pre-test, suggesting that she used more reading techniques and strategies during the post-test.

The QRI-5 data also support the findings that the visualization and drama-based strategies and techniques significantly increased Danielle’s reading comprehension and also improved other areas of reading for her. While her fluency on the post-test was only 8.8% better than on the pre-test (the lowest percentage increase from pre-test to post-test), this data demonstrates that the interventions also helped Danielle to read more fluently and accurately. Danielle’s reading comprehension showed significant increase from the pre-test to the post-test; she showed the most improvement in her ability to recall events and facts from passages with a 44.6% increase, showing that by learning and practicing skills such as using a graphic organizer to document sensory information, visualizing and drawing a scene from a story, and finally, acting out a scene using props, Danielle’s ability to remember and recall was most impacted. Also impacted by the interventions was her ability to answer explicit and implicit questions about a text, which increased by 20% from the pre-test to the post-test.
As shown, the 18 interventions were highly successful in improving Danielle’s reading comprehension, most specifically in her ability to recall and remember facts and events from stories. The data also show that other areas of reading were positively impacted by the interventions. The following chapter will connect the research and findings to existing literature and will provide recommendations for the student.
CHAPTER FIVE: CONCLUSIONS

Connections to Existing Research

The purpose of this study was to investigate the impact of visualization and drama-based reading interventions on the reading comprehension of a student with a cognitive disability. The existing literature on reading comprehension, reading for students with disabilities, and visualization and drama-based strategies helped to inform this case study, specifically in the design and format of interventions and the strategies used to aid Danielle in improving her reading.

The existing literature examined in this case study reveals that reading comprehension is an area of struggle for many students in elementary school and beyond, especially during the “fourth-grade slump” (McNamara, Ozuru, & Floyd, 2011). Furthermore, as documented by Klinger et al. (2010), reading comprehension is poorly understood and taught by teachers, and has not been extensively researched in academia, especially within the field of special education. It was my goal; therefore, to address some of these concerns and gaps by providing a well-researched and well-documented case study on reading comprehension for a student who showed struggles in this particular area of reading.

Much of the published literature on reading comprehension has found specific techniques that benefit all students. I therefore used these techniques to formulate and design my interventions. I designed interventions that required reading aloud as opposed to silent reading (which was used rarely) because Hale et al. (2007) found that students comprehend more when reading aloud. McNamara, Ozuru and Floyd (2011) determined that students understand narrative texts better than science texts due to their more
frequent exposure to vocabulary and ideas presented in narratives and fiction. Wanting to make the texts in the intervention as accessible as possible to Danielle, I used these findings to influence my choice of books and passages for visualization and drama-based interventions.

The literature furthermore informed the specific ways to teach reading comprehension. Stetter and Hughes (2010) found that an excellent way to improve reading comprehension for students was to teach them to make story maps or pictures based on what they read. Radar (2009) found that students are positively impacted by creating pictures in their head, or visualizing, when they hear or read a story. Other studies by Rose, Parks, Androes, and McMahon (2000) and DuPont (2009) stated the significant impact on reading comprehension of teaching students to act out scenes, use props, and pretend to become characters in stories. Based on this research, academic literature on reading comprehension in general, and finally, the needs of the sample population, I chose to focus on visualization and drama-based techniques. The aforementioned studies also provided me with ways in which I could effectively implement visualization and drama strategies that would positively impact Danielle’s reading comprehension.

**Explanation of Results**

As shown in Chapter four, the effects of the visualization and drama-based interventions significantly increased the reading comprehension of a student with a cognitive disability. Danielle, the subject of this case study, grew an overall 16 points on her MAP test and on the specific comprehension portion of the MAP test, 27 points
showing these interventions were highly successful. Furthermore, Danielle showed improved scores in all areas of the QRI-5. She increased 44.6% on her ability to retell and recall information from a passage from pre-test to post-test, and increased 20% in her ability to answer explicit and implicit questions from a text.

While this study served to increase Danielle’s reading comprehension, the results also showed that her reading fluency increased as well. From the pre-test to the post-test on the QRI-5, Danielle’s accuracy and acceptability percentage increased by 8.8 percent. Therefore, the interventions not only served their purpose, but went above and beyond to improve other reading skills for Danielle.

**Strengths and Limitations of the Study**

Having worked with Danielle as her classroom teacher for almost 2 school years, I know her very well and was therefore able to plan and design a case study and interventions specific to her strengths and areas of need. In choosing a research topic and a sample population, I was able to immediately identify Danielle as a student who would be easy to work with and who would respond well to one-on-one attention and intervention. Furthermore, I was able to use her interests and proclivities in acting, drawing, and using her imagination to design interventions that she would be interested in and would enjoy doing.

This study also had some limitations. The interventions took place over a 6-week period which was a short amount of time, and Danielle and I worked together only 3 days each week as opposed to 5. These time constraints may have led to less improvement in
Danielle’s reading comprehension scores and overall reading ability and the impact would have been greater had we spent more time on interventions.

Another limitation of this study was the fact that during these 6 weeks of intervention, Danielle was also receiving regular reading instruction from me in her special education classroom. Therefore, it cannot be entirely determined that the results of the MAP and QRI-5 test were solely from the visualization and drama-based interventions.

**Recommendations for the Student**

As shown by the data in this case study, while the purpose of the interventions was to improve reading comprehension, Danielle’s reading ability as a whole increased. Even after a short six weeks, Danielle was able to significantly increase her scores on both the MAP test and the QRI-5, showing that despite her cognitive disability, Danielle has much potential to grow and improve in the subject of reading.

As discussed in Chapter one, Danielle is in a most-restrictive setting due to her cognitive disability; however, the significant increase in Danielle’s reading performance over a short period of time suggests to me that she might be able to be a part of the regular education classroom or curriculum for a part of the day. One recommendation I have for Danielle at school is for her to be more exposed to the regular education 4th grade classroom and curriculum as she may show significant successes.

I also recommend that Danielle continue to utilize and practice the skills taught during the intervention, both at home and at school. Not only did these strategies prove to be helpful in improving Danielle’s reading ability, but she also seemed to really enjoy
them. Her successes with these interventions can also be used to help improve reading comprehension for other students with cognitive disabilities.

Especially after completing this case study and seeing the tremendous amount of growth Danielle is capable of, as both a researcher and as her teacher I am looking forward to seeing her increase academic progress. As Danielle continues to improve her reading ability and more specifically, her reading comprehension meeting the Common Core Essential Elements state standards, I believe her confidence will increase and the tools and skills taught to her during this case study will be tools she can continue to use in her educational career.
REFERENCES


APPENDICES

Appendix A

Below is the example of the graphic organizer used in the senses part of the intervention.

Danielle would dictate to me using the pictures of what a character heard, saw, tasted, felt, and smelled and I would record her answers next to the pictures.
Appendix B

Below is a session-by-session anecdotal notes and planning chart. Each box contains a detailed description of all 18 interventions, my observations during the interventions, and finally, any changes or concerns I had following the interventions.

### Session-by-Session Anecdotal Notes and Planning Chart

<table>
<thead>
<tr>
<th>SESSION</th>
<th>INSTRUCTIONAL PLAN</th>
<th>SPECIFIC OBSERVATIONS FROM LESSON</th>
<th>CONCERNS/CHANGES WARRANTED</th>
</tr>
</thead>
</table>
| 1- Graphic Organizer with Senses 2/11/13 | -Work on identifying 10 sight words (has, her, is, it, into, down, up, done, and, but)  
-Work on decoding st words: teach the sound then have Danielle decode words (star, stop, stay, stir, stun, stew)  
-Read together The Very Hungry Caterpillar by Eric Carle  
-Discuss the 5 senses and show graphic organizer and how to use when reading. I am including “felt” as touching and also emotions.  
-Go back through the book page by page and have Danielle dictate what the caterpillar saw, smelled, tasted, felt, and heard. Provide prompts when needed and work with Danielle to explain her answers. Model how to fill out the graphic organizer. | I knew this book was too challenging for Danielle to read independently, but thought it would be appropriate comprehension-wise. Danielle and I read the book aloud together and then went through the book page by page. With prompts (especially about what the caterpillar felt), Danielle was able to use her memory and the pictures to tell me what the caterpillar saw, smelled, tasted, felt and heard on each page. | I am concerned that Danielle forgets what we just read as soon as we turn the page. Perhaps we should read a page and then discuss the senses; however, I worry that this interrupts the continuity of the story which is also very important in reading comprehension. It might be more beneficial to begin by reading shorter passages. |
<p>| 2- Graphic Organizer with Senses | - Work on identifying 10 sight words(has, her, is, it, into, down, up, done, and, but), use words in use today and did a fairly good job reading it | Danielle appeared to really enjoy the story today and did a fairly good job reading it | I think quickly reviewing characters following the first reading might make Danielle’s comprehension of... |
| 2/12/13 | sentences verbally Discuss vocabulary in reading with Danielle. Have her explain and work with her on the following words: sharp, empty, pile, save. I read “Emily and Popcorn” by Clark Ness while Danielle listens. Danielle reads “Emily and Popcorn” aloud to me. Go back through the passage and have Danielle dictate what senses occurred in the story. Provide prompts when needed and work with Danielle to explain her answers. independently after I had read it aloud. I’m glad we went over the vocabulary beforehand, as I think it helped her better understand the story (or at least identify the words). I was pleasantly surprised as to how much Danielle was able to recall about the story, especially since there were no pictures. I was concerned that while Danielle had some great recall about certain senses, that she used pronouns when describing characters. She also needed prompting when it came to more implicit senses that weren’t explicitly mentioned in the text, such as, the smell of popcorn or the sound the popcorn monster would make chasing after Ms. Smith. a text stronger and will lead to less “she’s” and “he’s” when dictating senses to fill out the graphic organizer. |
|---|---|---|---|
| 3- Graphic Organizer with Senses 2/13/2013 | -Work on identifying 10 sight words (the, her, his, these, that, there, friend, far, big, pretty) -Decoding sl blends: teach Danielle the sound then have her decode words (slop, slum, slap, slit, slob, slab, slaw) -Teach vocabulary and then have Danielle describe words in her own way: expensive, fiery, trail, knocker, magnificent, straight, ashes. -Read <em>The Paper Bag Princess</em> by Robert Munsch (a story Danielle I noticed that Danielle seemed very comfortable with the graphic organizer in this session, perhaps because it was the third time she had used it, or perhaps because she knows this story very well. I should have followed my previous advice; however, that Danielle needs at least 2 reads in order to comprehend as she was unable to give me very much information without looking at the book in order to fill out the graphic organizer. I From now on, it is critical that even if Danielle knows a text, we read it possibly even 3 times to provide her the opportunity to truly understand it. |</p>
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<tr>
<th>Date</th>
<th>Activity</th>
<th>Notes</th>
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<tbody>
<tr>
<td>2/19/2013</td>
<td>4- Graphic Organizer with Senses</td>
<td>Danielle seemed to enjoy this book because it was short and easy for her to read. The few words per page seemed to help her to focus on what was actually going on in the story which then helped her to fill out the graphic organizer. Because there weren’t many words, a lot of the senses had to be inferred and it required a few prompts from me for Danielle to be able to come up with answers (i.e. the buns smell yummy, the mud looks messy/dirty).</td>
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<tr>
<td>2/20/2013</td>
<td>5- Graphic Organizer with Senses</td>
<td>Since the beginning of the interventions, I have seen a marked difference in the amount of sight words Danielle is able to identify and use in sentences. While this is not the focus of the</td>
</tr>
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</table>
| 6- Graphic Organizer with Senses 2/21/2013 | - Work on identifying and using 10 sight words in a sentence (sky, table, learn, like, wish, little, big, down, up, your)  
- Phoneme and grapheme mapping bl- blend words, review sound, letters that make that sound, have Danielle map and spell words with bl- blend (blog, blip, blab, blub, blend)  
- Review vocabulary from past lessons and teach vocabulary for new book today: hopped, sighed, scrunched, protect-discuss words and then have Danielle use these words in a sentence  
- Read together Timothy and the Night Noises by Jeffry Dinardo, then have Danielle read aloud by herself | I am also noticing not only an improvement in Danielle’s sight words, but her ability to decode words. This intervention was also beneficial because we were able to work in identifying specific information from a story including characters, setting, and plot. As noted before, Danielle struggles to name characters from a story, so we will continue to work on this skill in conjunction with the intervention strategies to aid her in her reading comprehension. | No changes warranted in this lesson. |
- Have Danielle tell me characters in the story, where the story takes place, and what happens in the story
- Graphic organizer from Timothy’s perspective… Danielle dictates to me senses he is experiencing in the story and I record

<table>
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<tr>
<th>7-</th>
<th>Visualizing a scene and drawing a picture</th>
<th>2/26/13</th>
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<tbody>
<tr>
<td>- Work on identifying 10 sight words (the, her, his, these, that, there, friend, far, big, pretty), use words in sentences verbally</td>
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<td></td>
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<tr>
<td>- Review st and sl blends</td>
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<tr>
<td>- Introduce new vocabulary word: owling</td>
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<tr>
<td>- Discuss a new reading comprehension strategy: drawing pictures of scenes to help us understand a text. Read a page from <em>The Paper Bag Princess</em> and model how to listen and draw based on what I hear.</td>
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<tr>
<td>- Have Danielle practice the strategy as I slowly read to her pg. 1 in <em>Owl Moon</em> by Jane Yolen. If her picture is missing any details, re-read those details and work with her to include everything she would she is she was in this story.</td>
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<tr>
<td>- Recap why we might draw a picture of a story and how it can help us better understand a book.</td>
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</table>

Danielle did an excellent job with the sight words and decoding part of this lesson. I am already seeing a lot of progress in her ability to sound out words. Danielle was very excited about this new reading strategy, especially when I modeled it for her. I’m glad I included that in the lesson, because it showed Danielle what I expected. During the actual reading comprehension activity, Danielle had trouble understanding and focusing on the passage. I think it is because I did not show her the pictures (as I wanted her to imagine the setting and story). This indicates that this strategy may not be as beneficial as I thought it would be. I needed to read the passage 4 times in order for Danielle to produce a picture, though she was missing some key elements and made a few incorrect drawings (i.e. drawing a mother instead of father). I think I need to teach more vocabulary before interventions, even words I assume Danielle will know (such as the word “Pa.”) Furthermore, this session taught me that for this specific skill, Danielle needs more than 2 times to understand the information, also indicating how important pictures are to her reading comprehension. I also feel that because this book was more serious, it was actually more difficult for Danielle to connect to, so I think I need to stick with light-hearted books and passages.
<table>
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<tr>
<th>Date</th>
<th>Activity Description</th>
<th>Notes</th>
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</table>
| 2/28/2012    | - Work on identifying 10 sight words (my, more, not, on, off, end, so, it’s, talk, kite)  
               - Review all sight words since beginning of intervention and make sure Danielle can identify them correctly.  
               - Review why drawing pictures of what one hears in a story might be helpful.  
               - Read to Danielle a passage from “Three Bits Better” by Sara Matson (Highlights Magazine). Have Danielle identify characters and where they are verbally (setting). Give her a few minutes to draw the scene and then read again to make sure she gets all the information from the text.  
               - Looking together at the drawing, reread the passage together and add things to the drawing if anything missing.                                                                                       | Danielle has shown great progress with sight words identifying 86% of all the words correctly since the beginning of the intervention. As previously stated, Danielle really struggles with identifying characters and even though we reviewed this, Danielle seemed confused as to who Wagon Wheel was (the dog) and the role he played in this scene. In order to improve upon Danielle’s ability to identify sight words, I think we need to review all sight words more often (even though this is more time consuming). I think we could additionally spend more time discussing characters and setting, because this aids in the comprehension of a given text. |
| 3/1/13       | - Work on identifying 10 sight words (my, more, not, on, off, end, so, it’s, talk, kite), use words in sentences verbally  
               - Review st and sl blends, use phoneme mapping to This passage was really beneficial because it incorporated sight words and s blends that Danielle has been working on. I was also able to incorporate the previous | No changes needed.                                                                          |
<table>
<thead>
<tr>
<th>Description</th>
<th>Strategy</th>
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<tr>
<td>Have Danielle spell the sl words: slab, slop, slit, slid, slam, slug, slab, stab, stag, stun, stew, stud.</td>
<td>Teach Danielle ending. Have her sound out words that contain this sound: ring, fang, slung, sting, wing, lung.</td>
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<tr>
<td>Have Danielle read aloud “Pink Lady” reading passage from Reading A-Z (there are no pictures). Have her read it a second time either aloud or in her head.</td>
<td>Have Danielle pretend she is the illustrator of this passage and needs to draw a picture to show what is happening. Have her draw the picture, then read the text one more time in her head and make corrections or additions to her picture.</td>
</tr>
<tr>
<td>Work on identifying 10 sight words (could, would, can, did, do, this, boy, girl, kind, love). Review vocabulary from past lessons since the beginning of intervention and have Danielle either define words or put them in sentences (or give an example). Have Danielle read “Friends in the Stars” from Reading A-Z without the pictures once aloud and once in her head with minimal prompting or help from me to decode words (this book is on her independent level). Then</td>
<td>This intervention was very time consuming as I had Danielle illustrate each page. I could tell this took a toll on her, and it was asking a little bit too much. Other than that Danielle did a good job of decoding and reading the text and drawing pictures, it just required a lot of memory (though it was helpful because she read each page and then drew a picture).</td>
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</table>

**Visualizing a scene and drawing a picture**

This intervention was very time consuming as I had Danielle illustrate each page. I could tell this took a toll on her, and it was asking a little bit too much. Other than that Danielle did a good job of decoding and reading the text and drawing pictures, it just required a lot of memory (though it was helpful because she read each page and then drew a picture).

In retrospect, I shouldn’t have planned to have Danielle illustrate the whole book using this comprehension strategy. It was asking a little bit too much and I could tell she was overwhelmed. In the future, I will limit pages to 1-2 in order to keep Danielle motivated and engaged.
<table>
<thead>
<tr>
<th>Date</th>
<th>Activity Description</th>
<th>Notes</th>
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<tbody>
<tr>
<td>3/5/13</td>
<td>11- Visualizing a scene and drawing a picture&lt;br&gt; - Work on identifying 10 sight words (could, would, can, did, do, this, boy, girl, kind, love)&lt;br&gt; - Review all blends learned this far&lt;br&gt; - Explain that today Danielle is going to illustrate 2 pages in a book, the book Henry and Mudge and the Bedtime Thumps by Cynthia Rylant.&lt;br&gt; - Cover up pictures just so Danielle can see words on page 13. Have Danielle read this page aloud once (helping her if needed) and in her head once. Then take text away and have Danielle draw a picture. I am looking for a birdbath and a house and garden with corn. If any components are missing, I will read the passage to Danielle and then ask what was missing from the picture (I am trying here to have her be more independent with her reading and comprehension.)&lt;br&gt; - Same thing pg. 19 for additional practice with reading, understanding and then drawing.</td>
<td>These passages were fairly easy to draw and Danielle seemed to not only enjoy the passages, but enjoyed drawing the pictures and felt good when she covered all the components. I think she was successful because the level of detail in the passages was minimal so she was not overwhelmed by information that would need to be drawn.</td>
</tr>
<tr>
<td>11-</td>
<td>12- Visualizing a scene and&lt;br&gt; - Review all sight words that we have done since the beginning of</td>
<td>Again, I have noticed marked improvement in Danielle’s sight word</td>
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<td>Visualizing</td>
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<td>Date</td>
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<td>3/6/13</td>
<td>Drawing a picture intervention having Danielle read them all and use 10 words of her choice in a verbal - teach and map str blends (string, strap, stripe, strut) - teach vocabulary needed to understand the passage for today by explaining it, then having Danielle draw a picture of it: shrieked, salad bar, charging, rabbit - p. 16 and 17 George by Maggie Stern - I read 2 pages to Danielle, we choral read, she read aloud alone (pictures will be covered up) - I will then ask her to draw a picture of the scene that we just read having her pay special attention to where they were in the story</td>
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<td>3/11/13</td>
<td>Acting out a scene from a book using props - Work on identifying 10 sight words (could, would, can, did, do, this, boy, girl, kind, love), use words in sentences verbally, write 1-2 sentences with sight words - Teach new skill of acting things out. Talk about what acting is and discuss vocabulary word, props. - Once I have explained new reading strategy discuss vocabulary in story: copycat, strange, mistake, shave, brainless - once I teach words, have Danielle either use them in a sentence or define them in her own words - I read Stephanie’s Ponytail by Robert Munsch to Danielle. Then</td>
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<tr>
<td>3/13</td>
<td>When explaining this new intervention strategy, I could see immediately that Danielle was excited about trying this out, as she loves drama and acting things out. When Danielle discovered she could act out and retell the story using my hair, she was even more excited, and even after only hearing the book 2 times, she was able to correctly do the hairstyles and retell the story. I predict this will be a really effective intervention for Danielle.</td>
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<td></td>
<td>Again, having tangible props for Danielle to work with should be something used in every single intervention.</td>
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<tr>
<td>Date</td>
<td>Activity Description</td>
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<tr>
<td>3/12/13</td>
<td>14- Acting out a scene from a book</td>
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<td></td>
<td>- Work on identifying 10 sight words (said, because, happy, sad, excited, interested, October, red, something, thing)</td>
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<td>- Have Danielle read 2 times aloud <em>The Wish Broom</em> by Peggy Kahn.</td>
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<td>- Once she is done reading, explain that she is going to pretend she is the little girl in the story (providing her with the prop of a broom to become the wish broom). Ask her to act out the story about what the little girl wishes the broom could do.</td>
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<td></td>
<td>- Again, having the broom as a prop made all the difference in Danielle’s ability to retell the story. Maybe it is due to previous interventions, but I am seeing Danielle pick up on aspects of the story I don’t think she was able to recall at the beginning of interventions.</td>
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<td>n/a</td>
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<tr>
<td>3/13/13</td>
<td>15- Acting out a scene from a book</td>
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<td></td>
<td>- Work on identifying 10 sight words (said, because, happy, sad, excited, interested, October, red, something, thing), use words in sentences verbally, write 1-2 sentences with sight words</td>
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<tr>
<td></td>
<td>- Vocabulary- cow plops, sunsets, indelible, entirely, underneath, invisible, discuss and have Danielle define in her own words</td>
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<td></td>
<td>- Read Danielle 2 pages from a scene in Robert Munsch’s <em>Purple, Green and Yellow</em>. Provide her with the prop of a marker</td>
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<td>- The vocabulary in this book is very difficult, and since it is written by an English author, the different spellings of words really seemed to throw Danielle off. That being said, using the marker as the prop helped Danielle to imagine she was Brigid and she was able to recall most of what was read to her and what she read. I was able to really see that Danielle understood what she read in this intervention and to see the effects of these</td>
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<td></td>
<td>n/a</td>
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and have her pretend to be Brigid in this scene and do what she does, acting it out with her expressions and with the marker.

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity Description</th>
<th>Interventions</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Acting out a scene from a book</td>
<td>The vocabulary strategy of discussing words and then drawing them was really perfect and supplemented what we have been working on during these sessions. I wish I would have implemented this early on in the interventions to assist in vocabulary instruction. This particular intervention was interesting because I had Danielle act out the whole book pretending to be the little girl while I pretended to be the king and queen. Danielle remembered most of the story and pretended to bring in various animals, and this story was great because of its repetition. I wanted to try an intervention without tangible props which made it a little bit more difficult for Danielle to act out. I think in the last two interventions I will make sure to provide props instead of having Danielle make up imaginary props (i.e. animals). I also plan on using the vocabulary drawing strategy if I teach vocabulary the next 2 sessions as I think it was a great supplement to what we’ve been working on.</td>
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<td>3/18/13</td>
<td>Sight words (these, March, morning, evening, color, decide, laugh, made, something, school) Phonics: ending sounds – ing and –ed, using phoneme grapheme mapping</td>
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<tr>
<td>3/19/13</td>
<td>Sight words (these, March, morning, evening, color, decide, laugh, made, something, school) Phonics: ending sounds – ing and –ed, using phoneme grapheme mapping</td>
<td>Again, the vocabulary work was really helpful and fun for Danielle. She also enjoyed the book and it was very appropriate reading-level-wise for her. Furthermore, giving Danielle a focus for this</td>
<td>For the final intervention, I will also try to provide Danielle with things I want her to focus on when she is acting. This seemed to really help her this time and I saw more recall than I have in any other intervention.</td>
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<td>Date</td>
<td>Activity Description</td>
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| 6/8        | - 4 vocabulary words, discussion, then have Danielle draw those 4 words: claws, fry, munch, baby  
- Danielle reads book *There’s a Monster Under my Bed* by James Howe 2 times aloud with my help if needed. Focus on helping Danielle to pause at punctuation and use her voice to show emotions of little boy. Then have her read the book 1 time in her head.  
Using a beanbag as a prop for the bed, have Danielle act out as much of the story as she can remember pretending to be the little boy. Have her focus on what he imagines is under his bed and how he feels.  
This intervention (i.e. focus on how the little boy feels about the monsters under his bed and show me this, and also to focus on what he saw) seemed to lead to Danielle better understanding the book, not just having fun acting things out as she had in the previous interventions. This intervention was fun and very successful. Danielle’s recall was almost perfect. | n/a                                                                 |
| 3/20/13    | 18- Acting out a scene from a book  
- Sight words (thank, this, her, she, his, were, was, later, than, listen)  
- Write 2 sentences using the words with correct grammar and punctuation…help Danielle to make any corrections to grammar or punctuation  
- Discuss verbs- action words, have Danielle give examples, explain that today we will read a book and focus on acting out the verbs or action words in the story to better understand it  
- Teach Danielle vocabulary words and have her act them out: crawl, drag, walk, wear, fly, freeze, find, meet  
This book was perfect for me to teach Danielle some grammar (namely, about verbs). Danielle seemed interested in learning about verbs and seemed to remember throughout the intervention what the word meant and was able to give me examples. I think having the prop and then providing Danielle with characters to talk with pretending to be Franklin was really helpful for her to act out the story. | n/a                                                                 |
- Read *Franklin in the Dark* by Paulette Bourgeois and Brenda Clark to Danielle 1 time, then have her read it to me one time with assistance if needed (this book is a little bit challenging for Danielle to read independently)
- Provide Danielle with a shell to carry around and different stations with animal pictures. Have her drag her shell to each animal and have the same discussion with them that Franklin had with the animals, focusing on using actions words.
- Recap importance of using acting to help us understand a story or parts of a story