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The effectiveness of rotated centers during a reading block for students with learning disabilities

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THE EFFECTIVENESS OF ROTATED CENTERS DURING A READING BLOCK FOR STUDENTS WITH LEARNING DISABILITIES

by

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Abstract

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Selecting the most efficient reading program for students with special learning disabilities has become a challenge in schools today. Currently the programs that are being produced are either in a traditional or conventional format, which are typically designed for general education students. Neither platform give much thought to students with learning disabilities. The traditional and conventional reading framework is block teaching for sixty minutes. The purpose of this study is to determine the effectiveness of modifying a traditional or conventional reading framework by incorporating reading stations for students with special learning disabilities. This study was conducted over a two to three month period with twelve students in the controlled group with SLD (Specific Learning Disability) and MD (Multiple Disability), similar economic status, low to moderate reading levels but low comprehension levels, same community but different ethnic backgrounds. The data demonstrated that for all twelve participants rotated learning stations during a reading block resulted in an increase in reading levels through comprehension. The students demonstrated a good attitude towards reading through their self-examination on the ERAS survey which had increased their scores.

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Chapter 1

Introduction

Today's reading programs are not always designed to support students with special needs, including those classified with Specific Learning Disability (SLD) or Multiple Disability (MLD) (Do you have a source for this statement?) . The Individual with Disabilities Education Act (IDEA) definition of a child with a *Specific Learning Disability* is, "A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia." The definition for *Multiple Disability* is two or more disabilities, simultaneous impairments (such as intellectual disability-blindness, intellectual disability-orthopedic impairment, etc.), which causes severe educational needs (IDEA 2014, 34 CFR 300.8 c10).

There are 2.4 million American public school students (approximately 5 percent of the total public school enrollment) identified with learning disabilities under the Individuals with Disabilities Education Act (IDEA). SLD is the largest category of students receiving special education services. Sixty-Nine percent of students identified with SLD are males and forty-nine percent are females. Black and Hispanic students are overrepresented in many states while white and Asian students are underrepresented in the SLD category. Most students with SLD are found in households living in poverty than in children from the general population. Living in a low -income household creates a greater likelihood of poor health, poor performance in school and a variety of poor

outcomes in adolescence. (National Council on Learning Disabilities, 2014). About 30 percent of students with a primary disability of SLD also had a secondary disability and 7 percent had MLD such as speech/language impairments or emotional disturbance (SEELS Wave 1 School Program Survey, 2001). In 2014, sixty-nine percent of fourth grade students with disabilities performed below the basics in reading, twenty percent were basic and two percent were proficient according to results of the National Assessment of Educational Progress (2014).

Today's reading programs do not focus on the students' attention span, lack of motivation, and learning and physical abilities, which often leads to low test scores, discipline problems, frustration, anxiety, depression, low-self esteem, fear, and wasted instructional time. Students with learning disabilities often have a difficult time following a traditional reading program that requires students to work independently and stay on one particular task for a long period of time. Most traditional reading programs are designed for an extended block time. The theory is that an extended block will give the student the opportunity to read independently and reflect on what they have read. But for some students with disabilities, this extended time may actually cause more problems than it solves.

According to the National Joint Committee of Learning Disability, many students with learning disabilities have a shorter attention span, some lose focus, and often struggle in reading or understanding the meaning of the text. Students may also have a difficult time recalling, and/or organizing information if left to figure out things by themselves or if taught in conventional ways. The disability cannot be cured or fixed but with the right support and intervention children can succeed in school and in life (National Joint

Committee of Learning Disability, 2014).

Considering the problems that most students with learning disabilities have in regards to how they are taught, I believe that modifying a traditional or conventional reading framework through incorporating stations provide an instruction model to keep the students focused, engaged, and interested which leads to higher achievement scores, test scores, less behavior problems, and students feeling a sense of satisfaction. As a special education teacher for ten years my students struggled with the traditional and conventional reading setting in a self-contained special education environment. My students had a hard time focusing, paying attention, staying on task, completing the assignment, working independently for an extended time, disoriented, and struggle with their learning abilities.

The three questions examined in this study are:

-What is the effect of the use of reading stations as compared to a reading block on the reading performance of students with disabilities?

-What is the effect of the use of reading stations as compared to a reading block on students' reading behaviors during reading for students with disabilities?

- What is the effect of the use of reading stations as compared to a reading block on the attitudes toward reading of students with disabilities?

This study was conducted in one classroom that is a self-contained special education setting. Students' reading performance was measured using the *Scholastic Reading Inventory Assessment (SRI) and Fauntas and Pinnell Benchmark Assessment System.* Students' reading behavior was evaluated on their comprehension and use of reading skills using Fauntas and Pinnell Benchmark Assessment System. Their attitude

towards reading will be a self-evaluation using the Elementary Reading Attitude Survey (ERAS). The reading block starts with whole group instruction for ten minutes that introduces a mini lesson that focus on reading strategies. Then students were separated into small groups (three to a group) and rotated into stations every fifteen minutes for 45 minutes. During this time the teacher pulled a guided reading group for direct small group instruction. Length of time with guided reading group was based on the group reading level. All groups will not meet in the same day. In this controlled setting I focused on the whole class (12 students) who are classified with SLD and MD (8 SLD, 3 MD). There are ten males and two females. Out of the ten males four are Hispanic and six are African American, one Hispanic female, and one African American female. All of the students receive free lunch. The intervention will be implemented over a two to three month period. It is hypothesized that students with learning disabilities will improve reading performance, positive behaviors, and positive attitude towards reading when they have the opportunity to access learning stations in the classroom. Additionally, it is hypothesized that the reading stations will improve students' attitudes toward reading and create a more conducive learning community.

The intervention group in this study was students in a special education self-contained 3rd/4th environment. The definition of a self-contained environment in special education is an environment that consists of no more than twelve students with moderate to severe disabilities that include autism, emotional disturbances, severe intellectual disabilities, multiple handicaps, and children with serious or fragile medical conditions. The reading stations were the alternative format used in this study for reading instruction to help students with disabilities reading behaviors, reading performance and attitude

towards reading. The stations were used as a consistent structured instructional format that includes independent reading, letter writing, interactive, and technology for comprehension, fluency, and other reading skills.

The objective for using this format is to keep students motivated, build a positive classroom community, reduce behavioral challenges, increase interest, provide explicit instruction in reading and comprehension, meet students at there needs, and to build fluency and content to their maximum. Stations are designed to maximize instructional time, fewer students per group, address learning styles, provide opportunity to move, offer variety of activities, shorter time, work collaboratively with peers, develop a positive attitude towards reading, increase interest for reading, and address disabilities

The conventional reading framework that is used in the school district is Literacy Collaborative by Fauntas and Pinnell. It requires students to pick a just-right book for themself, read independently for 45 minutes, write down their thinking on a sticky note, think about the mini lesson, and think "within the text", "about the text", and "beyond the text". During this time the teacher does small group instruction for guided reading. Guided reading groups are by reading levels. Students' performance is measured with *Scholastic Reading Inventory Assessment* (SRI), a computer adaptive reading comprehension test and *Fauntas and Pinnell Reading Assessment Systems* that is a formative and summative assessment. Students were assessed at the beginning of the year on *SRI* and *Fauntas and Pinnell Reading Assessment Systems* to determine reading levels. The *SRI* measures reading comprehension by focusing on the following skills: identifying details in a passage; recognizing cause-and-effect relationships; pinpointing sequence of events; drawing conclusions; and making comparisons and generalizations. The *Fauntas*

and Pinnell Benchmark Assessment Systems assess on reading skills to identify the instructional and independent reading levels. During the assessment, the computer adapts the test continually according to student responses.

Chapter 2

Review of Literature

Teaching reading is very complex. Reading is more than phonemic awareness and phonics. It includes fluency, vocabulary, and comprehension. Good readers are phonemically aware, understand the alphabetic principle, fluent, possess strong vocabularies and syntactical and grammatical skills, and able to make personal connections. If children have difficulties in these areas it will impede reading development (Wihelm, 2001)

Reading begins at a very young age before children enter formal schooling. Students who have stimulating literacy experiences from birth onward have an edge in vocabulary development, understanding the goals of reading, and developing an awareness of print and literacy concepts (Lyon, G.R.1998). Some children may lack the foundational skills for reading. These skills include phoneme awareness, phonics, spelling, and reading comprehension. Other factors that may impede students reading ability are family history of reading problems, home literacy environment, verbal interaction, language other than English, and socioeconomic status. If a child is diagnosed with a reading disability, there is a higher than normal probability that other family members will also have difficulties with reading (Gilger et al., 1991). As stated in Chapter 1, most students with disabilities struggle with reading (National Assessment of Educational Progress, 2013). Students have a difficult time recalling information, focusing, staying on task, processing information, and synthesizing. Students with learning disabilities have a difficult time understanding the meaning of words and passages. Let's discuss the different components of reading.

Phonemic and Phonic Awareness

Phonemic Awareness and Phonics are sometimes used interchangeably but there are slight differences. Phonemic awareness involves an understanding of the ways that sounds function in words, it deals with only one aspect of sound: the phoneme, which is the smallest unit of sound in a language that holds meaning (Yopp, 1992). Phonological awareness is the ability to recognize that words are made up of a variety of sound units. The term encompasses a number of sound related skills necessary for a person to develop as a reader. As a child develops phonics, they come to understand phoneme (Cunningham and Yopp, 1998). Phonemic awareness is critical for the success of students with language disabilities and dyslexia. Being able to recognize letter combinations and put them together into words is a critical skill.

Fluency

Fluency is the ability to read connected text quickly, accurately, and with expression. Fluency is important to reading comprehension (Rasplica and Cummings, 2013). Fluent readers read text with speed, accuracy, and proper expression and are a critical component of skilled reading. The National Assessment of Educational Progress (2013) reported the results of a large study of fluency achievement in American education. The study examined the reading fluency of a nationally representative sample of fourth graders and found 44% of students to be disfluent even with grade-level stories that were read under supportive testing conditions. The study also found that there is a close relationship between fluency and reading comprehension. Students who are low in fluency may have difficulty getting the meaning of what they read (U.S. National Reading Panel 2000). According to the U.S. National Reading Panel (NRP, 2000)

instruction in guided *oral* reading is an important component of elementary reading programs and is associated with gains in fluency and comprehension. Guided oral reading refers to modeling fluent reading. The NRP reported that good and poor readers benefit from guided *oral* reading and recommends teachers to include guided oral reading to enhance their reading instruction. However, NRP research analysis did not reveal whether students with learning disabilities benefit from guided *oral* reading.

Chard and Vaughn (2002) set out to study the effects of guided oral reading with students with learning disabilities. Chard analyzed studies to determine which features of a fluency intervention were most effective. They studied the effect of the amount of text read, the difficulty of the text, number of repetitions, the type of feedback, and the criteria for advancement to more difficult text. The study also covered the effects of both single-word and connected-text practice on fluency.

The researchers found, in general, that repeated and guided oral readings improve reading rate and accuracy in reading-disabled students. Their findings suggest that these students benefit from interventions that have multiple components focusing attention on increasing both the rate and the accuracy of reading.

Vocabulary

Vocabulary is the means by which learning is articulated. In both writing and discussion, the ability to use vocabulary accurately and incisively is a marker of one's command of the topic. Vocabulary meaning is built through a growing bank of background knowledge that is continually reorganized and expanded (Farley and Elmer, 1992).

Vocabulary or word knowledge is a part of reading comprehension (Tannenbaum, 2006). One of the most important skills learned by young students is the ability to understand written text, which is usually referred to as reading comprehension. Comprehension of the information in text, or of the author's meaning, is the ultimate reason for reading. To comprehend larger units of text such as paragraphs and stories, a child must understand the smaller word units (National Institute of Child Health and Human Development, 2000). Early factor analytic studies established vocabulary knowledge as one of the major factors in reading comprehension (Davis, 1944; Spearritt, 1972).

Reading Comprehension

Reading comprehension is the application of a skill that evolved for other purposes (listening or oral comprehension) to a new form of input (text) (Donald 1991). Reading comprehension is more complex than oral comprehension. It requires deliberate instruction, processing, thinking, synthesizing, and analyzing. Reading comprehension is seen as the product of decoding and listening comprehension. Other factors include listening comprehension, fluency and strategies (Olson, 1994).

Certain strategies and skills are needed for good readers. For example, the strategy summarizing requires several skills like sequencing of events, making judgments, noting details, making generalizations, and using story structure or text organization. Strategies employed by effective readers can be explicitly taught to improve reading comprehension (National Reading Panel 2000). Good readers do certain strategies and skills before, during, and after reading (Diamond, Gutlohn, Honig, Teaching Reading Sourcebook 2008).

Before reading. Good readers preview a text by looking at the cover and title. Look at some of the pictures and read some of the text. Predict what the text will say. Good readers ask questions like who, what, when, where, why, and how. Decides if what was read make sense.

During reading. Good readers predict about what will happen next. Make guesses and read ahead to see if predictions are correct. Good readers infer by imagining the details. Use what is understood to what the author means. Good readers connect to what is read to what is known and connect to their thoughts and feelings. They compare what they read to other texts and to the world around them.

After reading. Good readers Summarizes by organizing and connecting the details; draw their own conclusions. Finally, good readers evaluate by thinking about what they read, learned, and what was important to them. They evaluate if they like the text and explain why or why not.

Reading Comprehension and Students with Learning Disabilities

Children with learning disabilities are a diverse group of individuals, exhibiting potential difficulties in many different areas. For example, one child with a learning disability may experience significant reading problems, while another may experience no reading problems whatsoever, but has significant difficulties with written expression. Learning disabilities may also be mild, moderate, or severe. Students differ too, in their coping skills. Despite these differences, learning disability always begins in childhood and always is a life-long condition" (Bowe, 2005).

Over the years, parents, educators, and other professionals have identified a wide variety of characteristics associated with learning disabilities (Gargiulo, 2004). One of the

earliest profiles, developed by Clements (1966), includes the following ten frequently cited attributes:

- Hyperactivity
- Impulsivity
- Perceptual-motor impairments
- Disorders of memory and thinking
- Emotional labiality
- Academic difficulties
- Coordination problems
- Language deficits
- Disorders of attention
- Equivocal neurological signs

Almost 35 years later, Lerner (2000) identified nine learning and behavioral characteristics of individuals with learning disabilities:

- Disorders of attention
- Reading difficulties
- Poor motor abilities
- Written language difficulties
- Oral language difficulties
- Social skills deficits
- Psychological process deficits
- Quantitative disorders
- Information processing problems

Students with learning disabilities often have difficulties with reading comprehension (Gersten, Williams, Fuchs, & Baker, 1998). These children often lack the skills required for understanding text and have poor word-analysis skills (Hunt & Marshall, 2005). Reading comprehension refers to a student's ability to understand what he or she is reading. Some students with reading comprehension difficulties are able to read a passage so fluently that you might assume they were proficient readers. Fluency is a part of comprehension however it doesn't mean the student understood what was read. When they are asked questions about what they have read, they have little or no understanding of the words. It is always necessary to assess not only decoding but also the ability to understand what is being decoded. According to Salvia and Ysseldyke (1998), there are six different types of reading comprehension skills:

- Literal comprehension: The student reads the paragraph or story and is then asked questions based on it.
- Inferential comprehension**:** The student reads a paragraph or story and must interpret what has been read.
- Listening comprehension: The student is read a paragraph or story by the examiner and is then asked questions about what the examiner has read.
- Critical comprehension: The student reads a paragraph or story and then analyzes, evaluates, or makes judgments about what he or she has read.
- Affective comprehension**:** The student reads a paragraph or story, and the examiner evaluates his or her emotional responses to the text.
- Lexical comprehension: The student reads a paragraph or story, and the examiner assesses his or her knowledge of vocabulary words.

Here are some common reading comprehension problems of children with Learning Disabilities: (Ysseldyke, 1998)

- Difficulties recalling basic facts (unable to answer specific questions about a passage, such as What was the dog's name in the story?)
- Difficulties recalling sequence (unable to tell the sequence of the story that was read)
- Difficulties recalling the main theme (unable to recall the main topic of the story)

Students with learning disabilities often have difficulties with word recognition, which relates to the student's ability with respect to sight vocabulary. According to Salvia and Ysseldyke (1998):

A number of different skills were used to identify written words using important words analysis. (Ysseldyke, 1995 p. 251):

- The ability to associate sounds with the various letters and letter combinations used to write them (phonic analysis)
- Immediately recognizing and remembering words (sight-word reading)
- Using the surrounding text to help figure out a specific word (using context)

The skills listed above rely heavy on perception, selective attention, memory, and meta-cognitive skills. Thus, word recognition depends almost entirely on the cognitive skills that are most problematic for individuals with disabilities (Hunt & Marshall, 2005). According to Gargiulo (2004), here are common word recognition errors for students with learning disabilities:

- Omissions. Omitting a word (Tom saw [a] cat.)
- Insertions. Inserting words (The dog ran [fast] after the cat.)

- Substitutions. Reversing letters in a word (no for on, was for saw)
- Mispronunciations. (Mister for miser)
- Transpositions. Reading words in the wrong order (She away ran instead of she ran away.)
- Unknown words. Hesitating for 5 seconds at words they cannot pronounce
- Slow choppy reading. Not recognizing words quickly enough (20 to 30 words per minute)

Children with learning disabilities often have poor reading habits. Some behaviors that are exhibited by children with poor reading habits are (Gargiulo 2004):

- Tension movements: Frowning, fidgeting, using a high-pitched tone of voice
- Insecurity: Refusing to read, crying, attempting to distract the teacher
- Loses place: Losing place frequently
- Lateral head movements: Jerking head
- Holds material close. Deviating extremely from 15 to 18 inches

Reading Intervention

In a study meta-nalysis (Berkeley, Scruggs, & Mastropieri,) reviewed research conducted between 1995-2006 that included 40 studies of students form kindergarten thru 12th grade with learning disabilities examined reading comprehension instruction for students with disabilities. Of the 40 studies, 15 studies involved elementary school students, 18 involved middle school students, 6 included high school students, and 1 examined students in a residential facility for adjudicated youth. The mean age of participants in these studies was 12 years old. All of the studies included in this meta-analysis focused on students classified as having a learning disability. In addition, eight

studies included small groups of children with other classifications (ADHD or remedial reading). Several interventions designed to improve student reading comprehension and containing specific reading comprehension outcomes were examined. The interventions were categorized as questioning/strategy instruction, text enhancements, and fundamental reading skills training.

Questioning/strategy instruction. Questioning/strategy instruction interventions focused on teaching students reading comprehension strategies, directly questioning students while reading, or teaching students to self-question while reading. Interventions in this category included teacher-directed questioning (which encompasses both directly questioning students and training students to ask themselves or their peers questions while they read), reading comprehension strategy instruction (e.g., activating prior knowledge, making predictions, summarizing, identifying main ideas, clarifying, questioning, and analyzing text structure), and peer tutoring (e.g., peer-assisted learning strategies, Collaborative Strategic Reading (CSR), the Text Content and Structure Program, reciprocal teaching, and class-wide peer tutoring).

The use of questioning or strategy instruction for teaching students with learning disabilities reading comprehension skills has been studied more extensively than any other reading comprehension strategy, and has shown moderate to high effectiveness across studies. Five studies on question/strategy instruction reported very high effect. All of the interventions shown to be highly effective involved teaching students to ask and answer questions about the text's main idea. In addition, 4 out of the 5 highly effective interventions included a self-monitoring component, and 2 studies with very

high effect sizes included a strategy called "attribution retraining," where students learn to associate progress in their reading skills with their effort and strategy use.

Text enhancements. The primary purpose of text enhancement interventions is to increase reading comprehension by supplementing or enhancing the text. Text enhancement interventions included in-text question placement, graphic organizers, and technology (e.g., hypermedia and video vocabulary instruction for text enhancement).

In-text question placement, graphic organizers, and technology were used to teach students reading comprehension in eight of the studies reviewed. Text enhancements were found to be effective in helping students with LD learn reading comprehension strategies.

Fundamental reading skills training. Fundamental reading skills interventions provided training in basic skills (e.g., phonological awareness and/or phonics skills) to increase reading comprehension. This category contained packaged intervention programs designed to teach basic reading skills (e.g., the Behavioral Reading Therapy Program, the Failure Free Reading Program, the Auditory Discrimination in Depth Program, Embedded Phonics, and the Dyslexia Training Program). All the fundamental reading skills programs maintained very low student-to-teacher ratios during implementation.

Overall, instructing students in basic reading skills using packaged interventions with low student to teacher ratios was an effective method of increasing reading comprehension.

The conclusion and recommendation from the studies: This meta-analysis confirms previous findings that, overall, reading comprehension interventions for students with learning disability have a greater positive impact on student skill development than traditional instruction alone. Although the effect sizes were lower than those found in previous meta-analyses, reading comprehension interventions involving questioning/strategy instruction, training in fundamental reading skills, and text enhancements nonetheless ranged from moderate to high.

The authors note a ***common thread*** between the wide-range of interventions included in this meta-analysis: a focus on teaching students to attend more carefully and think more systematically while they read. Since previous research has found most students with learning disabilities fail to use these strategies on their own, the implication of this meta-analysis is that systematically teaching reading comprehension using any of these interventions is likely to significantly improve students' ability to derive meaning from text.

Another disability that affects reading is Dyslexia. Dyslexia is a neurological condition. Dyslexia is one of several distinct learning disabilities. It is a specific language-based disorder characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities (International Disabilities Association). The difficulties in single word decoding are often unexpected in relation to age and other cognitive and academic abilities; they are not the result of generalized developmental disability or sensory impairment. Dyslexia is manifested by variable

difficulty with different forms of language, often including, in addition to problems reading, a conspicuous problem with acquiring proficiency in writing and spelling.

Dyslexia is a type of reading disorder in which the student fails to recognize and comprehend written words. Dyslexia is a severe impairment in the ability to read, despite normal intelligence, normal opportunities to read, and an adequate home environment. Although the cause of dyslexia is unknown, it is generally thought that this problem results from difficulties with phonological awareness—a lack of understanding of the rules that govern the correspondence between specific sounds and certain letters that make up words (Lyon & Moats, 1997; cited in Gargiulo, 2004). In other words, letter-sound recognition is impaired.

Traditional/Conventional Reading Programs

Finding the right instructional programs for reading can be very challenging for struggling students and students with learning disabilities. Most school districts use a traditional or conventional method. Those methods include basal reading programs or literacy collaborative framework. A basal reader is a complex collection of reading selections, support materials, and assessments held together by a hefty teacher's edition. Seventy-four percent of schools and teachers use a basal reader, either following it closely or sampling from its many components (Education Market Research, 2010). Basals include small-leveled readers, big books, workbooks, and assessments. Basal readers follow education trends but rarely initiate new ideas and are market driven (Chambliss & Calfee, 1998). Durkin (1981) studied comprehension instruction in core programs and found that they provided practice and assessment but failed to help the

teacher provide explicit instruction into the comprehension practice. Researchers noted lack of explicit instruction over the next thirty years (Dewitz, Jones, & Leahy, 2009), the lack of metacognitive emphasis (Miller & Blumenfield, 1993), poor guided reading questions (McKeown, Beck, & Blake, 2009), the failure to build prior knowledge (Dewitz et al., 2010; Walsh, 2003), and insufficient volume of text to fuild fluency (Brenner & Hiebert, 2010). The structure of basal programs does not lead students to reading independence because the lessons focus on unchanging repetitive routines, not growing expertise (Chambliss and Calfee, 1998).

Literacy Collaborative is a literacy framework that consists of three blocked components; reading, writing, and word study. The reading framework is 45-90 minutes that consists of guided reading and independent literacy work. In the framework students read independently on the reading level for forty-five minutes while the teacher pull students for guided reading (Fauntas and Pinnell, 2006).

Guided reading strategies are often used to help students who struggle with reading comprehension. Pre-reading, during reading and post reading strategies are combined to facilitate learning and enhance literacy through the implementation of guided reading strategies, students become aware of how print works (Kasten, Kristo, & McClure, 2005), and students struggling with reading comprehension are better able to create meaning. “In guided reading, teachers show students the “tricks of the trade,” then provide focused support to help them become independent readers and writers,” (Kasten, Kristo, & McClure, 2005, p. 286).

Literacy Stations/Centers

Literacy centers are defined as small areas within the classroom where students

work alone or in small groups to explore literacy activities while the teacher provides small group guided reading instruction (Diller, 2003). Vygotsky (1967) proposed the concept of the zone of proximal development and studied the role of play in a child's education. As Debbie Diller explained, the zone of proximal development is "what a child can do with support today that they can do own their own tomorrow" (2003, p.8). Literacy centers within a learner-centered environment are also consistent with the work of Piaget (1963) who believed that children develop meaning through their direct experiences and through conversations with others regarding those experiences. Learner-centered environments are supported by the work of Deci and Ryan (1987) who found evidence that children put more effort into their schoolwork when they are intrinsically motivated rather than teacher motivated. Students learn when teachers provide choices, make learning relevant and keep it engaging (as cited in Diller, 2003). Effective centers require students to transfer meaning and reconstruct it in other contexts such as a center where a student reads a book and then creates a board game based on the plot. An effective center offers a range of acceptable responses (Cambourne & Labbo, 2001).

Stout (2009) conducted a study on the utilization of centers to improve reading instruction. This study was conducted for six weeks on first grade students. The school is located in a large urban district in the American Southwest region. Ninety-two percent of the students are economically disadvantaged; 86% are Hispanic, 12% African American, and 2% Caucasian. The study was conducted in one classroom of 17 students, 12 boys and 5 girls. The ethnic distribution of the class was 10 Hispanic, 6 African American, and 1 Caucasian. Data was collected on all of the students; six students with varying abilities were chosen as focus students. The focus students were chosen based on

the DRA (Development Reading Assessment) scores that were collected at the beginning of the study. Two of the students were high performing, two were medium performing, and two were low performing. Students were given a pre-test and a post-test. Data was collected through the teacher's anecdotal notes and teacher journal. Teacher observed the focus group daily in each station and noted if the student was engaged or not engaged. Student work samples were collected. Beginning work samples were compared to ending samples. Students were assessed again and the end of the study to find their DRA level. After six weeks, the DRA scores had increased an average of four reading levels. There was also correlation between the teacher's anecdotal notes regarding engagement in the centers and the dramatic improvement in the DRA scores. The students who were the least engaged in the centers were also the students with the lowest reading scores. Behavior in the class improved during center time because more clearly defined expectations (Ford & Opitz, 2002) and engaging activities (Jenson, 2005).

Summary

Reading has become more complex now than before. More and more students are born with a learning disability and most disabilities struggle with reading. Students with learning disabilities need modifications and different approaches to help enhance reading at their functioning level. Traditional methods do not work because it requires a lot of independency and students with learning disabilities need a lot of assistance. Reading comprehension alone is very complex and good readers have a lot of strategies that are utilized on an independent level where poor readers do not carry that trait. Strategies and modification of a traditional reading program is necessary for students to succeed and grow to independency. Students with learning disabilities have to be given explicit

instructions about the text to think before, during, and after. This should be reinforced daily. It's difficult for students with learning disabilities to summarize an entire text. Students with learning disabilities should summarize one paragraph at a time. It's very important to introduce children with background knowledge and utilizing context clues. Teachers should model thinking to expose students with disabilities on what their thinking should sound like during reading. Students with disabilities cannot sit for a long period of time addressing the strategies for good readers independently. The purpose of this study is to look into the difficulty of learning reading and utilizing the best framework and strategies to address the needs for students with disabilities. Utilizing rotated centers or stations during a reading block to address certain skills like phonics, comprehension, vocabulary, and fluency enable teachers to differentiate instruction according to each child's needs, address the interests of students, keep the learning child-centered, create socially-based learning, independency, engagement, less behavior issues, and keep students focused.

Chapter 3

Methodology

Setting and Participants

This study included twelve students in a self-contained 3rd/4th classroom. The students attend an elementary school in an urban school district in Southern New Jersey. It's a very large school district that contains nine elementary schools grades Prek-8, one high school, an administrative building, and a parent center in each school. There are a total of approximately 7,260 students in the district grades Pre-K – 12 and of that number 2,001 students are high school. The study covered reading under the Language Arts Literacy.

According to the State of New Jersey Performance Report (New Jersey Department of Education, 2013-2014), 2.0% of the students in the elementary school are Caucasian, 74.8% are African American, 19.3% Hispanic, 2.8% Asian, .05% Native American, 0.1%, .4% Other. The total school enrollment is seven hundred eleven. Of that amount 11% are Students with Disabilities, 94.7% Economically Disadvantage Students, and 5.9% are Limited English Proficient.

The students who were in the study are all classified for special education services in a self-contained environment with an IEP (Individualized Educational Program). Ten of the students are classified with Specific Learning Disability and two are Multiple Disability. Two of the twelve students are also diagnosed with autism and one is cognitively impaired. There were ten males and two females. Out of the ten males four

are Hispanic and six are African American, one Hispanic female, and one African American female.

Procedure

The intervention was implemented over a twelve-week period from mid October 2015 to mid January 2016. Students were given the *Scholastic Reading Inventory* and *Fauntas and Pinnell Benchmark Assessment* in the fall to determine their reading level. Students were assessed one more time in the winter to determine growth.

The students were divided into groups. One group received guided reading. In guided reading, the students read through a text, one at a time. I guided them through the text and focused on different reading skills like compare/contrast, context clues, and thinking beyond, within, and of the text. The materials I used were leveled reading books. That group consisted of students with the same reading level. I had four groups. Group 1 consisted of two students, one male age 8 and one female age 7, on a level C that is high kindergarten grade reading level. Group two consisted of three students, all males ages 8-9 on a level F that is a high first grade level. Group three consisted of four students, 1 female age 9 and 3 males ages 8-9 on a level J that is a high second grade level. Group four consisted of four students, all males ages 8-9 on a Level M that is a third grade level.

During the reading block students in the learning stations group rotated into different learning stations for fifteen minutes. The reading block is a one-hour block time set aside for reading. In each station, students focused on different reading skills that concentrated on comprehension and fluency. The reading stations were computers, independent reading, browsing box (students focus on background knowledge of informational text), and writing to the text. At the computer station students utilize the

websites Mobymax.com and compass learning. These sites focused on reading fluency, comprehension, writing, vocabulary, and different reading genres. These sites are designed with programs that are aligned to address their individual needs on their reading levels. At the independent reading station and browsing box students picked a book from the classroom library and read independently or chose an informational text like an almanac or books on animals browsed through it. In the writing station students express their thinking in their Reader's Notebook in a friendly letter format to the teacher. Students in the guided reading group worked individually with the special education teacher. The length of time in the guided reading group was ten to fifteen minutes.

During the reading block, students looked at the workstation chart to determine what station to start in. At each station students had a task to complete. This group loves informational text so a browsing area in the library was set up for the students to pick books in that area for browsing during their independent reading station. A consistent routine was set-up so the students will know what to do without assistance from the teacher or the aide. The aide monitor the stations to make sure the students stay on task and complete assignment. In the computer station students will go to Mobymax or compass learning to continue skills. The teacher is able to review the work and skills that were completed by each student. The timer was set for fifteen minutes in each station. When the timer rung the students straightened up their area and proceeded to the next station. Once students were situated the timer was reset for another fifteen minutes.

The students reading performance was measured using the *Scholastic Reading Inventory*. The *SRI* reading assessment uses a lexile score ranging from 0 – 1200. Students' attitude was measured using the *Elementary Reading Attitude Survey* (*ERAS*)

(McKenna, Michael C, Kear, Dennis J). The *ERAS* survey was used to determine the outcome of students' attitude towards reading. Students completed the *Elementary Reading Attitude Survey* at the beginning of the research and at the end. It consists of 20 items. Each item presents a brief, simply worded statement about reading followed by four pictures of Garfield. Each pose is designed to depict a different emotional state, ranging from very positive to very negative. The emotional states were very happy, slightly happy, slightly upset, and very upset. Each emotional state represented points from 1-4. The first half of the survey relates to attitude towards recreational reading and the second half relates to academic aspects of reading. Some sample questions are: How do you feel about reading different kinds of books? How do you feel about reading for fun at home? How do you feel about reading instead of playing? How do you feel when a teacher asks you questions about what you read? (e.g. See Appendix 1).

Variables

The independent variable in this study was the reading stations. This intervention is aimed to keep students motivated, on task, and engaged during reading, reduce behavior, increase interest, work collaboratively, and address students' needs.

The dependent variables in the study were the students' reading levels, self-assessment, and behavior evaluation.

Experimental Design

The use of reading stations was the intervention used. The *SRI* reading assessment measured the students' reading level before and after to determine progress. Students' attitude was measured using the *Elementary Reading Attitude Survey* (*ERAS*) at the beginning of the research and after.

Chapter 4

Results

In this single subject study, the effects of utilizing reading stations versus a block of reading to improve reading performance and attitude towards reading were examined with 12 special needs students from a 3rd grade self-contained classroom. The research questions to be answered were:

-What is the effect of the use of reading stations as compared to a reading block on the reading performance of students with disabilities?

-What is the effect of the use of reading stations as compared to a reading block on students' reading behaviors during reading for students with disabilities?

- What is the effect of the use of reading stations as compared to a reading block on the attitudes toward reading of students with disabilities?

The students were assessed in the beginning of the year on the computer using *Scholastic Reading Inventory* Assessment (SRI) for their reading performance. The SRI reading assessment uses a lexile score ranging from BR (beginning reading preK level) - 1200. This assessment evaluates reading comprehension. The lexile score obtained from the assessment were used to determine the students reading level. Students will also assess in mid-year and the end of the year to determine growth.

Group Results

Table 1 shows their lexile level in the beginning and middle of the year for each of the 12 students.

Table 1

SRI Beginning and Mid Year Results

Participants	***September Lexile score***	***January Lexile Score***	***Growth***
1	BR	361	281
2	27	103	76
3	BR	139	139
4	24	154	130
5	BR	192	192
6	174	254	80
7	40	171	131
8	BR	273	273
9	BR	236	236
10	BR	85	85
11	37	221	184
12	0	126	126

Students were assessed in the Fall and the Spring. The computer scores the students and gives a lexile score. Students are then assessed on SRI at the end of the score year to determine growth. This assessment is used for the purpose of growth. The group as a whole and as an individual showed a growth in the spring. The mean as a whole was 25.1 in the fall and 192 in the spring.

The students took a survey to measure how they feel about reading in September and February. Students took the *Elementary Reading Attitude Survey* (*ERAS*). The first half of the survey relates to attitude towards recreational reading the second half relates to attitude toward the academic aspect of reading. When scoring the survey, three scores are obtained. Four points for each leftmost (happiest) Garfield circled, three of each

slightly smiling Garfield, two for each mildly upset Garfield and one for each very upset Garfield. The scores are calculated informally where the score falls in regard to the four nodes of the scale. A total score of 50, for example, would fall about midway on the scale. Table 2 shows the results on the students' attitude towards reading.

Table 2

ERAS: Results for Students' Attitude Towards Reading

Participant	***Recreational Reading***		***Academic Reading***		***Percentages (%)***	
	Fall	***Spring***	***Fall***	***Spring***	***Fall***	***Spring***
1	12	36	6	31	23	84
2	19	34	9	29	35	79
3	12	22	7	18	24	50
4	10	29	6	26	20	69
5	15	31	10	28	31	74
6	18	34	11	29	36	79
7	17	30	10	27	34	72
8	11	23	9	20	24	54
9	10	24	5	21	19	56
10	8	17	8	15	20	40
11	5	22	3	16	10	48
12	15	28	9	24	43	65

For participant 1, scores on both the recreational and academic dimensions increased from the fall to the in the spring measurement. The overall fall percentage for recreational/ academic went from 23% to 84%. Participant 2 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 35% to 79%. Participant 3 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 24% to 50%. Participant 4 recreational and academic increased in the spring. The overall fall percentage for

recreational/ academic went from 20% to 69%. Participant 5 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 31% to 74%. Participant 6 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 36% to 79%. Participant 7 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 34% to 72%. Participant 8 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 24% to 54%. Participant 9 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 19% to 56%. Participant 10 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 20% to 40%. Participant 11 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 10% to 48%. Participant 12 recreational and academic increased in the spring. The overall fall percentage for recreational/ academic went from 43% to 65%.

Table 3

Results: Benchmark levels from Fauntas and Pinnell

Participant	***Fall***	***Winter***
1	***F***	***K***
2	***I***	***K***
3	***F***	***L***
4	***F***	***I***
5	***M***	***O***
6	**L**	**O**
7	**I**	**L**
8	**A**	**C**
9	**I**	**L**
10	**F**	**I**
11	**L**	**N**
12	**E**	**I**

Students were assessed in for the purpose of determining initial reading level in the fall and growth in the spring. The assessment measures decoding, fluency, vocabulary, and comprehension skills. The group as a whole and as an individual demonstrated a growth in the spring. The levels are spanned through grades K-8th and are aligned with letters A-Z book levels of *Fauntas and Pinnell* text level gradient (see Appendix B).

Participant 1 was benchmarked on "F" in the fall to determine initial guided and independent reading level and benchmarked on "K" in the spring that demonstrated growth. Participant 2 was benchmarked on "I" in the fall to determine initial guided and independent reading level and benchmarked on "K" in the spring that demonstrated growth. Participant 3 was benchmarked on "F" in the fall to determine initial guided and independent reading level and benchmarked on "L" in the spring that demonstrated growth. Participant 4 was benchmarked on "F" in the fall to determine initial guided and independent reading level and benchmarked on "I" in the spring that demonstrated growth. Participant 5 was benchmarked on "M" in the fall to determine initial guided and independent reading level and benchmarked on "O" in the spring that demonstrated growth. Participant 6 was benchmarked on "L" in the fall to determine initial guided and independent reading level and benchmarked on "O" in the spring that demonstrated growth. Participant 7 was benchmarked on "I" in the fall to determine initial guided and independent reading level and benchmarked on "L" in the spring that demonstrated growth. Participant 8 was benchmarked on "A" in the fall to determine initial guided and independent reading level and benchmarked on "C" in the spring that demonstrated growth. Participant 9 was benchmarked on "I" in the fall to determine initial guided and

independent reading level and benchmarked on “L” in the spring that demonstrated growth. Participant 10 was benchmarked on “F” in the fall to determine initial guided and independent reading level and benchmarked on “I” in the spring that demonstrated growth. Participant 11 was benchmarked on “L” in the fall to determine initial guided and independent reading level and benchmarked on “N” in the spring that demonstrated growth. Participant 12 was benchmarked on “E” in the fall to determine initial guided and independent reading level and benchmarked on “I” in the spring that demonstrated growth.

Chapter 5

Discussion

This study examined the effects of rotated centers during a reading block for students with learning disabilities in a 3rd/4th grade self-contained class in a K-8 elementary school in an urban community in southern New Jersey. The twelve participants in this study were students with special needs with the following disabilities: autism, emotional disturbances, severe intellectual disabilities, multiple handicaps, and children with serious or fragile medical conditions. All of the students have been in the special education self-contained environment since first grade. All of the twelve participants were reading at least one to three levels below their grade as determined by the beginning of the year assessments with the district required scholastic Reading Inventory assessment and *Fauntas and Pinnell Benchmark Assessment System*. The students' attitude towards reading was assessed on the *Elementary Reading Attitude Survey* (ERAS). The *ERAS* measures two areas, recreational reading and academic reading.

Rotating into learning stations by groups had a positive effect on reading comprehension, reading behaviors, and attitude towards reading. Each student made positive gains in reading comprehension and fluency with increased their reading levels by one to three levels. Moving from one learning center to the next every fifteen minutes motivated the students to enjoy reading block, practice skills, and have a different attitude about reading. As students understood their improvement in reading and reading skills, their confidence continued to increase. Students were able to understand their improvement in reading through different reading activities and weekly assessments on

the computer from various websites like compasslearning.com and mobymax.com. Students learned and practice different strategies for understanding text like rereading, thinking and visualizing as they read, and using illustrations to help with reading the words.

The mean as a whole was 25 in the fall and 192 in the spring. The students also increased in their attitude towards reading. Their attitude towards reading has increased in both areas of *recreational* and *academic*. The mean as a whole in *recreational* during the fall was 17 and increased to 28 in the spring. In the *academic* as a whole during the fall were 8 and increased to 24 in the spring.

The expectations for the study were that students would increase in reading performance, reading behaviors, and attitude towards reading. The SRI (Scholastic Reading Inventory) assess comprehension based on reading skills that includes identifying details in a passage, identifying cause/effect relations, sequence of events, inferences, draw conclusion, making generalization, and making comparisons. Three of the participants (Participants 1, 8, and 9) made the largest gains in comprehension on the *Scholastic Reading Inventory*. The *Fauntas and Pinnell Benchmark Assessment System* measures comprehension based on fluency on comprehension. Four of the participants (1, 5, 6, and 7) made the largest gains in comprehension on the *Fauntas and Pinnell Benchmark Assessment System*. The *ERAS* is a survey that calculates attitude towards recreational reading and academic reading. Three participants (1, 4, and 6) made a large progress from fall to spring. In academic reading, three participants (1, 2, and 6) made a large progress from fall to spring.

As stated earlier in this study, literacy centers within a learner-centered environment are consistent with Piaget (1963) who believed that children develop meaning through direct experiences and through conversations with others regarding those experiences. This study focused on utilizing centers to improve comprehension, attitude towards reading, and reading behaviors. A study (Stout 2009) on the utilization of centers to improve reading instruction among six first grade students with varying abilities concluded that the DRA scores increased an average four grade levels after six weeks. Deci and Ryan (1987) who supported learner-centered environments found evidence that children put more effort into their schoolwork when they are intrinsically motivated rather than teacher motivated.

Comparing the present study with the above-mentioned study, the students in the current study showed greater improvement in reading comprehension. In both studies the students increased in their reading levels.

Limitations

During this study all participants displayed an increase in their attitude about reading, reading behaviors, and comprehension. The effects were dependent on the students completing the skills aligned in the learning centers. Their fluency was not measured and behavior issues were not measured. The students were assessed on reading skills utilizing two different assessments (SRI and the *Fauntas and Pinnell Reading Assessment*).

In the current study it was not determined how much of the improvement was due to rotating into centers versus traditional reading block. There was not a control group that focused on only one or the other. The sample size was only limited to the twelve

students in the self-contained special education class. This sample was only restricted to special needs students in a self-contained environment with moderate to severe disabilities from various socioeconomic and ethnic backgrounds.

Practical Implications

The participants in this study experienced an intervention with utilizing rotating into learning centers to learn and practice reading skills. Students experience success with increasing scores in attitude towards reading, reading comprehension, and reading performance. The effect of the intervention was carried over to guided reading groups and weekly accelerated reading in the library where the students read a book once a week with a reading test. The students became aware of their reading ability by articulating the text or passage, receiving increase in weekly test scores in accelerated reading, and increase in levels from district assessments *SRI* and *Fauntas and Pinnell Benchmark Assessment System.* This awareness became the key towards their attitude about reading which lead to improved reading behaviors.

General education teachers and special education teachers who are teaching a resource program or self-contained program will benefit using rotated learning stations during a reading block. This intervention will allow a positive flow of learning in the classroom with less disruptive behaviors from students. Students will be motivated to read, focus more in each station, and participate. Teachers will have a better control in classroom management during reading. Most importantly students will progress in reading comprehension, reading performance, and attitude towards reading. Learning stations can be used at the elementary level k-8th and the high school level.

Future Studies

Future research should study the effectiveness of rotated centers during a reading block for inclusion classrooms, resource classrooms (pull out instruction), and general education classrooms where students are below grade level in reading, varied socioeconomic and ethnic backgrounds. Other studies focus on reading interventions to increase comprehension and fluency but does not focus on utilizing rotated centers as an intervention. Future studies should include a control group to compare the benefits of utilizing rotated centers during a reading block versus a traditional reading block where students are reading for a longer period of time. The study should focus and measure on reading comprehension, fluency, behavior during reading, and attitude towards reading.

Conclusion

This study was able to answer three questions that were examined during this study: What is the effect of the use of reading stations as compared to a reading block on the reading performance of students with disabilities? What is the effect of the use of reading stations as compared to a reading block on students' reading behavior during reading for students with disabilities? What is the effect of the use of reading stations as compared to a reading block on the attitudes toward reading of students with disabilities? The data demonstrated that for all twelve participants rotated learning stations during a reading block resulted in an increase in reading levels through comprehension. The students demonstrated a good attitude towards reading through their self-examination on the ERAS survey, which had increased in scores. The students reading behavior during reading improved by longer attention span, completing task and skills in each station, and improvement, and less discipline problems. Providing rotated learning stations during a

reading block was proven to be very effective for special needs students in a self-contained classroom. Implementation of this intervention can be conducted by expanding planning extra planning time and professional development to assist teachers in this framework and setting up the classroom. Once students become acclimated, students will demonstrate high interest and motivation that will improve reading skills. As students start to see their results increase, students will start to enjoy reading and apply learned skills.

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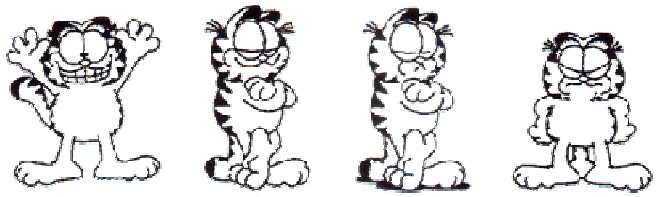
Appendix A

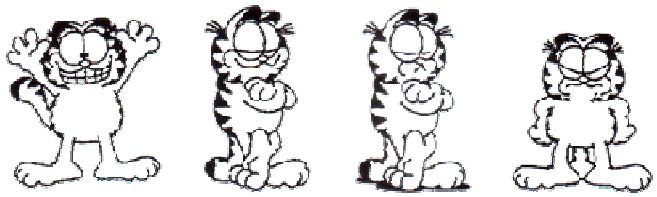
Elementary Reading Attitude Survey

Date_____ Grade _____ Name_____

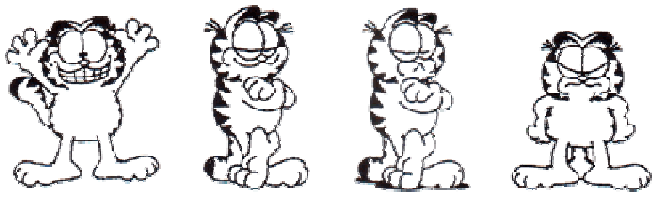
1. How do you feel when you read a book on a rainy Saturday?



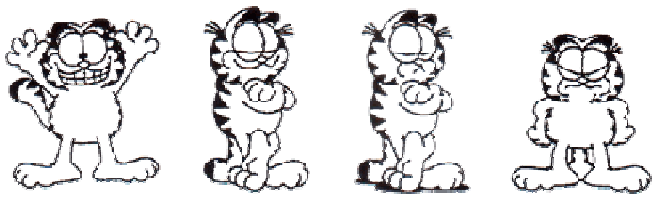
2. How do you feel when you read a book in school during free time?



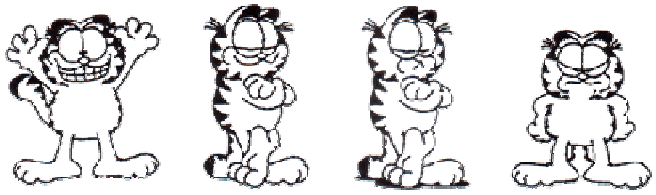
3. How do you feel about reading for fun at home?



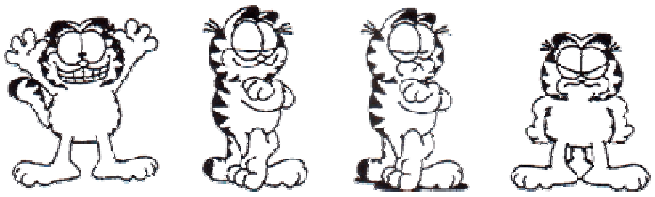
4. How do you feel about getting a book for a present?



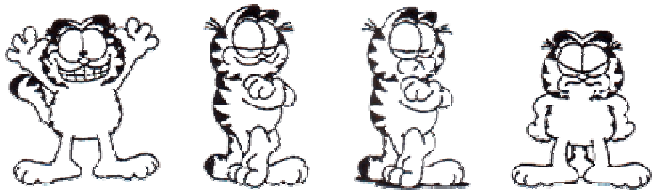
5. How do you feel about spending free time reading?



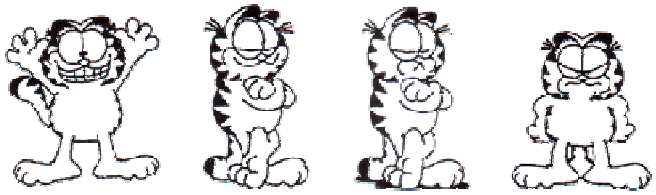
6. How do you feel about starting a new book?



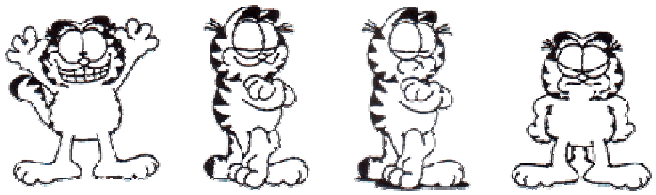
7. How do you feel about reading during summer vacation?



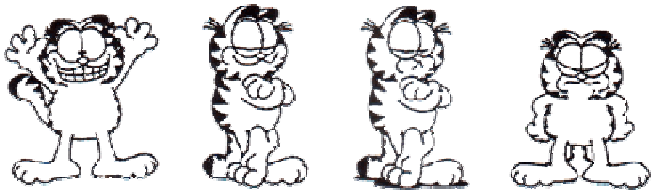
8. How do you feel about reading instead of playing?



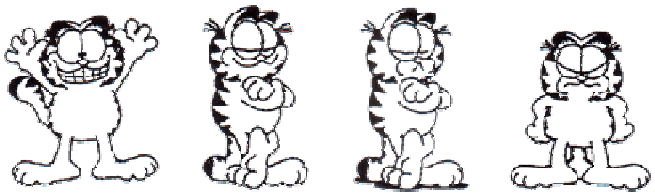
9. How do you feel about going to a bookstore?



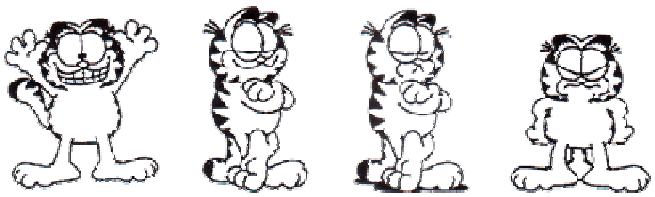
10. How do you feel about reading different kinds of books?



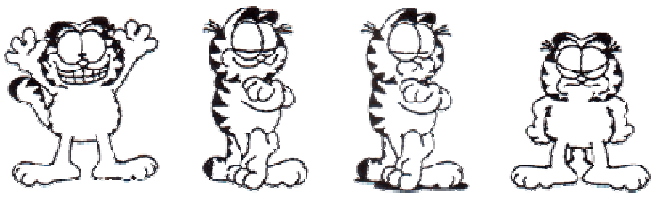
11. How do you feel when the teacher asks you questions about what you read?



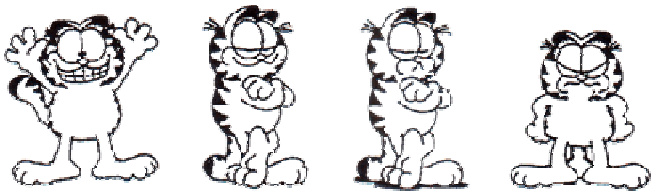
12. How do you feel about doing reading workbook pages and worksheets?



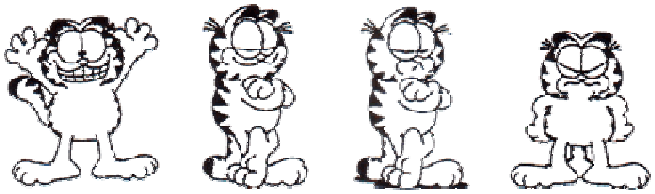
13. How do you feel about reading in school?



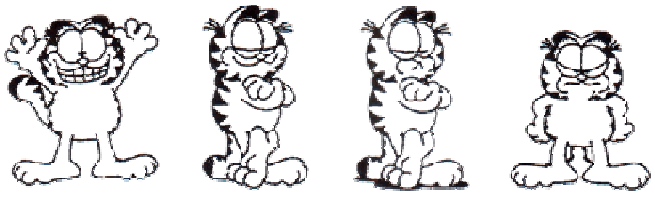
14. How do you feel about reading your school books?



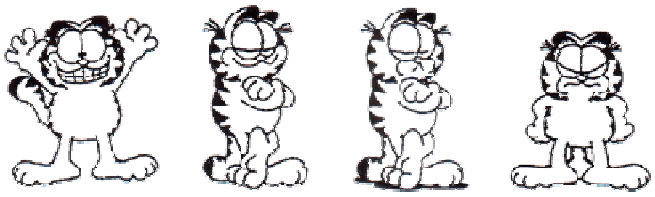
15. How do you feel about learning from a book?



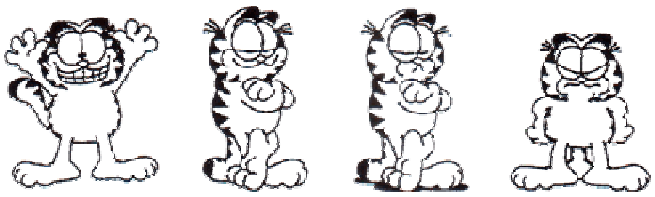
16. How do you feel when it time for reading class?



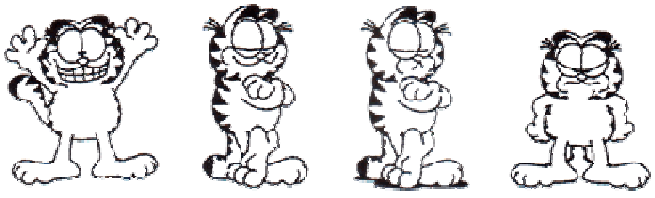
17. How do you feel about the stories you read in reading class?



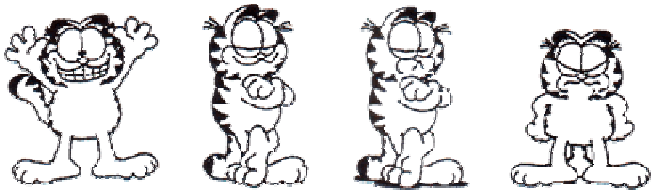
18. How do you feel when you read out loud in class?



19. How do you feel about using a dictionary?



20. How do you feel about taking a reading test?



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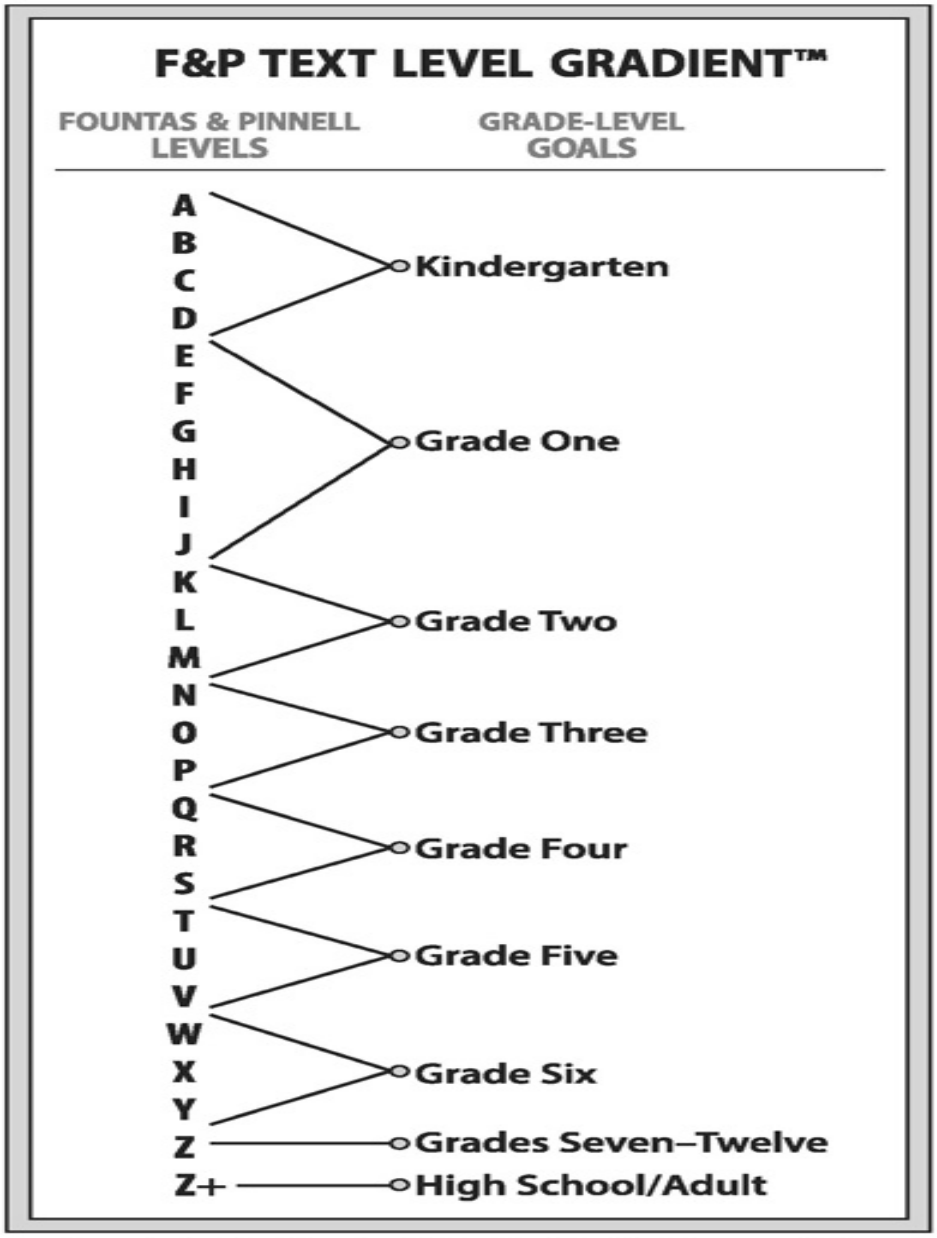
Kear, D.J. & McKenna, M. C. (1999). Measuring attitude toward reading: A new tool for teachers. In S. J. Barrentine (Ed.). *Reading assessment: principles and practices for elementary teachers. A collection of articles from "The Reading Teacher."* p. 199-214. Newark, DE: International Reading Association. Garfied Images approved for use in this document only.

Appendix B

Fauntas and Pinnell Gradient Scale



The grade-level goals on the F&P Text Level Gradient™ are intended to provide general guidelines, which should be adjusted based on school/district requirements and professional teacher judgement.