READING ASSESSMENT OF STUDENTS WITH
SPECIFIC LEARNING DISABILITY: A COMPARISON OF
TRADITIONAL AND NATURALLY OCCURRING TEXTS

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READING ASSESSMENT OF STUDENTS WITH
SPECIFIC LEARNING DISABILITY: A COMPARISON OF
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ABSTRACT

The purposes of this qualitative, multi-case study were to (1) investigate how students with a specific learning disability (SLD) constructed meaning from print when assessed using naturally occurring texts (NOcT), (2) investigate how this same group of learners constructed meaning from print when assessed using traditional, leveled passages (TLP), and (3) identify any similarities or differences that emerged in the meaning construction patterns of two students with SLD. This study included eight case studies, four third-grade students and four fourth-grade students. All cases had an individualized education plan (IEP) with reading goals and were reading below grade level according to district curriculum materials. Data were collected using documents, assessments, and interviews. To deepen the understanding of the findings from these data sources, data were analyzed from three additional sources: (a) reading accuracy and fluency data, (b) student interview responses, and (c) field notes recorded during and immediately after each individual assessment.

The constant comparative method of qualitative analysis was used to analyze the data. As conceptual categories emerged from the analysis, the evidence was sorted into these categories. Comparison of the categories to other categories resulted in theory that is grounded in the findings and the context of this study. Data analysis revealed three major findings: (1) the NOcT and TLP served different purposes, (2) schemata and interest played a critical role in the meaning-making process, and (3) the role of
schemata and topic were critically important during oral reading assessments. The findings demonstrated that students with SLD used the semantic, syntactic and graphophonic cueing systems to predict potential meanings. The new theory that was grounded in the data suggests that students with SLD are able to interact with different texts based on their understanding of the process of reading, and they can make word-level predictions using the language cueing systems.
DEDICATION

This study is dedicated to two very important people. I first dedicate this study to Jeremiah. You were the inspiration for this “book.” I hope you see how intelligent, talented, valuable, and cherished you are. And, I hope you realize the possibilities for your future are limitless. Additionally, this study is dedicated to my son, Mason. I hope someday your knowledge of this study will inspire you to pursue your dreams.
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CHAPTER I

THE PROBLEM

Background

For the second day in a row, I tried to assess Johnny’s reading fluency and comprehension skills to monitor his reading progress. I used a narrative passage the day before, and today I chose a classroom-based nonfiction passage. I struggled with the same problem as yesterday; Johnny refused to read for me. I tried to coax him with a reward. I tried peer mediation. I tried verbal praise and affirmation. I tried simple reasoning. I accommodated the behavior with extended time and by modifying the reading passage into shorter chunks. None of these strategies were successful.

Deeney (2010) suggests that struggling students can experience “reading avoidance,” because the cognitive efforts and attention needed to coordinate the multiple processes while reading is exhausting. Reading avoidance, or the tendency to evade interactions with written materials (Powers, Hurt, & Dunathan, 1981), may lead to repeated failure with reading tasks. Students who experience repeated failures, according to Lipson and Wixson (2009), may question their own reading competence.

Assessing oral reading fluency and comprehension using leveled passages is a common practice in the elementary classroom. The practice enables a teacher to monitor students’ academic growth and inform instruction. The use of leveled texts with students like Johnny, though, can hinder a teacher’s efforts to monitor reading progress in the assessment context. Lipson and Wixson (2009) state, “assessment and [consequently] instruction need to be focused on an evaluation of the existing match and the
identification of the optimal match between a learner and the conditions of the reading and writing context” (p. 59). This evaluation includes identifying the match between the knowledge, performance, and motivation of the learner and the materials, methods, and settings within the learning context (p. 69). Therefore, the reading assessment context, especially for students like Johnny who have a disability that affects reading, is a critical component in facilitating students’ success (McVee, Dunsmore, & Gavelek, 2005).

Texts Types Used for Reading Assessments

There are many types of reading assessments used to determine the effectiveness of a reading program or an instructional approach. The results of these assessments hopefully lead to precise and appropriate instructional interventions. There are formal tests, such as the Stanford Diagnostic Reading Test, the Woodcock Reading Mastery Test, and Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002), which, as McKenna and Stahl (2003) note, allow teachers little discretion in administration and interpretation of the scores. There are informal assessments such as informal reading inventories (IRIs) and running records (Clay, 1993) where teacher discretion plays a major part in administration and interpreting the scores. There are also assessments that blend aspects of both formal and informal tests and teacher-interpretation components, such as the Qualitative Reading Inventory-5/E (QRI-5/E; Leslie & Caldwell, 2011) and the Developmental Reading Assessment (Beaver, 1997). The purpose of these assessments is to provide data that describe the student’s reading process (i.e., achievement levels, relative strengths and weaknesses) so teachers can monitor progress and intentionally adjust classroom instruction (Rasinski & Padak,
According to Lipson and Wixson, (2009), this practice of continually gathering, interpreting, and acting upon assessment data to make instructional decisions defines the assessment-to-instruction process implemented in the elementary classroom. The goal of this process is to develop strategic, motivated, and reflexive readers [and writers] who apply skills and strategies independently and flexibly. According to Keene and Zimmerman (1997), such readers are able to activate relevant prior knowledge (schema) before, during and after reading. They can use their conclusions about important ideas to focus their reading and exclude unimportant information. These readers can use questions to clarify and focus their reading, as well as create visual and other sensory images from text before, during and after reading.

Typically, the formal and informal reading assessments previously mentioned include reading passages that the student being assessed must read and subsequently perform a skill or comprehension task. The reading passages are typically leveled according to difficulty, and they can take several forms, including decodable texts, controlled vocabulary texts, and authentic literature texts (i.e., selections in an anthology). These leveled texts are often contrived and contain limited vocabulary (Goodman, 2003d), or they have been modified in such a way to fit the purposes of assessment, which promotes efficiency in assessment procedures instead of quality of assessment information (IRA, 2009a). As a result, the student’s ability to make meaning of the text may be compromised (Goldman & Rakestraw, 2000). Furthermore, many struggling readers, including those with a specific learning disability (SLD), may exhibit reading behaviors that suggest they do not expect what they are trying to read to make sense (Smith, 1997).
Often leveled texts used during the assessment-to-instruction process do not have personal value for the students. According to Goodman (2003d) such reading experiences will not contribute to the student’s reading development. The required reading exercises often become ritualistic, meaning the reading events are ends in themselves. Students, then, become workplace, or occupational readers (Goodman, 2003d; McKenna & Robinson, 2009); however, this role in the school does not involve functional acts as most occupational reading does. These reading events are often “not related to personal language functions of the student” (Goodman, 2003d, p. 29).

Furthermore, according to Lipson and Wixson (2009), most educators conclude that standardized tests in the United States currently fail to adequately assess real world knowledge or sophisticated literacy. Teachers often focus their instructional attention on the type of performance that will be evaluated, rather than ensuring that the content, form, and purposes of the assessment match the student’s assessment needs and render meaningful, useful information for effective instructional decision-making (Valencia & Buly, 2005). This misdirected instructional focus can mislead students into believing that the purpose of reading is not to satisfy curiosity or fulfill a personal need but to complete a task (Goodman, 2003d).

According to Weaver (2002), reading should be a personal event, one in which the reader engages with the unique context while processing print. It is the student’s organized schemata or social factors (i.e., culture, ethnicity, socioeconomic background, age, education, interests, and value) that enable the student to construct personal meaning from the text. The activation of these “mental files” provides focus and direction for helping children to enhance their comprehension (Keene & Zimmerman, 1997, p. 51).
Therefore, when texts do not adequately access students’ schemata, the students have difficulty recognizing and constructing relationships between information in the text to allow for understanding of the content (McVee, Dunsmore, & Gavelek, 2005).

Moreover, this scenario can be the case when educators use leveled texts. The contrived language or controlled vocabulary can inhibit the student’s ability to make sense of the content (Goodman, 2003d). Consequently, literacy endeavors become stifled because these academic tasks do not relate to students’ personal experiences. Thus, students merely reproduce conventional forms and meanings (Myers, 1992). As a result, students’ purposes for reading disappear, and they may no longer be eager to learn from what they are reading (Szymusiak & Sibberson, 2001). Furthermore, as Stager (2008) states, if reading assessments are not meaningful to the students, the assessment may not be successful.

According to Deeney (2010) and Duke (2000), students must experience large amounts of print representing a variety of genres and print types, including texts that naturally occur in students’ out-of-school context (NOcT; e.g., books, magazines, brochures) and a sense of student agency (i.e., self-determination and choice). These factors are critical for engaging students in reading to support successful literacy development, critical thinking, and continuous academic achievement. Furthermore, materials used in the assessment-to-instruction process should incorporate authentic language and literacy activities, which include the use of local, cultural mediums (Serpell, 1977) and are often found in the out-of-school context. Vygotsky stated that individual cognitive skills are influenced by individual interactions with cultural tools and activities (as cited in Rogoff, 2003). These cultural tools used for assessment interact
with the subject’s specific prior experience, or schema, enabling the subject to perform more accurately on cognitive tasks (Serpell, 1977).

Assessment of Students with Disabilities

Despite multiple literacy assessment methods and instructional approaches designed to support them developmentally, students with disabilities continue to have difficulty reading. The difficulty in reading experienced by students with disabilities, including those students with specific learning disability (SLD), is evidenced in the national reading scores. The National Assessment of Educational Progress reported in The Nation’s Report Card from 2009 (NAEP, NCES, National Assessment Governing Board, IES, USDOE, 2010) indicates that only 13% of students with disabilities in the fourth grade who could be assessed are reading at or above the Proficient level, 35% are reading at or above the Basic level, and 65% are reading at the Below Basic level. These statistics are troublesome, because students who do not read well by nine years of age are difficult to engage and motivate (Cunningham & Allington, 2003), and they typically struggle with reading until the end of their formal schooling and into adulthood (Chall, 1983).

Three significant factors may contribute to the low reading achievement of this subgroup. First, as noted by Rogoff (2003), students who do poorly on standardized, cognitive tests have otherwise demonstrated levels of cognitive and intellectual thinking ability that allow them to successfully function in the out-of-school context. Rogoff’s research suggests that the slow growth in achievement could be linked to the fact that [reading] state standards often are not related to what students actually need to know to
be successful beyond high school, in college, or in the work place. In fact, according to Johnston (2003), when a group of children do not thrive in the school setting, some aspect of the assessment-to-instruction process is not functioning optimally for them.

Second, students’ aptitude and passion may significantly affect their academic performance (Stager, 2008). Hansen (1994) suggests that when students’ passions or interests are not addressed or achievable in the traditional school setting, many traditionally based assessments are rendered invalid. She states that, “if one believes current research and theory on motivation, assessment that is truly ‘authentic’ is conducted only within the context of students passionately seeking meaningful goals, because it is only within such a context that students’ true strengths and weaknesses are displayed” (p. 42).

Third, the nature of the reading assessments used with students with SLD may be inadequate. One issue may be the kinds of texts with which they are tested. Brabham and Villaume (2002) state that leveled texts are the common print text used for informal assessment purposes in the current elementary classroom. However, these leveled texts are often contrived and contain limited vocabulary (Goodman, 2003d), and students may have difficulty making meaning of the content (Goldman & Rakestraw, 2000). This issue is problematic for students with SLD. Students with SLD have the right cognitive tools, but they are not working efficiently (Gersten, Fuchs, Williams, & Baker, 2001). Researchers suggest that students with SLD demonstrate weaknesses in phonological processing (Bradley & Bryant, 1978; Snowling, 1981), word recognition (Spear-Swerling & Sternberg, 1996), and vocabulary used with academic content (Gersten, Fuchs, Williams, & Baker, 2001). These characteristics can undermine successful reading
experiences for students with SLD. Moreover, leveled texts that do not include natural language will compound the difficulty students with SLD experience when reading and comprehending text.

According to Valencia and Buly (2005), educators consult the popular press, educational publications, teacher workshops and state and district policies to improve the reading scores of students with SLD. Despite these efforts, students with SLD continue to read below grade level, and, students who continue to experience inadequate reading performance are likely to avoid reading because of fear of failure and negative attitudes (Ming & Dukes, 2010).

Statement of the Problem

Although many methods, strategies, programs, and policies have been implemented to improve the reading scores of students with SLD, the current national reading level of fourth-grade students indicates that this subgroup of students is still struggling to meet national benchmarks (NAEP et al, 2010). One issue may be that the types of texts used for assessment may not meet the assessment needs of students with SLD. Brabham and Villaume (2002) advocate the use of leveled texts for assessment in the elementary classroom. These leveled texts typically have a ranking according to the difficulty level of the text. However, these texts do not represent the natural forms and functions of language. Furthermore, students with SLD, who experience weaknesses with aspects of language, word recognition, academic vocabulary, and phonological processes, may have difficulty reading and comprehending leveled texts.
Purpose

Given the problem of low reading performance levels of students with SLD, this study sought to compare how students with SLD make meaning while orally reading traditional leveled passages (TLP) and leveled NOcT passages. While NOcT have been used in research studies (Alvermann & Van Arnam, 1984; Bednarek, 2006; Goetz, 1992; Goodman & Bird, 2003; Hindle, 1988; McVee, Dunsmore, & Gavalek, 2005; Wolf & Gibson, 2004), research on using this type of print text for oral reading assessment passages in the elementary classroom is lacking. NOcT are a local, cultural medium found in students’ out of school context, which have been identified as a text that can help struggling readers (Opitz, Ford, & Zbracki, 2006). Therefore, it is important that this topic be explored. Results of this study demonstrated the potential use of NOcT in the elementary classroom as a text for informal reading fluency and comprehension assessments.
Research Questions

This qualitative case study will be guided by three questions:

1. When assessed using leveled texts identified as “naturally occurring” (NOcT) in students’ daily lives, how do students with a specific learning disability (SLD) construct meaning from print?

2. When assessed using an informal reading assessment with traditional, leveled passages (TLP), how do students with a specific learning disability (SLD) construct meaning from print?

3. When assessed with both traditional, leveled passages (TLP) and naturally occurring texts (NOcT), what similarities or differences emerge in the meaning-construction patterns of two students with a specific learning disability (SLD)?

Conceptual Framework

The researcher of this study maintains the position that reading is a constructive process in which the goal is meaning-making, not merely decoding words. Meaning-making is dependent upon the concepts (e.g., objects, events, actions, situations) stored in a learner’s schemata. While reading, a learner constructs meaning when he or she is able to find a “configuration of schemata” that offers an account for the aspects of the text (Rumelhart, 1980, p. 9). This interaction with the text involves retrieving and applying these concepts stored in schemata, as well as the language associated with the schemata, to the written text to determine a level of meaning. This means that an individual’s meaning-making process is influenced by the impact of cultural norms, societal expectations, and learning context on the way language is used (Halliday, 1978;
Vygotsky, 1978). Therefore, the act of reading and, consequently, a reader’s ability to make-meaning is highly influenced by sociolinguistics.

Assumptions

This study maintains two assumptions. First, the nature of the reading process of students with SLD is complex, inclusive of many factors that influence their oral reading performance. Second, it is assumed that the students with SLD will describe their beliefs about reading and perceptions of different types of texts to the best of their ability, while the researcher acknowledges that the students’ responses are only a representative sample of the breadth and depth of their thoughts.

Definition of Terms

Assessment. The process of collecting and analyzing data to inform instruction and how students are performing and growing (Cunningham & Allington, 2003). It is an ongoing process, intertwined with learning (Paris, 2001; Hancock, Turbill, & Cambourne, 1994a), which allows for diagnostic, formative, frequent opportunities to examine student performance in a variety of formats (Cobb, 2005).

Authentic assessment. The extent to which the measure of performance corresponds to real world experiences—representing literacy behaviors of community and workplace—relative to the learner (Goodman, 1988; Valencia, Hiebert, & Afflerbach, 1994). Authenticity resides in content, the underlying constructs it taps and the correspondence among the assessment, instruction from which it samples and purposes which assessment will be used (Valencia et al, 1994).
Comprehension. The identification of the meaning of the text as a connected whole rather than as a series of individual words and sentences (Rapp, van den Broek, McMaster, Kendeou, & Espin, 2007). This aspect of reading is a constructive and strategic process in which the reader uses predicting, monitoring, inferring, and questioning to make sense of print before, during, and after reading (Goodman, 2003d; Keene & Zimmerman, 1997).

Contrived texts. Texts that are modified in such a way to fit a particular purpose, such as assessment (IRA, 2009a).

Controlled texts. Texts that have limited use of uncommon words (Goodman & Bird, 2003).

Informal assessments. Assessment activities that closely approximate the ones found in daily classroom reading instruction, which are generalizable to classroom performance. These activities can be used flexibly, and they can capture the interactive nature of reading. The procedures and materials for creating consistent systematic assessment tools allow student performance to be compared across selections or versus set criteria. They are designed to create trustworthiness in testing while maintaining the daily environment (Lipson & Wixson, 2009). Teachers may use discretion in how the test is given and when interpreting the results (McKenna & Stahl, 2003).

Leveled texts. Reading material that represents a progression from more simple to more complex, challenging texts (Brabham & Villaume, 2002) designed to meet the developmental needs of many readers (Glasswell & Ford, 2010).

Literacy. A “superordinate category,” which includes reading, writing, speaking, and listening, including the use of print even when the user does not make sense of [the]
print (Edelsky, 1991). The literate individual is one who can effectively use written materials in school, work and recreational environments (Kaestle, Campbell, Finn, Johnson, & Mikuleck 2001).

**Miscues.** Misread words due to misleading expectations (Rosenblatt, 1978) where the student has been cued or influenced by print semantically, syntactically, or graphophonically (Goodman, 2003b), which gives insight into the student’s reading process (Goodman, 2003d).

**Naturally occurring texts (NOcT).** Texts that reliably exist in the non-school, everyday environment for purposes other than classroom instruction. The content of NOcT can be either fiction or nonfiction in sentence and paragraph form (Hamsher & Oswald, 2011). This type of text includes the reading of a cohesive string of words, which contains specific referents to content, specialized discourse or reading level (McVee, Dunsmore, & Gavelek, 2005)

**Observer as participant.** The participation of the researcher is secondary to role of information gatherer (Merriam, 1998).

**Oral reading fluency.** The act of reading which involves the critical link from word recognition to comprehension (Rasinski & Hamman, 2010). It involves reading with an appropriate rate (automaticity) in meaningful phrases, accuracy, with prosody (expression) and comprehension (Rasinski & Hamman, 2010; Rasinski & Padak, 2005; National Reading Panel, 2000).

**Oral reading passage.** A brief, complete text with a beginning, middle, and end (Watson & Hensen, 1994)
Reading. A complex process by which a reader reconstructs, to some degree, a message encoded by a writer in graphic language (Goodman, 2003a; McKenna & Robinson, 2009)

Reading avoidance. The tendency to avoid the act of receiving information through the written medium. This state within the learner typically involves a high level of apprehension (Powers, Hurt, & Dunathan, 1981).

Reading interest. Actual behaviors related to texts individuals have read or do read (Spangler, 1983).

Reading preferences. “Expressed attitudes about hypothetical situations” related to texts individuals would read (Spangler, 1983, p. 877).

Schema. A schema is an abstract, active, nonlinear organization of past experiences or responses. Constructing schema involves the building of an “organized setting” of incoming impulses, which all must work together to create a response. Schema, then, are responsible for what is perceived, recognized and remembered (Bartlett, 1932).

Students with specific learning disability (SLD). This group of students has a disability which most often manifests itself in difficulty with reading in comparison to the general population (Moats, 1995, 2004; Swanson, 1999). For the purposes of the study, the term students with SLD refers to students whose primary academic weakness is with reading and subsumes “students with learning disabilities” and “students with reading disabilities.” This definition abides by the general guidelines described the Individuals with Disabilities Improvement Act (IDEA) of 2004, which state that students who have
a disorder in one or more of the psychological process involved in understanding or using language, written or oral, which manifests itself in the imperfect ability to listen, think, read, speak, spell, write, or do mathematical calculations. This term includes conditions such as perceptual handicaps, brain injury, minimal brain dysfunction, developmental aphasia, and dyslexia. The term does not include students who experience learning difficulties which are primarily the result of visual, auditory, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (§ 602).

Text. Texts are considered “organized networks that people generate or use to make meaning either for themselves or for others” (Wade & Moje, 2000, p. 610). A text could be published, such as a textbook, novel, directions to a device, or cookbook. Or, text could be unpublished, such as handwritten lists or oral conversations that are later transcribed. All of these texts carry meaning in some capacity to a person or persons.

Summary

Leveled texts are commonly used for assessments purposes in the elementary classroom. However, these types of texts may not meet the literacy needs of students who struggle with reading, especially students with SLD. Indeed, meeting the literacy needs of elementary students with SLD is critically important to their future success as readers.

Currently, research is lacking in the use of NOcT as a type of passage used in informal reading assessments in the elementary classroom. Thus, this study is designed to explore how students with SLD make meaning while reading NOcT passages compared to traditional leveled reading passages. The comparisons of how these students make meaning while reading the different types of texts will emphasize factors which influence their reading processes.
Chapter II proffers a review of the literature that details assessment practices from a historical perspective in the United States, the role of assessment in American classrooms, literacy development, texts currently used in the classroom in the assessment-to-instruction process, students with SLD, effective oral reading practices for students with SLD, schema theory, and naturally occurring texts (NOcT). Chapter III describes the methodology of the study. Chapter IV presents the data, data analysis, and the findings of the study. Chapter V provides a discussion of the results, conclusions, and implications for the use of NOcT in informal reading assessments with elementary students with SLD.
CHAPTER II
LITERATURE REVIEW

The purpose of this study is to explore how students with specific learning disability (SLD) make meaning while reading leveled passages from naturally occurring texts (NOcT) compared to traditional leveled passages. The comparison of how students make meaning while reading the different types of texts will emphasize factors that influence their reading processes. This exploration will describe the possible uses of NOcT in the elementary classroom, specifically with students with SLD. A review of the literature in this chapter on the following topics will provide the conceptual framework for this study: assessment practices from a historical perspective in the United States, the role of assessment in American classrooms, literacy development, students with SLD, effective oral reading practices for students with SLD, texts currently used in the classroom in the assessment-to-instruction process, NOcT, and schema theory.

History of Assessment

Educators and leaders have measured individuals’ literacy skills for centuries. The rapid developments in tools and methods of assessment in the past two decades, specifically, have had a significant impact on elementary assessment practices. These developments have led to an opportunity for teachers to introduce a culturally relevant text for assessment.
Throughout most of history, educators have assessed students’ literacy skills and knowledge using oral methods. In the Old Testament of the Bible, Jepthath measured his soldiers’ linguistic skills to determine friend from foe. In Ancient China, individuals who wanted to join the civil service gave oral compositions on Confucian classics (Madaus & O’Dwyer, 1999; Phillips, 1968). During the Middle Ages students in formal school orally debated literary concepts. Literacy assessment practices began to change during the Colonial times in America when the oral tradition began to dissipate and the written examination emerged. By the late 19th century, the written examination replaced the oral examination as the main method of literacy assessment when Horace Mann introduced the written essay. This move to written examinations was political in nature; written tests were a tool for superintendents to monitor teachers and students (Madaus & O’Dwyer, 1999).

Since the introduction of the written examination, literacy assessments changed rapidly and concurrently. The objective, teacher-made test was developed at the beginning of the 20th century. This test was the predecessor of standardized tests, such as the multiple-choice test, which were statistically grounded (Madaus & O’Dwyer, 1999). Shortly after, norm reference tests and classroom-based informal assessments were widely developed and administered (Smith, 1986). Then, in the 1970s, criterion reference tests emerged. This movement sought to establish high standards for all students (Valencia et al, 1994) and incorporate minimum competency levels (Madaus & O’Dwyer, 1999). According to Madaus and O’Dwyer (1999), these measures of academic literacy skills dramatically changed assessment practices in the classroom.
because assessments became more objective, less performance oriented, and only able to measure isolated skills.

The 1970s and 1980s also introduced more meaningful and multi-dimensional methods of assessment. Kenneth Goodman’s early work in the 1960s on organizing miscues, or unexpected responses to text, according to a taxonomy led to using the procedure of miscue analysis to make instructional decisions and evaluations (Goodman & Burke, 1972). This ground breaking assessment strategy gives teachers a tool to analyze oral reading so that the collection of a variety of data (i.e., reliance on semantic, syntactic, and graphophonic print cues) gives a teacher meaningful insight into a student’s reading process. Thus, this means of analysis is often referred to as a “window on the reading process” (Goodman, 2003c). Through the use of miscue analysis, teachers learn the tools and strategies the student brings to the reading event, which informs classroom practice. Miscue analysis is then based on the theory that the reading process involves the interrelationship between language and thought (Goodman, 2003a).

Also during the 1970s and 1980s, and as a result of the miscue analysis research, the whole language instructional movement emerged (Goodman, 2003a). This movement has sought to educate and assess students in realistic, authentic, child-centered ways. Educating a child from this perspective – a philosophy of educating and assessing the whole child – requires a collection of data, not a single test score, to describe students’ present levels of performance (Harp, 1994). This philosophy has influenced current assessment-to-instruction practices but not without challenge from the standards-based movement.
From the 1990s to 2010s, conflict has heightened between education policy makers and education researchers. This conflict has centered on how achievement data and measures of academic growth should be represented. Policy makers have required teachers to administer standardized state tests with high stakes (i.e., sanctions imposed by state departments of education) attached to the outcomes. Despite the threat of sanctions for not meeting the adequate yearly progress (AYP) requirements, teachers have remained committed to implementing more authentic, formative performance assessments (Madaus & O’Dwyer, 1999). Authentic, formative, and informal assessments, including informal reading inventories and portfolios, provide data that drive everyday classroom instruction and create multidimensional representations of students’ progress. These informal assessments are particularly important for students with disabilities and those from culturally or economically diverse backgrounds because teachers can implement them with discretion and flexibility (IRA & NCTE Joint Task Force, 1994; Lipson & Wixson, 2009; McKenna & Stahl, 2003). District administrators recognized the value of data rendered from informal, formative assessments, and they have since advocated for government support of their use in the classroom, especially in early reading achievement (Paris, 2001).

The advocacy and continued commitment to informal assessments has eased the conflict between how education policy makers want to see achievement results and what education researchers say is meaningful data. As a result, legislation is in the midst of change. The draft of the revisions of the No Child Left Behind Act (NCLB, 2002) states that the use or lack of use of formative assessments could impact causes for schools not making AYP (Dorn, 2010).
Role of Assessment in American Classrooms

In the era of accountability in testing, policy makers and teachers have discounted classroom-based assessments to guide instruction in the classroom. However, assessment is one of the most important issues facing the American education community (Hiebert, Valencia, & Afflerbach, 1994). Assessments allow many roads to literacy for the student and help educators understand the many routes taken (Reardon, 1994).

Throughout history, the terms evaluation, assessment, and test have often been used interchangeably. According to Madaus and O’Dwyer (1999), at the foundation of each term is the goal of presenting a particular situation to a student to measure a small sample of a particular behavior from a larger domain of knowledge. Educators can then make inferences about the person’s probable performance relative to the entire domain. However, each term is different in its context. The term evaluation typically describes making a judgment about or interpreting data (Hancock et al, 1994a; Harp, 1994) with the purposes of curricular or program planning (Watson & Hensen, 1994). Typically, a single score is assigned as a summation or final analysis to report student learning (Cobb, 2005).

Whereas an evaluation is meant for program planning, assessment is meant for more individualized or group planning over time. Many educational experts (Barrentine & Stokes, 2005; Cobb, 2005; Cunningham & Allington, 2003; Gronlund, 1985; Hancock, Turbill & Cambourne, 1994b; Harp, 1994; IRA & NCTE Joint Task Force, 1994; Johnston, 2003; Paris, 2001) have described the meaning of assessment. A synthesis of their findings and conceptual frameworks, for the purposes of this discussion, leads to a
definition of assessment. Assessment is the process of collecting and analyzing data in a variety of formats related to how students are performing and growing and achieving instructional objectives to inform daily instruction. The goal of daily assessments is to understand individual readers-writers in the classroom as their literacy skills are developing, as well as improve teaching and reduce achievement differences among groups. Ultimately, opportunities for learning mean opportunities for assessment and vice versa.

Although, evaluation and assessment differ slightly in context, they have an important commonality: they both need to be ongoing, cyclical, and systematic (Hancock et al, 1994b; Tierney, 1998). Without these characteristics, evaluation and assessment become decontextualized and teachers may then become misinformed about student development and achievement (Lipson & Wixson, 2009). Such is often the case with tests. Typically, a test is given in a short period of time and often elicits information from students in multiple choice, true false, short answer or essay format. Data from tests represent a single point in time of a student’s knowledge or skill level. Using several test scores alongside other measurements of a student’s knowledge or skills in the assessment process, though, is beneficial for describing a student’s performance level or needs over time (Lipson & Wixson, 2009; McKenna & Stahl, 2003; Thurman & McGrath, 2008).

There are many models of assessment, which influence assessment-to-instruction practices, including stage models (Chall, 1983; Spear-Swerling & Sternberg, 1996) and interactive models (Lipson & Wixson, 2009; Rummelhart, 1994). While these models of assessment have influenced classroom assessment practices in whole or in part, it is imperative that educators identify with a model to make sense of assessment data.
Therefore, assessments are only more effective than evaluations and tests when philosophies and rationale (not techniques) drive the system (Valencia et al., 1994).

The definition of assessment leads to a brief discussion of three main roles, or responsibilities, of assessment in the American classroom. First, assessments in the classroom are used to continuously measure academic progress. Historically, test and examinations (i.e., norm reference and criterion reference) have been the main method of measuring literacy skills. The data rendered from these measurements can be decontextualized, because they represent a student’s behavior at a particular point in time (Lipson & Wixson, 2009). Conversely, assessments that are ongoing and cyclical allow for frequent feedback relative to skills and knowledge that constitute literacy (Hansen, 1994). This frequent feedback not only informs the teacher about academic progress, but parents and students gain a deeper understanding of learning in different contexts (Barrentine & Stokes, 2005; Paris, 2001; Serafini, 2000).

Second, assessments provide data that drive daily instruction. The frequent, cyclical, and ongoing nature of assessments enables teachers to implement small assessment-to-instruction episodes, which are the core of alignment. These small episodes, as Paris (2001) notes, permit teachers to link diagnostic assessments and focused instruction repeatedly and quickly as children engage in text. These daily, classroom assessments are often called informal assessments, which are authentic and formative (Risko & Walker-Dalhouse, 2010). They allow the teacher to use discretion to modify the assessment and widely interpret the data (McKenna & Stahl, 2003). There are many types of informal assessments that inform classroom instruction, including informal
reading inventories, curriculum-based assessments, interviews, and anecdotal records. All of these provide visible evidence of classroom activities and developmental processes (Paris, 2001). Because of the timeliness of informal assessments, teachers can capture students’ needs, strengths, and specific instructional history (Risko & Walker-Dalhouse, 2010). Therefore, the frequent, early, and variety of data is meant to be used to adjust classroom instruction and improve long-term outcomes (Dorn, 2010), while reducing the achievement differences between groups (IRA & NCTE Joint Task Force, 1994).

The third role assessments play in the classroom is accountability. Reading assessment in Grades 3-6 has increasingly high stakes, which means there are more mandated tests (Paris, 2001). And to the outsider, student achievement is represented by a score on a standardized test (Hiebert et al, 1994). Although there are a variety of assessments, the procedures and formats are often influenced by the audience for whom the information is being gathered (Paris, 2001). Therefore, classroom assessment practices are ultimately mandated by outside agencies (Hiebert et al, 1994). Despite this external influence, assessments, especially those deemed authentic, try to address the accountability concerns by focusing on assessing higher level literacy abilities using “real life” literacy tasks and actual classroom artifacts and projects while upholding standards that matter in the community and workplace (Valencia et al, 1994).

Assessment that improves learning holds educators accountable and drives instruction. Johnston (2003) suggests that the primary component of assessment, despite the assessment demands of the classroom, is a teacher’s ability to make sense of and record students’ literate behaviors. Ultimately, the goal of assessment is to “teach children to view themselves as engaged readers [and writers] and to show them that
literacy is more about social interaction and meaning making than about recognizing and writing words accurately” (p. 75). To reach this goal and make sense of assessment data, educators must know how literacy develops.

Literacy Development

Theories of Literacy Development

The definition of literacy evolves with what educators continually learn from research on literacy development. Edelsky (1991) defines literacy as a “superordinate category,” which includes reading, writing, listening, and speaking. The literate individual is one who can effectively use written materials in school, work and recreational environments (Kaestle, Cambell, Finn, Johnson, & Mikuleck, 2001). And, according to Jetton and Dole (2004) literacy is a constructive, fluent, strategic, and motivated process. Moreover, an individual’s literacy development is a complex process.

Early theories of literacy development identify the individual as a passive receiver of text and the text as controller of the reader (Shannon, 1948). Consequently, literacy development was thought to begin in the formal school years. Reading was taught in isolation from other language processes, and writing was neglected altogether. Classroom instruction, then, involved the teaching of sequential skills in reading acquisition, as though these were new skills unlike any others children could learn (Goodman, 2003d).

Since this early view, several experts developed different theories of literacy development. In the early 1900s, John Dewey proposed the pragmatic view of learning. This theory suggests that students learn best when reading materials are practical and
relevant to the life of the child. Thus, it was thought that such materials facilitated a “transaction” between the child and text, which allowed the literacy experience to be meaningful (Dewey & Bentley, 1949). In the 1940s, the cognitive information processing theory of reading and writing emerged. This theory states that reading and writing are comprised of subskills. The difficulty of a particular subskill equates to the amount of attention an individual applies to the task.

Then, in the 1960s, a debate began regarding whether students learn best using part-to-whole (i.e., skills-based) or whole-to-part (i.e., whole language) strategies. Jeanne Chall (1967) found in her synthesis of experimental studies that the best way to teach children to read was by using a code emphasis compared to teaching whole words. Kim (2008) notes that it was Kenneth Goodman who challenged the skills approach (i.e., words out of context) and suggested that good readers use context clues and background knowledge to predict, guess, and confirm words while reading. This “reading war” has continued to influence current views of literacy development, as well as assessment-to-instruction practices (Chall, 1967).

The part-to-whole and whole-to-part debate led to another view of literacy development called the psycholinguist theory (Smith, 1971). This theory suggests that language and thought are interrelated. Children are born into a linguistic society that fosters their need to understand and be understood, as well as to master the functions of the language (Goodman & Goodman, 2003a). This motivation to master the language begins with listening and leads to an awareness and recognition of printed symbols (signs, logos, handwriting) (Chall, 1983; Goodman & Goodman, 2003a). Consequently, children who participate with text learn that signs and symbols can have personal
meaning for them. Therefore, literacy learning is a meaning-making, thought process that is an extension of natural language, not merely rote memorization of signs and symbols (Goodman & Goodman, 2003a).

In the 1970s, the impact of an individual’s social reality or culture on language use, or what is known as sociolinguistics, became publicized. Vygotsky (1978), whose work was first published in 1930 and translated into English in 1962, investigated the social context of linguistic development. He is noted as the first modern psychologist who suggested that culture becomes part of a person’s nature, asserting that linguistic development is situated in social interactions. The social context, according to Vygotsky, makes all other literacy functions possible.

Halliday (1978) also suggested that language is intertwined with one’s culture or social situation. Language is not merely a string of words or sentences, rather it is an exchange of meanings with significant others. Halliday states, “Language is the main channel through which patterns of living are transmitted, through which a person learns to act as a member of society and adopt its culture” (p. 9). An individual’s ability to interpret text, either written or oral, is interpreted using a personal “semantic grid” (p. 123). This personal tool allows the text to be interpreted in terms of one’s own meaning potential at that time. Furthermore, this sociolinguistic perspective suggests discourse or text can be interpreted as specifically relevant to the context of the situation, as well as relevant to the context of the culture. It is the linguistic system that allows for these interpretations.

Kenneth Goodman (2003d) built upon the known theories of psycholinguistics and socio-linguistics to frame his views on language, learning, and literacy in what he
calls the “transactional sociopsycholinguistic theory of literacy development” (p. 8). According to this theory, the reading and writing process starts with a base of psycholinguistics, because language interacts with thought during a reading or writing event. Any reader/writer is variable in his or her use of language and thought, depending on the schematic background that reader brings to the text. Therefore, reading and writing involve the student bringing social, cultural, personal, and linguistic factors – the social context – to the text and constructing meaning in the interaction with the text (Goodman, 2003e). The summation of these factors brought to the texts is what Rosenblatt (2005) has called the student’s “linguistic-experiential reservoir.”

These tenets of the transactional sociopsycholinguistic model are grounded in the scientific analysis of reading miscues (Goodman, 2003d). Reading miscues are not errors, but unexpected responses to text that offer insight into the strategies a student employs to read and brings to the interaction with the text. When miscues are examined using the process of miscue analysis, educators compare the observed versus expected responses to text to determine how effectively and efficiently readers use the language systems and reading strategies to construct meaning (Martens, 2002). Therefore, reading is a meaning-making process, a transaction between the reader, the text, and the situational context (Weaver, 2002).

Harste, Woodward, and Burke (1984) further examined the sociopsycholinguistic process of literacy learning. Between the years of 1976-1981, Harste and colleagues examined the language and literacy behaviors of young children ages three through six. These authors found in their multiple studies that young children’s language and language learning occurs in social settings. Furthermore, the patterns of literacy
behavior, whether the behavior involved reading, writing, or oral language, were
dependent upon the transaction between the learner and the environment. This means
that a literacy event can have different meanings for different learners based on the
environment or social context and what knowledge and experiences the learner brings to
the event. Consequently, there is not “only one meaning” derived from a literacy
experience, which these authors point out as problems with the behavioral and cognitive
models of literacy development. Instead, according to sociopsycholinguistic principles,
language is learned through interpretation and “every literacy event is based on the intent
to make meaning within the social context” (p. 94).

A final theorist who has had significant influence on views of literacy
development is Marie Clay. Clay (1997), whose work is based on the work of Kenneth
Goodman (1969), proposed the literacy processing view of development. This view
posits that the individual seeks to construct inner control of the text while reading or
writing. She suggests that reading and writing are reciprocal processes; one does not
develop without influencing and the influence of the other. The tasks of reading and
writing are, therefore, governed by an individual’s motor abilities and prior knowledge of
the tasks. The “tentative and flexible” teacher, then, records the processing behaviors,
which are manifestations of the individual’s attempts to control the text. Similar to the
psycholinguistic theory and transactional sociopsycholinguistic theory of development,
the tenets of the literacy processing view suggests individual knowledge and use of
language significantly impact literacy development.
Current Perspective of Literacy Development

This historical perspective on literacy development provides the context for a current outlook on how children develop literacy skills. As Vygotsky (1978) stated, literacy and learning become interrelated from the child’s very first day of life. The communication patterns, specifically oral language, begin with a desire to communicate (Harp, 1994). These patterns that are established during the first year or two of life are crucial for the children’s later development in language, cognition, and social skills (Landry, Smith, Swank, & Miller-Loncar, 2000). And, according to Roskos, Tabors, and Lenhart (2009), oral language is the foundation of learning to read and write. With adult help, young children need to develop skills in semantics (meaning of words), syntax (grammar), morphology (manipulating structure), phonology (sound structure), and pragmatics (social uses of language) through experiences and structured activities (e.g., word play, shared reading, dramatic play, multi-sensory learning opportunities). These authors also suggest that oral language, specifically speaking and listening skills, learned in the preschool years are crucial for future reading and writing achievement and school success. Moreover, when children enter school, they come with a considerable amount of literacy knowledge and can engage in literacy events even if they are unaware that they can do so (Fagan, 1989; Harste, Woodward, & Burke, 1984).

The belief that children enter school with a considerable amount of literacy knowledge supports the concept of emergent literacy as opposed to reading readiness. Harste, Woodward, and Burke (1984) state that the concept of reading readiness suggests children are not “ready” to learn literacy skills until a particular age or maturation level. Once children reach a particular age, such as 6.5 years, children are at the right “mental
age” for literacy instruction. Instructional programs which adhere to a reading readiness perspective often suggest teaching a hierarchy of skills through which children progress. This view, however, does not acknowledge differences in literacy behaviors children bring to school. And, according to Smith (1997), whether a child is deemed “ready” may be dependent on the type of instruction emphasized in the classroom. For example, if instruction emphasizes alphabetic knowledge then children who cannot identify the letters will not be deemed ready.

Emergent literacy involves the process of becoming literate from birth (Harste, Woodward, & Burke, 1984; Vacca, Vacca, Gove, Lenhart, & McKeon, 2003). This perspective, unlike the notion of reading readiness, suggests that children bring some knowledge of print and book experiences to school. These authors state that under normal circumstances learning to read should be as natural as learning oral language. Instruction and assessment from the emergent literacy perspective, then, consider the child’s knowledge of print, learning needs, and reading behaviors and interests. Therefore, the emergent literacy perspective seeks to “get literacy instruction ready for children” (Vacca et al, 2003, p. 95) instead of getting children ready for instruction.

Reading is language and it is developed in the same way oral language is: through active, involved learners participating in language experiences that involve print in meaningful, important, understandable ways (Smith, 2000). The act of reading from the beginning (and even before) is started by an idea, and then purpose develops into a constant self-revising impulse that guides selection, synthesis, and organization (Rosenblatt, 2005). Moreover, as Smith (1997) suggests, reading is not a passive activity.
Meaning is not something a reader or listener gets from language, but something that is brought to language. The only way to read, then, is at the level of meaning.

According to Pascual-Leone and Smith (1969) and Goodman (2003b), reading involves decoding, where the student receives and deciphers the sounds, language, and meaning of text. The process of writing, though, differs from reading because it involves encoding, which requires the student to produce or provide the sounds, language, and meaning of text that someone else or the self may decode. It follows, then, that the process of writing differs from reading in that writers begin with ideas and transform them to print to be shared, whereas readers begin with print and end with ideas. Thus, writing is an expressive activity, and reading is a receptive activity (Rosenblatt, 2005). Yet because children need writing to learn about reading and reading to learn about writing, the reading and writing processes are always interacting (Roskos, Tabors, & Lenhart, 2009).

Whether the literacy event is simply reciting a book that has been memorized or constructing a written response, speaking, listening, writing, and reading all share the same transactive process. A literacy transaction involves a reader adding to the nonverbal or socio-physical setting of his or her past life and literate experiences (i.e., memories, preoccupations, values, aspirations) when he/she enters into a relationship with the text (Rosenblatt, 1978). This relationship becomes a living organism, where the reader and the text cannot be separated (Rosenblatt, 2005). Every transaction, then, stirs a linguistic experience that is the basis for interpretation. Moreover, transacting with a text is the cornerstone of meaning-making in any literacy event (Rosenblatt, 1989, 2005).
Although reading, writing, speaking, and listening development rely upon similar factors and a similar process, differences exist in the development of each task. First, individuals may develop stronger skills in one task compared to another. For example, young children may be better readers than writers (Goodman & Goodman, 2003b; Rosenblatt, 2005). Second, just as the products of reading, writing and listening tasks are conceptually different, so too are their respective stages of development or levels of skills acquisition. For example, Chall’s (1983) stages of reading development differ conceptually from Henderson’s (1981) stages of spelling development. Third, an individual’s relative strength or weakness in visual, motor, and perceptual skills significantly impact the rate of reading, writing, speaking, and listening development (as cited in Spear-Swerling & Sternberg, 1996). Moreover, literacy tasks are interrelated yet independent (McKenna & Robinson, 2009).

Current measures of school literacy success involve determining whether a student reads or writes “on grade level” (Minarik, 2000). However, literacy is not accomplished in schools alone; children, parents, siblings, and the general community contribute to learning and achievement (Lipson & Wixson, 2009). The reflective educator, then, sees that literacy tasks in the current education environment are not bound to books (Smith, 1997). Books constitute only a small part of our daily reading fare. Most people read newspapers, forms, bills, magazines, journals, and advertisements. Computer monitors present many types of print. The literate person in the 21st century, then, has new literacies (Lankshear & Knobel, 2003), including multiple forms of texts (i.e., print, visual, aural, and digital) that can be read critically for multiple purposes in a variety of contexts. Thus, educators have increasingly recognized their responsibility to
integrate information and communication technologies (ICTs) into the curriculum (IRA, 2009b), because being literate in the 21st century requires that individuals be able to deal with all types of texts, including on-line texts (Martinez & McGee, 2000). These literacy skills add to the current view of literacy development by suggesting that there are multiple ways of knowing (Leland, Harste, & Helt, 2000). The multiple ways of knowing approach to literacy and learning proposes that different sign systems offer different potentials for individuals to make meaning. Worthy of note, some students who struggle with or find little reason to read a textbook may be engaging in literate practices at home, such as reading graphic novels, e-mailing, instant messaging, participating in chat rooms and blogs, and consulting video game magazines for strategies (Brozo & Flynt, 2008).

In conclusion, tasks involved in literacy development are interconnected and interdependent. Nonetheless, literacy tasks differ conceptually in their purpose. Each task must be situated in a language, constructive, meaning-making, social context, and opportunities to practice these tasks collectively and in isolation are essential. The goal, then, of literacy learning at any age and with multiple forms of text is to apply learned literacy skills, knowledge, and strategies to perform everyday literacy functions, whether they are emergent, functional, workplace, or content related (McKenna & Robinson, 2009). However, students do not always follow this typical pattern of literacy development. In fact, some students get “off track” (Spear-Swerling & Sternberg, 1996).
Students with Specific Learning Disability (SLD)

In the 1950s, all students with reading difficulties were given the label “dyslexia,” based on the theory that this group of learners had motor and perceptual deficits (Gahagan, 1994). However, educators soon discovered that this label did not match all the behaviors these students exhibited. This mismatch led to the conception of the term “learning disability” (LD) by Samuel Kirk in the 1960s (Spear-Swerling & Sternberg, 1996). Shortly after, the field of learning disabilities was formally recognized (Hammill, 1993; Moats & Lyon, 1993), which resulted in increased funding for experimental research on students with LD. This research in the 1960s laid the foundation for what educators know and are learning about characteristics of students with specific learning disability (SLD), as well as models of prevention (i.e., RTI) and effective instructional practices for this group of learners.

Currently, slightly less than 5% of the U.S. population has a specific learning disability (McKenna & Robinson, 2009). Specific learning disability, however, is the most common disability in the classroom (Gahagan, 1994), representing 43.3% of all students with disabilities 6-21 years of age under IDEA (Rehabilitation Research and Training Center on Disability Statistics and Demographics, 2009). This disability category also accounts for a higher proportion of all special education enrollments than any other classification under IDEA (Zirkel, 2010).

According to the federal definition in Individuals with Disabilities Improvement Act (IDEA) of 2004, students with SLD are defined as having a disorder in one or more of the basic psychological process involved in understanding or using language, spoken or written, which may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to
do mathematical calculations. This term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage (§ 602).

From a broad perspective, students with SLD are heterogeneous in nature, meaning what one student with SLD experiences, another may not (Gahagan, 1994; Wood, 2006). For example, one student may experience difficulty with reading, while others may experience difficulty with math, writing, or oral language. Wood (2006) also notes that this group of learners may have difficulty with gross and fine motor abilities, which affects their social skills and the knowledge they gain from their world. The combination of and interaction between these general characteristics may contribute to the tendency not to be accepted by their peers and to have a poor self-concept. Although, students with SLD may struggle in different academic and social areas, this group of students experience the most difficulty with reading compared to the general population (Moats, 1995, 2004; Swanson, 1999).

Despite these weaknesses and tendencies, students with SLD are not exempt from the natural learning process; they are intellectually capable (Gahagan, 1994). Gahagan (1994) also states that students with SLD learn to make meaning of one’s environment by continuously connecting background knowledge, experiences, and emotional state. Therefore, they need meaningful contexts to confirm predictions and opportunities to interact with the environment more than any other learner. According to Gersten, Fuchs, Williams, and Baker (2001), instead of being deficient in skills, students with SLD have the tools, but the tools are not working well. From an instructional perspective, students
with SLD differ minimally from poor readers (Spear-Swerling & Sternberg, 1996). There is little evidence students with SLD require dramatically different types of instruction in reading than poor readers, especially with word recognition skills. Furthermore, as Spache (1972) and Spear-Swerling and Sternberg (1996) note, students with SLD will have this disability for a lifetime, but they can learn to read well. They are not doomed to lifelong reading failure.

Although the federal definition is specific about its inclusion and exclusionary criteria and students with SLD can be portrayed from a broad perspective, research has been able to further describe students who have this high-incidence disability in relation to literacy development and skills. Most notably, students with SLD demonstrate weakness in phonological or “sound-related” processing, which significantly impact reading acquisition (Bradley & Bryant, 1978; Snowling, 1981). Phonological tasks are rooted in phonological aspects such as discrimination, segmenting, blending, and isolating sounds (Chall, 1983; Spear-Swerling & Sternberg, 1996). Weaknesses in these subskills can impact word recognition (Perfetti, 1985; Stanovich, 1992) and undermine successful literacy experiences for students with SLD.

Research has also been able to further describe this group of learners in regard to reading comprehension. Gersten, Fuchs, Williams, and Baker (2001) conducted a literature review on comprehension instruction for students with SLD. Their research identified common characteristics of this group of learners. They found that students with SLD commonly experience weakness in strategic processes and metacognition, difficulty with vocabulary used with academic content, limited task persistence, and less
prior knowledge. Their findings suggest that students with SLD do not know they should monitor their comprehension or apply specific strategies.

Martin, Martin, and Carvalho (2008) also conducted a literature review, which focused on characteristics of students with SLD related to reading development, as well as evidence of reading instructional strategies used with this group of learners. They found that students with SLD commonly experience difficulty when processing information and communicating. In addition, students with SLD respond best to teacher-directed approaches that involve teaching specific, sequential skills. The findings of Gersten, Fuchs, Williams, and Baker (2001) as well as Martin, Martin, and Carvalho (2008) suggest weaknesses in factors that influence comprehension can significantly impede literacy development and skill acquisition for students with SLD.

Over the past 60 years, educators have learned that the continuum of behaviors and characteristics of students with SLD is broad (Martin, Martin, & Carvalho, 2008). There is much variance in how strong or weak a skill or group of skills are between just two students with SLD. Because of this variance, there is no best method or approach to assessing and instructing this group of learners (Adams & Bruck, 1993; Foorman, 1984). The notion, then, of matching the student with educational environment is critical to effective assessment and instruction (Lipson & Wixson, 2009). Matching assessment to instruction is at the heart of the response to intervention model (RTI) described in IDEA (2004).

Since the use of the intelligence quotient-achievement “discrepancy model,” which has been the primary procedure for identifying students with SLD in most states, experts have criticized its validity, reliability, and ability to authentically evaluate a
For a student to qualify for special education services and to be determined as having a specific learning disability, a “severe discrepancy” (i.e., two standard deviations away from the mean) must exist between the student’s intellectual ability and achievement (IDEA, 2004). Under this model, a student with SLD could qualify for services due to evidenced deficits in either basic reading or reading comprehension, as well as services in reading for a broader array of problems such as expressive oral language or receptive oral language (Spear-Swerling & Sternberg, 1996). According to Vaughn, Wanzek, Woodruff, and Linan-Thompson (2007), this model inherently requires students to fall behind to a significant degree before becoming considered eligible for special education services. Implementation of this model often rendered results that collectively led to overrepresentation of subgroups of learners or struggling students who did not meet the criteria for special education services.

These criticisms influenced legislation reflected in IDEA (2004) in the approved, but not mandated, use of RTI. IDEA (2004) states, “In determining whether a child has a specific learning disability, a local education agency may use a process to determine if he or she responds to scientific, research-based interventions as part of the evaluation process” (§ 614). Within the RTI model, students with disabilities are viewed first as general education students. Special education educators and administrators need to embrace this model of prevention rather than a model of failure (NASDE & CASE, 2006).

Conceptually, the struggling student in the RTI model is identified early before an evaluation for a possible SLD (Mokhtari, Porter, & Edwards, 2010; Walker-Dalhouse &
The struggling student receives well-timed, developmentally appropriate, intensive scientifically based instructional supports (Barnes & Harlacher, 2008) for particular instructional needs. Theoretically, these supports should allow struggling students to catch up with their peers (Mokhtari, Porter, & Edwards, 2010). As a result, it is believed that the differentiated instruction provided in the RTI model will minimize the overrepresentation of linguistically and culturally diverse students in special education placements or those students who struggle due to inadequate instruction (Walker-Dalhouse & Risko, 2009). Moreover, students with SLD or those who are struggling are provided instruction within the RTI model that matches areas of weakness (i.e., phonological processing skills and factors influencing comprehension) before they begin to fail (Barnes & Harlacher, 2008; Walker-Dalhouse & Risko, 2009).

Operationally, RTI is a multi-tier approach in which each successive tier provides more intensive instruction (Cummings, Atkins, Allison, & Cole, 2008; Fuchs, Fuchs, & Stecker, 2010; NASDE, 2005). Typically, there are three tiers where educators place students on the basis of screening and progress monitoring (Cummings et al, 2008). These tiers are fluid, meaning students can move among tiers based on instructional need. According to Fuchs et al, (2010), Tier 1 is general whole-class intervention from a core instructional program. In Tier 2, which is targeted small group instruction, educators provide instruction based on specific skills that match a particular need. Tier 3 is the highest tier, which involves individualized intervention for students who have thus far been unresponsive to the instruction provided. Highly qualified educators (IDEA, 2004; NCLB, 2002) provide the specialized instruction or a more intensive version of the instruction in Tier 2 to these struggling students. Educators then use the variety of data
collected in Tier 2 and Tier 3 to support the need for a multi-factored evaluation of any struggling student. Thus, the RTI model provides students with SLD or struggling readers enough time and opportunities to respond to individualized or small-group instruction from specially trained educators before an evaluation occurs.

**Effective Oral Reading Practices for Students with SLD**

Despite growing knowledge about the characteristics about students with SLD, this group of learners has historically not been held to high standards of achievement. Efforts were made prior to the 1950s to provide an education for these learners, but their educational services were often in separate facilities (Cook, Klein, & Tessier, 2008). The historic case of *Brown vs. Board of Education of Topeka, Kansas* (1954) and laws such as the Handicapped Children’s Early Education Assistance Act of 1968 legally provided students with disabilities with the opportunity of a public education. However, the federal government did not unify its efforts to guarantee a “free and appropriate public education” for students with disabilities until the enactment of the Education for all Handicapped Children Act in 1975 (later renamed the Individuals with Disabilities Education Act in 1990).

The Individuals with Disabilities Education Act of 2004 requires schools to educate students with disabilities in the regular education classroom “to the maximum extent appropriate” based on the determined least restricted environment (LRE). The requirement of educating students with disabilities in the public schools also ensures they will receive services to meet their academic, behavioral, or functional needs. Administrators and teachers must provide an education to students with disabilities that
includes quality instruction, as well as tests, assessments, and evaluations. IDEA (2004) states,

Disability is a natural part of the human experience and in no way diminishes the right of individuals to participate in or contribute to society. Improving educational results for children with disabilities is an essential element of our national policy of ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities (§ 682).

The NCLB Act (2002) also defines and enforces the requirements of assessing and reporting all students’ learning. It requires all students, including students with disabilities, both high functioning and low functioning, to demonstrate academic growth. The NCLB Act (2002) requires teachers to assess all students annually in grades three through eight and one time in high school according to state standards in reading and math. Students with disabilities, depending on severity, may take the same tests as students without disabilities or an alternative assessment. They may also take these mandated tests with allowable accommodations and modifications to “even the playing field” with their nondisabled counterparts. In this manner, standards of achievement are implemented and required for all students.

One way of upholding these standards of assessment and methods of prevention is “progress monitoring” (National Center on Student Progress Monitoring, 2011) the academic growth of students with SLD or those who continue to struggle (e.g., poor readers, struggling readers, “garden variety” readers) using effective instructional practices. According to Kuhn, Schwanenflugel, Morris, Morrow, Woo, Meisinger, and Stahl (2006) the term “effective” in the context of reading means promoting skills related to the development of reading fluency. The authors elaborate on this definition by
saying, “one key aspect of [fluency] approaches is that they combine extensive opportunities to read connected text with the provision of scaffolding. That is, they provide learners with support through either feedback or modeling that emphasizes appropriate decoding, phrasing, and expression” (p. 358). The National Reading Panel (2000) states that fluency-oriented approaches to literacy instruction are effective at increasing students’ accurate and automatic word recognition, assisting with their comprehension, and promoting their use of prosodic features, such as stress, pitch, and phrasing. Although an educational practice or method may be considered effective, a match between assessment, instruction, purpose, and educational standards must be addressed before a practice is implemented (Lipson & Wixson, 2009). The following oral reading practices are supported by research, and they are considered effective in the field of education for all students, especially students with SLD.

Previewing text is one practice that is considered effective for students with SLD and those who struggle with reading (Rose, 1984). This strategy allows students to read or listen to a passage before instruction or assessment to activate and build background knowledge. Rose (1984) as well as Rose and Sherry (1984) used previewing text before oral reading with students with SLD in elementary and junior high. In this study, the researchers placed students in a listening-while-reading group or silent reading group. The students with SLD were then given high-interest/low vocabulary passages, which matched their assessment needs (Daly, Martins, Kilmer, & Massie, 1996), to preview before performing an oral reading. The results of this study showed that the students’ oral reading fluency improved, whether they previewed text by listening-while-reading or reading silently.
The second effective oral reading practice is repeated reading, which has been used with students with SLD and struggling readers (Rasinski, 1990). This strategy is based on the theory of automatic information processing in reading (LaBerge & Samuels, 1974), which states that readers at different fluency levels expend varying degrees of processing effort to decode text. For example, poor readers expend much processing effort to decode each word, whereas fluent readers expend minimal effort. According to Samuels (1979), repeatedly reading a passage of text provides essential practice for nonfluent readers to practice word attack skills. With repeated reading tasks, the word attack skills become automatic, resulting in increased fluency and comprehension that are carried over to new selections. Since Samuels introduced the strategy, repeated reading has been used in many research studies in many ways. For example, repeated readings have been used in combination with poetry (Staudt, 2009), in combination with error correction (Nelson, Alber, & Gordy, 2004), in comparison with listening-while-reading (Dowhower, 1987; Rasinski, 1990), and in a school-wide intervention (Denton, Fletcher, Anthony, & Francis, 2006). Although the research methods in each of these studies varied, the implementation of repeated readings stayed the same: the struggling student reread a passage until some predetermined level of fluency was achieved. In all the studies mentioned, repeated readings had a significant impact in improving the oral reading of students with SLD or struggling readers.

A third effective oral reading practice for students with SLD and struggling readers is paired or partner reading (Allington, 2001; Topping & Bryce, 2004). Paired reading is a type of peer tutoring and part of the larger category of Peer Assisted Learning Strategies (PALS), where a more knowledgeable student supports the learning of a less
knowledgeable student using prompting, praise and feedback (Fuchs, Fuchs, & Burish, 2000; Miller, Thurston, & Topping, 2010). PALS are considered effective because they facilitate frequent interaction among peers while learning takes place (Fuchs, Fuchs, & Burish, 2000). In paired reading, specifically, when a tutee does not self-correct a misread word, the tutor supplies the word, the tutee repeats it correctly, and the reading by the tutee resumes or the tutee and tutor read simultaneously (Topping & Bryce, 2004). MacDonald (2010) conducted a three-year study involving paired reading with students who had severe reading difficulties. The tutees, who were the students with reading difficulties, were paired with tutors, who were more able readers, for three 18-minute sessions three times per week alongside a phonics instructional program. During the sessions, the tutee read a passage to the tutor who recorded, discussed features of, and practiced misread words. At the end of the three-year study, reading accuracy and comprehension improved but reading speed did not.

In a second study using paired reading, Vaughn et al. (2000) compared collaborative strategy reading (CSR) and partner reading (PR) with students who were struggling readers, some of whom were identified as having a reading disability. The CSR fosters comprehension of text while students work in groups or pairs to resolve questions about vocabulary and concepts using different strategies. This strategy allows “students to practice and eventually assume responsibility for implementing appropriate strategies to enhance reading and concept knowledge before, during, and following reading” (p. 326). The CSR and PR sessions lasted 25-45 minutes two to three times per week. At the end of the 12-week study, all students in the study made significant average
gains in reading rate and correct words per minute. There was no average gain in comprehension and the average gain in accuracy was not significant.

Many other oral reading practices have also been used with students with SLD to build the complete profile of a student when making instructional or placement decisions. These practices include echo reading, choral reading, “tape-check-chart” (Allington, 2001), shared book experiences (Stahl, Heubach, & Cramond, 1997), and teacher modeling (Smith, 1997). The many formats of oral reading instruction allow educators to be selective in the tools they use during the assessment process. Therefore, the ability to be selective enables educators to assess and instruct in ways that honor students’ processes and celebrate their products (Harp, 1994). Thus, the variety of data collected from meaningful and contextually appropriate practices in the RTI model informs instruction.

During the implementation of these instructional practices, data is collected to progress monitor student achievement. The data collected related to oral reading fluency may include: (a) word recognition accuracy, (2) fluency (automaticity and expression), and (c) comprehension (Rasinski & Padak, 2005). Another form of oral reading fluency data that may be collected are miscues, or unexpected responses to text (Goodman, 2003c). These unexpected responses to text can then be analyzed by using miscue analysis assessment procedures (Goodman & Burke, 1972). Miscue analysis is an effective assessment-to-instruction tool that teachers use for all types of learners. Miscue analysis is supported by the theory of psycholinguistics (Smith, 1971) that suggests the interaction between language and thought is necessary to make sense of written language. Students use their knowledge of language to sample, predict, and confirm meaning of text
In this tool, educators mark a student’s misread words as “miscues,” not errors, where the student has been cued or influenced by print semantically, syntactically, or graphophonically. The miscues, then, give the educator insight into students’ reading processes and the tools and strategies upon which they are reliant, which influence individualized, instructional decisions (Goodman, 2003f).

There are also optimal instructional factors for struggling readers and students with SLD. Vaughn, Wanzek, Woodruff, and Linan-Thompson (2007) examined empirical evidence on various levels of instructional intensity (i.e., decreasing group size and/or increasing the amount of time the student spends in instruction), which contribute to improved performance with students with SLD or those with reading difficulties. They found that students had more learning gains when the assessment–to-instruction environment included smaller group size (e.g., groups of three students or one-on-one with a teacher) and when the interventions last up to 20 weeks. These authors also state that there are not enough studies to determine what quantity of sessions or duration of sessions affect learning gains. This current research suggests that although students with SLD and other struggling readers have difficulty with reading, there are effective instructional and assessment practices that can positively impact their reading performance.

Texts Used for Assessment in the Elementary Classroom

According to Brabham and Villaume (2002), leveled texts are the common print text used for informal assessment purposes in the current elementary classroom. Leveled texts are available in many forms, including books created by commercial programs,
selections for basal reading anthologies, and children’s literature. This type of print text was developed to meet diverse learning needs and has found its place in the classroom, however, not without criticism.

The first leveled readers date back to the early 1800s, and they are now a mainstay in current basal programs (Cunningham et al., 2005). Leveled systems grew out of the need to address concerns about the overuse of whole-group instruction and the more traditional ability-based small groups (Glasswell & Ford, 2010). The theory behind using leveled texts in the classroom, regardless of the leveling system or form of leveled text, is to match texts to readers (Brabham & Villaume, 2002). This means students must have an opportunity to read comfortable texts rather than experience constant frustration with texts that are too difficult or too easy.

**Leveled Texts**

To determine text appropriateness, educators often consider the text difficulty or what is known as readability. Readability is defined as the “comprehension difficulty of connected texts and numerous measuring instruments used on sample books and other texts to predict the level of reading needed to read and understand” (Chall, 1983, p. 73). There are various systems that indicate levels of appropriateness or difficulty. Each system typically has its own way of indicating difficulty (e.g., a letter, a number, a grade level, a grade level with gradient), which may or may not translate to other leveling systems. A key feature of leveled texts is the distinct ways texts can be organized for readers’ comprehension.
According to Cunningham et al (2005) leveled texts should increase in difficulty along the “dimensions” of emphasis in the instructional approach they promote (p. 413). These authors have identified three major dimensions of increasing the difficulty of texts. First, texts can be leveled with vocabulary control by word frequency. The purpose of leveled texts in this category is to foster word recognition, which is the ability to access pronunciations attached in memory to entire printed words. As texts with controlled vocabulary increase in difficulty, the vocabulary control becomes loosened. This means as the text become more challenging, the “repetition of high-frequency words decreases or the list of words considered familiar due to frequency range decreases in size” (p. 413).

The second dimension of increasing the text difficulty is phonetic control. These texts are often classified in the genre called decodable readers. Much like the leveled texts with controlled vocabulary, the amount of decodable words decreases as the text complexity increases in decodable texts. The purpose of this type of leveled text is to foster students’ decoding, or their ability to use knowledge of letter-sound relationships and patterns to construct pronunciations of unfamiliar printed words.

The third dimension of determining a text level according to Cunningham et al (2005) is word predictability. These texts are often classified in the genre called predictable texts. Texts in this category are constructed in such a way that they provide extra cues, such as various context clues, to readers so they can read it accurately, even though word recognition and decoding skills are still developing. In the same manner as the previously mentioned texts, as the difficulty of predictable texts increase the number of cues decrease. The purpose of this type of leveled text is to foster students’
use of the three main cueing systems associated with the reading process: syntax, semantics, and graphics.

Cunningham et al. (2005) finally suggest that multiple-criteria or dimensions can be used to determine the level of a text. This type of leveled text considers more than one criterion to determine text difficulty. For example, a leveled book series with multiple criteria may include decodable words and controlled vocabulary. In similar fashion, as the text increase in complexity the presence of the multiple criteria decreases.

Brown-Chidsey, Johnson, and Fernsom (2005) describe a fifth dimension: leveled texts based on authentic literature. This type of leveled passage is taken directly from children’s literature or is packaged in literature-based basal reading materials adapted for instruction, meaning the text has been simplified in some capacity for a particular readability level. Proponents of authentic texts abide by the notion that students need reading material that uses language naturally and permits readers to connect with the texts using their prior knowledge (Livingston, 2006).

Readability Formulas

Texts may have a combination of controlled or uncontrolled factors contributing to their readability levels, thus a readability level can be determined by using a readability formula. This method uses a mathematical formula which typically takes into consideration the number of words, syllables and sentence length to determine text complexity. A readability formula does not take into consideration words that are vocabulary controlled, phonetically controlled, or predictable. The most popular readability formulas include the Fry Readability Scale (Fry, 1968), SMOG Readability
Formula (McLaughlin, 1969), Fog Index (Gunning, 1968), Dale-Chall Readability Formula (Chall & Dale, 1995), and Spache Readability Formula (Spache, 1953). Each of these formulas assumes that easier texts have shorter sentences with fewer words and syllables than more challenging texts (Brabham & Villaume, 2002). All of these categories of leveled texts may appear in formal tests, informal assessments, and assessments that blend aspects of formal tests and teacher-interpretation components.

Brabham and Villaume (2002) state that the range of leveled texts is important, because it encourages teachers to select materials that are appropriate for their students. Struggling readers, especially, need to read comfortable texts rather than experience constant frustration with texts that are too difficult. In addition, leveled texts free teachers from dependency on grade-level materials that may not fit the needs of their students. These authors also state that the best feature of using leveled texts is that they require teachers to question how they select texts for reading instruction, as well as build a base of knowledge that can increase the effectiveness of teaching and assessment that enables students to take charge of their learning.

Two studies have compared the use of different types of leveled texts in oral reading assessments. First, Kourea, Cartledge, and Musti-Rao (2007) compared the oral reading performance of students using DIBELS oral reading fluency (DORF) passages and constructed passages with controlled vocabulary as part of a larger study. DORF passages have a standardized readability level and the constructed passages in this study included sight words the students had practiced during intervention. When compared to the DORF passages, the second and third grade students in the peer-tutoring context had higher oral reading fluency rates using the constructed paragraphs.
In a second study, Hintze and Shapiro (1997) compared the oral reading fluency of students in second through fifth grades. Half the students in each grade level read using authentic literature from a grade-level basal series and the other half read decodable text from a grade-level basal series using curriculum-based measurement probes. The results of this study showed students’ oral reading fluency on both types of texts contributed to gains in oral reading fluency.

These studies show support for different dimensions of leveled texts. However, according to Bradley-Klug, Shapiro, Lutz, and DuPaul (1998) as well as Hintze, Shapiro, Conte, and Basile (1997), students’ oral reading fluency scores are related to the source of the oral reading fluency passage. This means that a student may perform better for a variety of reasons on a probe taken from basal materials, for example, compared to probe from literature-based materials. In addition, experts caution against the exclusive use of leveled passages. Szymusiak and Sibberson (2001) state that when students exclusively read leveled texts, their purpose for reading disappears. The students begin to read for the teacher instead of being eager to learn more from what they are reading. Consequently, the students do not learn from what they are reading. Glasswell and Ford (2010) cite another consequence of exclusively using leveled text. These authors state that teachers become increasingly inflexible outside of the student’s assigned letter or number. Consequently, teachers can lose sight of what matters during the reading event: the interaction between the reader, the text, and social context.

Brabham and Villaume (2002) also caution against using leveled texts in the assessment process. They state that assessment agendas which focus primarily on progress marked by moving students to higher text levels can distract teachers from
carefully monitoring and addressing the development of word-solving and comprehension strategies. Leveled texts, therefore, have a tendency to confine students to browsing and reading in a color-coded or level-designated range. These practices, consequently, deny students the opportunity to develop strategies and motivation to locate and immerse themselves in appealing literature.

The ability of leveled texts to confine readers has implications for students with SLD, who already struggle to read. In the current oral reading fluency assessment environment, many reading programs limit texts to books (Opitz, Ford, & Zbracki, 2006) or passages made to look like pages from books. And, according to Smith (1997), the widespread emphasis only on books and book-like passages in school can be destructive. Students with severe reading problems have learned a destructive lesson while reading only these texts in the classroom setting: comprehension is not as important as word accuracy. Consequently, this group of students typically behaves as if they do not expect what they read to make sense.

Brabham and Villaume (2002) also suggest that students can become overly reliant on the appealing and memorable language of leveled texts and become unable to shift attention to other types of print and develop the necessary understandings of how words work. In addition, these authors state that constraining language to make texts decodable also produces contrived language that is difficult to comprehend. Thus, these students are given limited opportunities in these texts to develop the powerful and robust word-solving and meaning-constructing strategies that characterize skillful readers. Instead, print text that offers readers the most insight into the meaningfulness of written
language tends to lie outside of books and into the far “personal and pervasive” world of their own lives (p. 124).

Goodman, Watson, and Burke (1987) support the use of texts that lie in this “personal and pervasive” world of the students. When selecting texts for assessment, these authors suggest using passages that are new to the reader but have familiar concepts. This type of passage could be from trade books, basal readers, content-area textbooks, journals, or newspapers. Regardless of the source, it is imperative that the passages include an “entire cohesive text,” meaning it fully develops a concept in a nonfiction text or has a clear storyline in a fiction text. Furthermore, the passage selected for oral reading and comprehension assessments “must be written in a language that supports the readers in their understanding of new information” (p. 38).

*Naturally Occurring Texts (NOcT)*

One type of text that reaches into the “personal and pervasive” world of students’ own lives is naturally occurring texts (NOcT). Although NOcT have been used in research studies, the term has not been clearly defined. Alvermann and Van Arnam, (1984) use the term NOcT to refer to familiar historical passages taken from the curriculum social studies text. Hindle (1988) conducted a study to develop new grammars in the English language utilizing a computer program that analyzed tagged NOcT, which he stated were able to give “unrestricted textual input” (p. 118). Goetz (1992) also used NOcT, specifically newspaper articles. He defined NOcT as “articles with one or more subheadings and three to five paragraphs before the first subheading from the international section of the New York Times” (p. 7). Wolf and Gibson (2004)
examined the discourse structure relations to develop a new structure to represent those relations using NOcT, specifically texts from the *Wall Street Journal* and the *AP Newswire*. McVee, Dunsmore, and Gavelek (2005) examined how social and cultural perspectives have contributed to current conceptions of schema theory. Within their discussion, they define NOcT as having specific referents to content, specialized discourse or reading level. And, Bednarek (2006) used “a text-driven approach to explore epistemological positioning (the expression of assessments concerning knowledge) in English newspapers” (p. 635). The author of this article specifically mentions newspapers as a type of NOcT, considering them “preoccupied with knowledge.”

A synthesis of these studies that have used the term NOcT renders a definition. With the exception of the study by Alvermann and Van Arnam (1984), NOcT reliably exist in the non-school, everyday environment for purposes other than classroom instruction. The content of NOcT can be either fiction or nonfiction. The text contains a cohesive string of words that can make sentences and paragraphs. And, the text exists in non-book form. Examples of NOcT include magazines, travel guides, brochures, and newspaper articles either in print or electronic form. In the literature reviewed, these types of NOcT fall under the larger categories of popular culture texts (Alvermann et al., 2007) and alternative texts (Guzzetti, 2002).

Other terms, such as *authentic texts* and *environmental print*, have also been linked in the literature to texts that exist in the nonschool environment. Thus, a distinction between these two terms and NOcT is required. Authentic literacy tasks include experiences that are personal, nonschool forms of reading and writing (Edelsky,
1991; Myers, 1992). Authentic texts, then, include print texts that are commercially published in the nonschool environment, as well as written messages, written stories authored by the student, or simple written lists. For this reason, the term authentic literacy is not used, because the text being considered in this study does not include noncommercially published texts written by the student. The second term, environmental print (EP) is similar to NOcT because it involves print that is published on a regular or irregular basis in the environment outside of school, and it is not related to an identified school curriculum. However, EP is often associated with logographic or symbolic reading. Such reading involves identifying letters based on visual characteristics rather than using systematic links between letters and sounds (Bowman & Treiman, 2008). Logographic reading is typical of pre-literacy experiences, which include children’s recognition of EP (e.g., the golden arches of McDonald’s). For these reasons the term EP is not used in this study.

Working from the definition of NOcT listed earlier, there are several studies which have used this type of text for educational purposes. It should be noted that with the exception of Goetz (1992), the authors of the following studies do not refer to the texts they use as NOcT. As a component of a two-part study, Fagan (1989) gave third, sixth, and ninth-grade students 17 reading tasks considered ordinary and every day. These tasks included reading a TV guide, sales flyer, advertisement for pizza, and a contest announcement. The students were asked how each item was used and where it could be found, as well as specific comprehension questions. All students in all groups, with the exception of third grade students, performed better at recognizing the NOcT than
correctly answering comprehension questions. The author concluded that students at these grade levels were not competent in reading ordinary tasks found outside of school.

In a second study, Spratt, Seckinger, and Wagner (1991) asked 671 Moroccan young children and adolescents to perform a series of household literacy tasks to investigate whether the performance on these tasks were related to school literacy levels, school experience, and background factors. The authors developed a *Household Literacy Assessment* to measure students’ ability to make sense of written features of four items: a letter, a front page of a daily newspaper, electricity bill, and a box of medicine. The *Household Literacy Assessment* involved using the actual materials as they would be found outside of school. After each item was presented to the students, they were asked to identify the item and respond to a number of questions about the item. The authors compared the performance on the *Household Literacy Assessment* with school-based reading assessments and cognitive assessments. The results of the study showed that school experiences contribute to the acquisition and development of household literacy skills. For example, performance on household reading tasks involves the integration of other types of knowledge (i.e., knowledge of print conventions, specialized vocabulary, and contextual knowledge). The authors concluded that children who remain in school and reach a higher grade level acquire a variety of literacy skills that are also relevant to literacy tasks outside of school.

In a third study, Goetz (1992) studied undergraduates’ imaginative processes in response to newspaper articles. The students rated their responses to familiarity, interest, comprehension, imagery, emotional response using a 6-point, Likert-type scale. Goetz
found that imagery was highly correlated with affective responses, and comprehension was related to both imagery and affective responses.

In addition to these studies, several experts highly recommend using NOcT in the classroom. They suggest making NOcT available in the classroom for self-selected reading (Cunningham & Allington, 2003), to learn about other cultures (Valencia et al, 1994), and to reinforce curriculum content (Flood, Lapp, & Bayles-Martin, 2000). Other experts not only recommend the use of NOcT for everyday classroom purposes, but specifically to meet the needs of struggling readers. Brozo and Flynt (2008) suggest connecting the at-home literacy practices of struggling readers, such as reading graphic novels, e-mailing, participating in blogs, and reading magazines, with inside school literacies to motivate students to read in the content classroom. Fagan (1989) encourages the use of a literacy center with a wide range of reading materials, such as newspapers, magazines, forms, brochures, and flyers, to broaden the students’ perspective of what reading is, especially to allow those who struggle to think of themselves as readers. Furthermore, Dorn (2010) suggests that having a variety of accessible texts (i.e., books, magazines, brochures, and internet) in terms of readability and availability is critical in engaging students in reading.

Opitz, Ford, and Zbracki (2006) commit several chapters of their book, *Books and Beyond: New Ways to Reach Readers*, to discuss how magazines, newspapers, and real-life texts (e.g., manuals, travel guides, and brochures) can benefit students who struggle to read. For example, magazines include many types of writing with varying lengths. Instead of reading full chapters or even a full page, students who struggle can read captions on different pages, labels on multiple diagrams, and short sidebars that appear
next to full-length articles. Each section may be short, but combined together there is much practice with reading where all the parts contribute to a significant reading experience. Newspapers can be thought of as anthologies, inclusive of articles, advertisements, comic strips, editorials, and picture essays. These authors state that this text represents the students’ world, and students who struggle can take pride in recognizing that they can read something that others in the community read nearly every day. In addition, real-life texts, such as manuals, travel guides, and brochures, are beneficial for those who struggle the most to read, especially those who say, “I don’t like reading!” and those who say, “I’m not very good at reading.” These students are noted as having reading avoidance and having little success with reading. If the school activity looks like typical school reading, the greater effort they exert to avoid it. Real-life texts can offset reading avoidance, because they represent nonschool reading for noninstructional purposes and quickly tap into the struggling readers subject knowledge, prior experience, and technical vocabulary. In addition, struggling students who read this type of text can more easily identify its purpose, a scenario which may not be present when responding to an assigned selection from an anthology.

Although NOcT may meet the needs and interests of those who struggle to read in the elementary classroom, research shows evidence of its limitations. Many of the passages and articles in NOcT are expository-nonfiction texts, which are more difficult to understand than narrative texts (Olson, 1985; Tun, 1989) and may require more instructional time to teach their component parts. Additionally, Kamberelis and Bovin (1999) suggest students in third grade have little knowledge about expository text structure, which hinders their comprehension of the text. Furthermore, students often
need a base of prior knowledge of a topic in an expository text with its greater density of content for adequate comprehension (Best, Floyd, & McNamara, 2008).

There are also social-cultural influences that suggest NOcT should not be solely relied upon to meet reading assessment needs. Fagan (1989) found when considering literacy events in general, students believed they could become good readers and writers only within the context of teacher-assigned literacy events. They value school literacy because it is important to their future success in life and their personal success with peers. This latter finding implies that if the teacher does not value or see the educational purpose in NOcT, even if students prefer it or find meaning in it, students may not deem it valuable in the school setting. Myers’ (1992) study on the *Social Contexts of School and Personal Literacy* found that students have an equal respect for school literacies (those known as academic) and personal literacies (those known as social or authentic). His conclusion was not to replace school literacy practices with more authentic, environmentally [or culturally] related practices. Myers acknowledged that school and environmental literacy practices serve different purposes, both of which are valued by students.

In conclusion, NOcT are a culturally relevant, local medium that can be used for literacy activities in the elementary classroom. Students can accomplish literacy tasks using NOcT traditionally associated with school-based nonfiction and fiction texts. Missing from this research, however, is the use of NOcT for assessment-to-instruction purposes. Although NOcT has been used in studies for educational purposes and experts support the use of NOcT in the classroom, there are no found suggestions in the literature
for the intentional use of NOcT which exist in sentence or paragraph form to measure students’ oral reading fluency and comprehension in the elementary classroom.

Schema Theory

The philosophy for the use of NOcT in the elementary classroom is rooted in the premises of schema theory. Bartlett (1932) defined schema as an abstract, active, nonlinear organization of past experiences or responses. Constructing schema involves the building of an “organized setting” of incoming impulses, which all must work together to create a response. Schemata, then, are responsible for what is perceived, recognized and remembered.

Piaget, who is well-known for his stages of cognitive development, expanded upon the construct of schema. He stated that schemata are “templates” for similar experiences. These templates become internalized mental processes through assimilation and accommodation. In assimilation, a person takes in an experience using existing, related schema. If individuals do not have related schema, they must change, or accommodate, their existing schema. Piaget stated, then, that learning takes place through assimilation and accommodation (Piaget & Inhelder, 1969).

According to Rumelhart (1980), schema can be considered “units” of generic concepts stored in memory. As Rumelhart explains, the units, or individual schema, are interrelated in a hierarchical structure. This means that each schema has “sub-schemata corresponding to the constituents of the concept being represented” (p. 8). An individual’s interrelated network of schemata allows the individual to make predictions and evaluations about an event, object or situation, which lead to personal interpretation.
or comprehension of that experience. Thus, it can be said that schemata are the “building blocks of cognition,” meaning they are the “fundamental elements upon which all information processing depends” (p. 4). Schema theory, then, is a theory about knowledge, how knowledge is represented, and how that representation facilitates the use of that knowledge.

Despite criticisms of schema theory (McVee, Dunsmore & Gavalek, 2005; Sadoski, Paivio & Goetz, 1991), this perspective on learning has influenced reading research enormously. Anderson, Spiro, and Anderson (1977) state that schemata have “slots” for important information to fit. The slot-fitting and, consequently, attention-directing processes occur concurrently during the reading process. The slots contain text-to-text, text-to-self, and text-to-world connections (Keene & Zimmerman, 1997). Therefore, the information in an individual’s schemata is the principle determiner of what is learned from text (Anderson, Spiro, & Anderson, 1977).

Weaver (2002) goes on to suggest that schemata develop and deepen as individuals interact with their world. Schemata, or what Weaver calls the “pragmatics” of reading, include social factors, such as age, socioeconomic background, ethnicity, education, interests and values, not merely prior knowledge (Weaver, 2002). These social factors influence how an individual perceives and approaches a reading event, as well as how the individual manages and understands the text. It is the unique individual context that allows an individual to make use of grammar, semantics and situation to comprehend the language of the text. This association is central to the reading comprehension process. The literacy task of reading then is situated in the sociocultural context (McVee, Dunsmore, & Gavalek, 2005).
Despite a known need for the integration of social and cultural factors for literacy and schema development, educators in the standards-based, assessment-driven setting struggle to apply this principle (Cunningham & Allington, 2003). The chasm between what needs to be taught and the need to integrate social and cultural factors in assessment-to-instruction practices leaves some students’ schemata dormant. Literacy endeavors, then, are stifled because academic tasks do not relate to students’ personal experiences. Thus, students merely reproduce conventional forms and meanings (Myers, 1992).

One method of activating students’ latent schemata is by providing multiple experiences for them with a variety of texts (Cunningham & Allington, 2003; Deeney, 2010; Duke, 2000; Reyes & Azuara, 2008). Because students are interested in their world, it is argued teachers should include informational resources along with traditional fiction and nonfiction texts in the classrooms. Informational resources include not only informational books and content-related poetry, but also NOcT (i.e., magazines, brochures, guides and newspapers). According to Duke, Bennett-Armistead, and Roberts, (2001), adding informational resources to a teacher’s repertoire of reading materials in the classroom can enhance the reading process. Cunningham and Allington (2003) believe it can turn a struggling student into a reader.

Furthermore, there are several reasons NOcT may be able to bridge the gap between a student’s dormant schemata and academic reading tasks. First, the content in NOcT is similar to what is found in book reading in the elementary classroom. The topics in selections of NOcT may include science, animals, sports and literature. These topics parallel the reading preferences of early and mid-elementary students as reported
by Sturm (2003). Sturm found that over 1,000 students preferred to read traditional library books on the topics of science, animals, sports and literature. The content in both traditional library books and NOcT would be a part of students’ schema.

Second, the passage structure of NOcT, whether fiction or non-fiction, is similar to the form and function of typical classroom books and texts. The fiction passages in NOcT, specifically child-oriented magazines, have typical fiction elements, including title, author(s), characters, setting, plot, problem, solution and pictures. The nonfiction passages in NOcT, not limited to child-oriented magazines, include title, author(s), subheadings, informational content, pictures, and occasional graphs and charts. Text structure is a common component of reading instruction in the elementary classroom. Therefore, the students’ schematically-based knowledge or experience with text structure could potentially be transferred and applied to the text structure of NOcT for assessment-to-instruction purposes.

Third, NOcT may be able to bridge the gap between students’ latent schemata and an academic reading task due to the typically large number of pictures and graphics in this type of text. Interaction with graphics will not only activate students’ prior content knowledge, but also allow the students to make use of personal grammar, semantic and contextual knowledge to comprehend the language of the text. As a result, the students’ “linguistic-experiential reservoir” (Rosenblatt, 2005) would be activated, potentially enabling students to more efficiently read and comprehend the text.

Fourth, the use of NOcT in the elementary classroom may benefit the struggling reader. Deeney (2010) suggests that struggling students experience “reading avoidance” because the cognitive efforts and attention needed to coordinate the multiple processes
while reading is exhausting. NOcT may be able to minimize this exhaustion. NOcT is a relevant, cultural medium representative of students’ social context, a key component upon which schemata are dependent. Interacting with the social context (i.e., age, socioeconomic background, ethnicity, education, interests, and values) is motivating for diverse learners. And, as noted by Gambrell (1996), increased motivation improves reading achievement levels. As a result, the intentional use of NOcT in the elementary classroom may provide a means for students with SLD to view themselves as readers.

Summary

Education experts have developed and implemented several models and practices of assessment throughout history, which have formed the roles of assessment in the classroom. Assessment practices are currently dominated by standards and an emerging emphasis on formative, informal assessments. Therefore, it is critical that effective instructional practices are identified and matched with different groups of learners to progress monitor their learning.

Effective oral reading strategies, such as previewing text, repeated reading, and paired reading, often utilized during progress monitoring frequently include passages that have been leveled to a particular point of difficulty. Leveled texts come in many forms and have been used in various ways. Although research supports the use of leveled texts (Brabham & Villaume, 2002), some experts encourage their use with caution (Glasswell & Ford, 2010; Szymusiak & Sibberson, 2001), especially because of their tendency to include language that may not naturally be understood by readers (Goldman & Rakestraw, 2000). The use of language that is contrived or controlled in leveled texts can
make literacy endeavors exhausting and meaningless for students with SLD, who
typically have difficulty with language, word recognition, phonological processing, and
content-area vocabulary. These meaningless or exhausting endeavors may be minimized
by using NOcT, because it represents the students’ social and cultural context and may
facilitate increased interactions with personal schemata. And, increased use of an
individual’s schemata may result in improved reading performance (Serpell, 1977).
Therefore, the use of NOcT in the elementary classroom supports what educators know
about reading development and instructional practices.
CHAPTER III
METHODOLOGY

This qualitative case study employed a descriptive, cross-case (Miles & Huberman, 1994) or multi-case (Fraenkel & Wallen, 2006) design. Such a design investigates each discreet case first, then analyzes commonalities or patterns among the cases. This study sought to describe how eight third- and fourth-grade students with specific learning disabilities (SLD) construct meaning from text as they read both traditional leveled assessment passages (TLP) and leveled naturally occurring textual (NOcT) passages orally. This chapter describes the methodology used in the study, as well as the population and setting. In addition, the chapter explains how data were collected and analyzed.

Design of Study

The possibility of using NOcT as part of the assessment-to-instruction process has been a topic of interest to the researcher, especially because there is no recognized evidence in academic research of its use to drive instruction in everyday classroom practice. In response to this finding, as well as positive experiences using NOcT with students with SLD, the researcher conducted a pilot study to investigate students’ text interests and performance while orally reading NOcT (Hamsher & Oswald, 2011). Ten elementary students, who just completed second through fifth grades and whose reading
levels ranged from below level to above level, participated in the pilot study in the summer of 2010. These students were shown three piles of texts, including classroom-based nonfiction books, fiction books, and NOcT (i.e., Ranger Rick, National Geographic Kids, a newspaper article, a travel guide, and a brochure). The students were asked which type of text they would prefer to read. Only one student selected NOcT as the most preferred text (seven students chose classroom-based nonfiction texts; two students chose fiction texts). The student who chose this text has attention deficit disorder (ADD). Although only one in 10 selected NOcT, the one student who chose the NOcT happened to be a struggling reader. This finding encouraged the researcher to pursue how a larger sample of students who struggle with reading respond to NOcT.

When the participants in the pilot study were asked, “What would you think if the teacher used NOcT like these in the classroom?” Many students expressed interest and receptiveness to its presence because of the appeal of the structure of the NOcT publications (e.g., “There is more than one main idea,” and “It’s not like reading a book. Magazines you can finish one story and quit.”). In addition, school norms influenced their perceptions of reading materials (e.g., “Students need to read chapter books,” and “Only science teachers have magazines; reading teachers have books.”). The second interview question showed that students’ prior knowledge and personal experience influenced their interest in different texts. This finding supports the theoretical framework of this current study that suggests that an individual’s schemata play an important role in meaning-making during a reading event.

Each student then read two selections of NOcT. The results of the oral readings were mixed at best. However, the format of and the procedures in the 3-Minute Reading
Assessments: Word Recognition, Fluency, and Comprehension (Rasinski & Padak, 2005) templates, including accuracy, fluency-automaticity, fluency-expression, and comprehension, can be applied to NOcT. The templates along with the format of typical NOcT passages make for an easy, brief assessment context, which provides immediate feedback. The format and procedures, as well as the findings from this pilot study, influenced the researcher’s choice of format for the oral reading assessments for the current study.

According to Merriam (1998), qualitative research seeks to identify meanings people have constructed about their world and how all the parts work together to form a whole. Case study, then, is a type of qualitative research that involves an intense examination of a phenomenon using a unit of analysis (Merriam, 1998; Yin, 2003). A case is selected because there is an instance of some concern or issue (Merriam, 1998). Thus, a case could involve a student, teacher, program, group, school, or community (Fraenkel & Wallen, 2006; Merriam, 1998). According to Rossman and Rallis (2003), most case studies are explanatory or descriptive, meaning they portray events, processes and perspectives as they unfold.

The design of this research was qualitative case study, because it sought to “gain an in-depth understanding of a situation and meaning for those involved” without disrupting the natural environment (Merriam, 1998, p. 19). The case or unit of analysis was students with SLD who constructed meaning through oral reading of both traditional and NOcT leveled passages. This was a multiple-case study, since several students with SLD were studied at the same time as part of the overall study (Fraenkel & Wallen,
Furthermore, this qualitative case study was descriptive in nature and sought to build an explanation for events and outcomes as they become known.

Research Questions

The following three research questions guided this qualitative case study:

1. When assessed using leveled texts identified as “naturally occurring” (NOcT) in students’ daily lives, how do students with a specific learning disability (SLD) construct meaning from print?

2. When assessed using an informal reading assessment with traditional, leveled passages (TLP), how do students with a specific learning disability (SLD) construct meaning from print?

3. When assessed with both traditional, leveled passages (TLP) and naturally occurring texts (NOcT), what similarities or differences emerge in the meaning-construction patterns of two students with a specific learning disability (SLD)?

Research Setting

This study was conducted in an urban school district located in a Midwestern state. The district had six elementary schools (Grades kindergarten through 4), one middle/junior high school (Grades 5 through 8), and one high school (Grades 9 through 12). The racial/ethnic composition of the school district was 76.3% White, 14.4% Black or African-American, 1.2% Hispanic or Latino, and 7.6% two or more races. The district had an average daily student enrollment of 4,100. Nineteen percent of the student enrollment was identified as having a disability. These students received services on a
continuum, which means some students received services at different facilities due to the nature and severity of the disability.

Data was collected in one of the K-5 elementary schools. In this school, approximately 64.7% of the student population qualified for free/reduced-priced meals. There were no students with limited English proficiency, and 6.8% of the student population received special education services. The building employed approximately 29 staff members, of whom 19 were classroom teachers, three were special resource teachers/specialists, and one was an administrator. The school’s student population was approximately 386 students, with a student-classroom teacher ratio of 21:1.

This elementary school received the designation of Excellent for two of the last three years from the Ohio Department of Education. For the past five years, it met the state’s Adequate Yearly Progress (AYP) in all required areas. (AYP is how the No Child Left Behind Act of 2002 measures achievement levels in reading and math and graduation performance in schools, districts, and states.) In addition, last year this school was recognized at the federal level as a Blue Ribbon School by the United States Department of Education. The Blue Ribbon Program honors public schools of any level that have high student achievement levels or have improved student achievement to high levels, especially among disadvantaged students (U.S. Department of Education, 2011). The elementary school in this study was nominated by the Ohio Department of Education because it had high student achievement levels the past five years.
Participant Selection

Because the intent of this study was to discover, understand, and gain insight from a sample through which the most can be learned, the process used to identify and select participants was one described by Merriam (1998) as “nonrandom” and “purposeful” (p. 61). Therefore, only students considered “information rich” (Patton, 2002) in relation to the purposes of this study were invited to participate. Fraenkel and Wallen (2006) further classify purposeful samples into eight categories, one of which they identify as “homogenous samples.” (p. 439). Homogenous samples include members who possess a certain trait or characteristic. For this study, the sample included students who each had a specific learning disability (SLD) and, consequently, an individualized education plan (IEP) with goals related to reading, including fluency and comprehension.

Participants’ names were retrieved by the building principal from the district’s information management system called Data Analysis for Student Learning (DASL). DASL houses information on every student enrolled in the school district. For example, a student’s grade, sex, ethnicity, birth date, parent information, district of residence, district of service, attendance record, test scores, discipline record, medical alerts, and any special education determination, such as SLD, were a few of the many student characteristics managed by DASL. The principal and other designated district employees were able to select students according to a particular characteristic or characteristics.

Because the participants in this study were minors under the age of 18, they were considered a vulnerable population (U.S. Department of Health and Human Services, 2005) and a letter of consent was obtained from each parent and a letter of assent (Appendix A) was obtained from each student. To obtain the letter of consent, a joint
phone call with the principal and researcher was made to each participant’s parent(s) or guardian(s) to explain the study, the student’s possible participation in the study, and reasons why the student was selected to participate. All the parent(s) and guardian(s) were interested in their respective student participating in the study, and they all signed and returned the letter of consent before the study began. Once letters of consent were obtained from parents or guardians, the researcher met with each student to describe the study, inform the student that participation was voluntary, acquire a signature for the letter of assent, and to control for stranger anxiety when data was collected. The participants in the study were given pseudonyms to protect the privacy and ensure their confidentiality, and all data was held in confidence (Fraenkel & Wallen, 2006).

There were nine third- and fourth-grade students retrieved by the DASL system who had a SLD and who had an IEP with reading goals. All nine students were asked to participate in the study, but only eight students signed the letter of assent. There were two girls and two boys in third grade, and one girl and three boys in fourth grade. These students had goals in reading comprehension, with a combination of goals related to written expression, reading fluency, and math. All the students were considered as reading below grade level according to assessments in the school’s basal curriculum materials. The students received special education services in a small group, resource room setting with an intervention specialist. No students received any related services. Three students were retained once, and two students have medically diagnosed Attention Deficit Hyperactivity Disorder (ADHD). The average chronological age of the participants in this study was 10 years 5 months.
The student participants’ grade levels of third or fourth grade were of interest for two reasons. First, because increasingly difficult texts are introduced, significant changes occur in the reading curriculum during the third and fourth grades (Best, Floyd, & McNamara, 2008). Before third grade, instruction focuses on decoding and reading fluency using narrative texts. During and after third grade, instruction moves beyond narrative texts and toward expository texts, which are more difficult to comprehend (Olson, 1985; Spiro & Taylor, 1980; Tun, 1989). Similarly, standardized assessment text passages change in the fourth grade. In the primary grades, passages include topics that are familiar and drawn from daily life. Starting in fourth grade, assessment passages are more informational with abstract concepts and more academic vocabulary. Consequently, the passages are less likely to draw on familiar content or words (Chall, 1983).

Second, there is wide recognition that many students experience a “fourth grade slump” (Chall, 1983). Moreover, according to Chall, the growth rate in reading development is deepest in the earliest stages of reading (i.e., up until Grade 3). By the fourth grade, development begins to plateau, and some educators begin to see this grade as a common point of weakness in reading development. This common developmental plateau can impede a student’s ability to grasp the more difficult content in reading materials and thereby cause serious problems in reading progress. Thus, this study explored whether passages using NOcT, which is largely nonfiction and represents the students’ out-of-school context, can provide teachers with better assessment information that may improve instruction at this critical juncture.
Role of Researcher

According to Fraenkel and Wallen (2006), qualitative research inherently explores relationships, which consequently heavily involves the researcher in collecting and interpreting information. Rossman and Rallis (2003) expand on this notion by suggesting that qualitative research is reflexive and highly interactive, which implies the data are interpreted through complex cognitive processes within the researcher. According to Guba and Lincoln (1981), when researchers are heavily involved in data collection and interpretation, they can approach the context with sensitivity and responsiveness, adapting techniques as needed, in addition to clarifying, and summarizing the evolving data (as cited in Merriam, 1998, p. 7). Thus, the role of the researcher in this study was to collect, clarify, and summarize data with reflexivity and sensitivity within the research setting.

Data Collection

One main interest in qualitative research is describing the value of a particular activity, situation, relationship, or material (Fraenkel & Wallen, 2006). To investigate the value of the oral readings by students with SLD, three data collection sources were employed: (a) documents, (b) assessments, and (c) interviews.

Documents

*School records.* To determine each student’s developmental reading level, assessment data in each student’s school records (e.g., cumulative folder or computer data base) was accessed. The purpose of accessing this data was to provide guidance in
selecting appropriately TLP and NOcT passages. In addition, the student’s intervention specialist was consulted to confirm the accuracy of assessment data that identified the student’s developmental reading levels.

*Researcher-generated documents.* Once the developmental reading level of each student was determined, the researcher met with him or her to elicit additional information using researcher-generated documents (Merriam, 1998). Researcher-generated documents are documents prepared by the researcher to “describe the situation, person, or event being investigated” (p. 119). The researcher-generated documents in this study included reading passages, reading probes, oral reading scoring aid, and a miscue data coding form to assist in the data collection during the oral readings, field notes to record spontaneous verbal and nonverbal expressions, and a data collection sheet for the interviews.

**Assessments**

*3-Minute Reading assessments.* The 3-Minute Reading Assessments (3-MRA; Rasinski & Padak, 2005) is a set of assessments that provide classroom teachers and specialists a method of obtaining valid diagnostic information about students’ reading achievement. These assessments “can be used to measure a child’s progress and identify areas of strength and concern” (p. 6). There are scoring and interpretation guides for the three major areas covered by the assessments: (a) word recognition accuracy, (b) fluency (automaticity and expression) and (c) comprehension.

Each text includes grade-level passages organized by topic (family outings, foods, extreme weather, unique individuals), with one passage for each topic. Each grade level
has four equivalent forms or passages with different topics of the same readability level. The process for developing the passages first included selection of topics the authors thought would be age-appropriate, familiar to most students, and contain no cultural bias. To insure the consistency of themes, the authors then developed passages for each form at each grade level according to topic (Padak, personal email communication, January 6, 2011).

To determine grade-level accuracy, each passage underwent both the Fry Readability Scale (1968), and either the Spache Readability Formula (1953) for Grades 1-3 or the Dale-Chall Grade Level Index (1995) for Grades 4 and above. Furthermore, six classroom teachers field-tested the passages, providing additional ecological validity.

Data were collected on each student’s oral reading in three areas: (a) word recognition accuracy (decoding), (b) fluency (automaticity and expression), and (c) comprehension. In the 3-MRA, word recognition accuracy indicates the student’s ability to read words correctly. Reading fluency-automaticity indicates a student’s reading rate. Reading fluency-expression indicates a student’s ability to read words in four areas: (a) expression and volume, (b) phrasing and intonation, (c) smoothness, and (d) pace (Zutell & Rasinski, 1991). Last, comprehension indicates the student’s ability to recall what was read in the passage in relation to the quality of detail recalled about the main ideas and supporting points, as well as connections made to other texts or the students’ world outside the text.

Data was collected on the students’ oral reading using these 3-MRA scoring tools for both the leveled NOcT and TLP included in the 3-MRA. The 3-MRA scoring guide
was selected for both passages so comparisons could be made among students’ reading performances using the leveled NOcT and the TLP.

The student read one passage of NOcT, specifically a fiction or nonfiction passage from *Highlights* magazine in its original form, and one TLP from the 3-MRA booklet. The student was given a choice (Zemelman, Daniels, & Hyde, 2005) of which passage to read first. The students read both passages in one sitting.

*Naturally Occurring Texts (NOcT).* Glasswell and Ford (2010) argue that even though assigning a grade level to most naturally occurring texts (NOcT) is difficult, this factor should not be a deterrent in the use of NOcT in the classroom. Opitz, Ford, and Zbracki (2006) also state that magazines, newspapers, and real-life texts (e.g., manuals, travel guides, and brochures) can benefit students who struggle to read.

For this study, several different NOcT publications were considered for use during the oral readings, such as child-oriented magazines (i.e., *Ranger Rick, National Geographic Kids, Sports Illustrated Kids, Highlights, Highlights Vacation*), content- or age-appropriate travel guides (e.g., *Travel Planner: Lake Erie Islands Region*), and brochures (e.g., *Cedar Point*). Most of the NOcT considered for this study were written at readability levels that were considerably higher than the developmental reading levels of the participants in this study. Therefore, *Highlights* magazine was the only NOcT used in this study, because it included texts with a range of readability levels. In addition, using one publication in this study eliminated the possibility of different publications’ text format and structure to hinder the meaning-making process and comparison of data across cases. *Highlights* magazine was chosen because it typically includes a wide range of leveled passages about topics which children most prefer to read, namely science,
animals, sports and literature (Sturm, 2003). In addition, *Highlights* magazine is published specifically for ages six through 12, a range which included the ages of participants in this study.

According to Goodman, Watson, and Burke (1987) instructional materials for young children are typically short in length. Furthermore, when selecting materials, the predictability of the language and structure of the text, difficulty of the concept load, and relevance of the material to the reader are of critical importance and must be considered. These criteria were especially relevant to this study, because the participants were young and had difficulty with reading. Therefore, the length of the NOcT was about 200 words.

To determine appropriate grade-level readability, the first 200 words of each NOcT text used underwent a readability analysis using the Fry Readability Scale (1968), and either the Spache Readability Formula (1953) for Grades 1-3 or Dale-Chall Grade Level Index (1995) for Grades 4 and above. The estimated readability levels of the NOcT passages were generated using a web-based tool from *Intervention Central* called “Oral Reading Fluency Passage Generator” (http://www.interventioncentral.org/index.php?option=com_content&view=article&id=192; Wright, 2011). This passage generator has the ability to generate readability levels for grades 1-3 using the Spache Readability Formula (Spache, 1953) and for Grades 4 and above using the Dale-Chall Grade Level formula (1995). The Fry (1968) estimated readability levels of the NOcT passages were generated for all the NOcT using a web-based tool called *The Fry Readability Program* (http://www.educational-psychologist.co.uk/fry_readability_program.htm). This website only generates the Fry readability level.
The initial passages that were selected were one grade level above each reader’s determined developmental reading level in order to challenge the readers’ strategies but not too difficult that they could not continue reading independently (Goodman, 2003c; Goodman, Watson, & Burke, 1987). However, during the first reading for both grade levels, it was determined that the initial passages were not difficult enough, because the students made considerably less than the 25 miscues that were needed to “give an in-depth, well-rounded description of the reader’s strategies” (Goodman, Watson, & Burke, 1987, p. 37). As a result, three third-grade participants read passages two grade levels above their developmental reading level, and all the fourth grade students read passages three grade levels above their developmental reading level. Although efforts were made to select passages relating to science, animals, sports, or literature (Sturm, 2003), the topic and genre were secondary factors that influenced passage selection. The topics of the passage were selected only in the context of a predetermined readability level.

**Miscues**

In addition to the data collected with the 3-MRA, miscue data were collected. Miscued words occur when a reader deviates from the text during oral reading in a way that affects comprehension of a passage. According to Goodman (1969), miscues are not “random,” but occur as a result of semantic, syntactic or graphophonic error as a reader is attempting to make sense of a text. Miscues are influenced by a number of complex factors, including the different cueing systems and the reader’s known reading strategies, life experiences or prior knowledge of a topic (Goodman, 2003b). According to Harris and Hodges (1995), miscues “provide a rich source of information for analyzing language
and reading development” (p. 155). In this study, the Reading Miscue Inventory: 
Alternative Procedures (RMI; Goodman, Watson, & Burke, 1987) was used to collect 
data while listening to the audio-recordings of the oral readings. The RMI enabled the 
researcher to identify the different types of miscues readers made while reading the 
NOcT and TLP.

The RMI lists four miscue analysis procedures, of which Procedure I was used for 
this study. Procedure I is intended for individuals such as researchers, reading specialists 
and special education teachers who want in-depth knowledge of how the student makes 
meaning while reading. The RMI Procedure I (Goodman, Watson, Burke, 1987) 
“examines the reader’s use and control of language systems and reading strategies while 
reading orally” (p. 75). This procedure has a specific marking system for recording 
miscues while a student reads aloud. For example, there is a specific mark for when a 
student substitutes a word for the actual word in the text (e.g., “there” for “where”), omits 
a word (e.g., the student does not say the word “in” within the text), inserts a word not 
actually within the text, and repeats words, phrases or entire sentences. This procedure 
describes how to select, code, number, analyze, and summarize miscues. Steps for 
retelling are also included.

Interviews

According to Rossman and Rallis (2003), interviewing takes a researcher into “the 
participants’ worlds, at least as far as they can (or choose to) verbally relate what is on 
their minds” (p. 180). In this study, the researcher interviewed students using an 
“interview guide” approach. In this approach, the researcher asked open-ended questions
with a request for the participant to elaborate. The purpose of this approach was for the participant to construct his or her personal view of the phenomenon without being influenced by how the researcher viewed it.

In the current study, there were three different interviews. The first interview had two parts. Before reading both texts, the researcher asked the student to identify which text he or she preferred to read first. Then, after each reading, the student was asked which text was more interesting. These questions were followed by a probing question that inquired why that type of text was chosen (Appendix B). The responses were audio-recorded and transcribed near verbatim on a response sheet within 24-hours.

The second and third interviews occurred the day after the oral readings. The students participated in a more in-depth interview (Appendix C), which was an adaptation of an interview protocol developed by Livingston (2006), regarding students’ perceptions of different types of texts and thoughts on their potential use for assessment in the classroom. The researcher prompted students with probing questions such as, “Tell me more about that.” There were 11 questions.

The *Burke Reading Inventory* (1987; Appendix D) was used in the third interview. This interview had 10 original questions, and one supplemental question. The purposes of this interview were to elicit information on strategies employed by each student while reading, provide insight about how the student viewed himself or herself as a reader, and determine how each student conceptualized the reading process. The third interview took place immediately after the second interview. Both were audio-recorded and transcribed within 24-hours.
Field Notes

According to Rossman and Rallis (2003), field-notes are critical in the data collection process to systematically record impressions, insights, and emerging hypotheses, which compliment other data sources. The oral readings were video-taped in order to record the students’ spontaneous verbal and/or nonverbal expressions. These behaviors included facial expressions, body language, body movements, and affective or colloquial verbal expression not directly a part of the oral reading passage but that occurred while the students orally read. The video-recordings were transcribed into field-notes within 24-hours to be sure observations were clarified.

Rossman and Rallis (2003) state that “observation is fundamental to all qualitative inquiry” (p. 94). Merriam (1998) suggests that “observational data represent firsthand encounters with the phenomenon of interest” (p. 94). During the observations, the researcher assumed the role of observer as participant. Merriam (1998) describes the researcher in this role as one whose activities are known to the group and the level of information revealed is controlled by the group members. The observational data collected helped the researcher understand the complexity of the social setting.

Data Analysis

Data analysis is the complex and ongoing process of finding meaning in the data to describe the central phenomenon under study (Creswell, 2002; Merriam, 1998). According to Grbich (2007), data analysis in qualitative research involves “focusing on how social, cultural, and political events and individual and group understandings shape what is said and written, and how these influences can be ‘tracked’ throughout multiple
data sources” (p. 108). This tracking of the influences upon the data requires the inquirer to move between inductive and deductive reasoning to consolidate, reduce, and interpret the data for emergent themes and patterns (Merriam, 1998, p. 178). According to Creswell (2002) and Merriam (1998), this iterative and dynamic process of data analysis enables the inquirer to situate the findings within larger, more abstract meanings and form models and theories that explain the data.

The overall goal of data analysis in this study was to generate grounded theory. The grounded theory approach emerged more than 50 years ago from two researchers, Barney Glaser and Anselm Strauss (Grbich, 2007; Merriam, 1998). This theory has two purposes. First, researchers use frames of reference to investigate and reconstruct the context of an everyday setting. The second purpose of grounded theory is to provide a method for analyzing qualitative data that is rigorous and “meticulous” (Grbich, 2007, p. 71). Thus, grounded theory involves generating a substantive theory (Merriam, 1998) or substantive schema (Grbich, 2007), in which relationships can be determined among the essential, independent categories derived from the study.

According to Grbich (2007), grounded theory is best suited to research related to observing the interaction between a case and its environment, especially when there is little evidence of the case in current research. Thus, there may be a need for “new theoretical explanations, which are built on previous knowledge to explain changes in the field” (p. 70). The current study sought to generate a new theory to describe how students with SLD make meaning while orally reading TLP compared to NOcT.

The first phase of data analysis using grounded theory involves bringing all the information about the case together and comparing one segment of the data with another
segment of the data, until all the data have been compared with each other. This widely used process, known as the constant comparative method (Glaser & Straus, 1967), is one in which the researcher continually “holds a conversation with the data” (Merriam, 1998), in order to identify differences and similarities within and among data sources (Glaser & Straus, 1967). These differences and similarities then lead to the development of codes or categories, and their subsequent properties, all of which must be related to the research questions. Next, the codes are evaluated for broad domains, which, through inferential reasoning, will “lead to a theory explaining the kind of behavior under observation” (p. 36).

In this study, the observation field notes, oral reading scores, retellings, interviews, and miscue analysis assessments each represent data sources from which segments of one case (i.e., Student 1) were constantly compared (Glaser & Straus, 1967) with the same segment of another case (e.g., Student 2).

The ultimate goal of this study was for the researcher to develop a theory of how students with SLD make meaning while reading leveled NOcT passages, particularly when compared to their reading of TLP. During this grounded theory approach to making sense of the data, the researcher used an inductive approach to formulating a new theory. However, the researcher also used a deductive strategy when needed to validate the categories against the data (Glaser & Straus, 1967).

Data in the observation field notes and interviews were coded as themes emerged. Data from the assessment rubrics (Rasinski & Padak, 2005) used for both the NOcT and TLP were examined in order to identify specific meaning-making skills demonstrated by these students. The data was then compared for differences and similarities across cases.
The data in the miscue analysis was coded according to the \textit{a priori} code list already established in the RMI procedures. To efficiently reduce and refine the categories and move toward the development of a new theory (Merriam, 1998), the researcher in this study maintained passivity while receiving the data and minimizing personal predilections while interpreting the data (Glaser, 2002).

\textit{Assessments}

The \textit{Administration and Scoring Aids} template in the 3-MRA (Rasinski & Padak, 2005) provided guidance for measuring three main areas of oral reading: (a) word recognition accuracy, (b) fluency (automaticity and expression, and (c) comprehension. Word recognition accuracy (decoding) and fluency-automaticity were measured according to standardized national benchmarks. For example, one’s word recognition accuracy (decoding) was the number of words read correctly divided by the total number of words. The resulting percentage was compared against a range in percent which aligned with what are known as an “Instructional Reading Level” or “Independent Reading Level.” A student’s fluency-automaticity was the number of words read in one minute. The total number of words read was compared to nationally normed standards of what a typical student in grades one through eight read in the fall, winter, and spring.

Fluency-expression and comprehension were measured according to rubrics (Appendix E). Fluency-expression was broken down into four components: (a) expression and volume, (b) phrasing and intonation, (c) smoothness, and (d) pace (Zutell & Rasinski, 1991). Each of these components was rated on a scale of one through four according to established criteria. The ratings were then totaled for a score out of a
possible 16. Comprehension was measured by asking a student to retell what he/she remembered from the passage. The student was then assigned a score between one and six using a rubric with graduated criteria. For example, a student would receive a score of “1” if he or she had “no recall or minimal recall of only a fact or two from the passage,” a student would receive a “6” if the “recall was a comprehensive summary of the passage, presented in a logical order and/or with a robust set of details, and included a statement of the main idea. [The] student also makes reasonable connections beyond the text, such as to his or her own personal life or another text” (p. 12). All the data collected from these assessments were analyzed for patterns across cases.

Miscue Analysis

In addition to the scoring instruments from the 3-MRA, each oral reading transcript underwent a miscue analysis assessment. In 1969, Goodman conducted an extensive study of oral reading miscues. He found that all expected responses to text and unexpected responses to text, or miscues, are “cued” by the thoughts and language of the reader, who attempts to construct meaning from the text. Goodman’s (1969) insistence that nothing in the reading process is accidental ushered in revolutionary changes in reading theory.

From Goodman’s (1969) research, it became clear that miscued words are not random. From a psycholinguistic perspective, Goodman argued that during the act of reading, a reader is attempting to construct meaning through the simultaneous integration of three fundamental “cueing” or information systems: semantic, syntactic and graphophonic (Goodman, 1969). “Semantic” or meaning-based cues rely heavily on a
reader’s schemata (i.e., cumulative prior knowledge and experience). “Syntactic” or structural cues rely heavily on a reader’s access to the grammatical structures within a passage. “Graphophonic” or visual cues rely heavily on a reader’s knowledge of sound-symbol relationships (e.g., phonics). As a reader navigates these cueing systems within a sociocultural context and for particular purposes, he/she predicts potential meanings. Proficient readers then confirm those predictions by continually monitoring their accuracy (Weaver, 2002). Goodman’s psycholinguistic perspective on reading as a reader-centered constructive process of meaning making is widely accepted today (Weaver, 2002).

During attempts to construct meaning using the semantic, syntactic and graphophonic cueing systems, all readers’ predictions will sometimes result in “miscues” (Goodman, 1969; Weaver, 2002). These miscues typically involve the omission, substitution, or insertion of words. In addition, the prediction-confirmation process may also result in a reader’s self-correction of a miscue. Similarly, a reader may also reconstruct the text during a reading event but not change its meaning. A reader may miscue by identifying the wrong word (e.g., “mom” instead of “mother”), but the substituted word may not have altered the meaning of a passage. Similarly, a particular miscue may disrupt the structure of a text, but substitute other words that restore the grammatical structure.

Miscue analysis posits that both expected responses and miscues are logical. The critical difference among readers then, is in the quality of the miscues (Vacca, et al 2003; Weaver. 2002). Therefore, understanding how miscues relate to expected responses allows educators to understand which cues the student employs, ignores, or under
employs in the reading process (Goodman, 2003c; McKenna & Stahl, 2003). The nature
of a miscue analysis may lead to significant insights about how reading is developing in a
student and indicate the specific type of instruction a student may need to support his or
her reading development (McKenna & Stahl, 2003).

By examining major findings in the extensive miscue analysis research, McKenna
and Stahl (2003) have identified key insights regarding the miscue analysis process.
First, as children mature substitutions become more common. Substitutions gradually
become more sophisticated, bearing greater phonic resemblance to the actual word.
Second, the reliance on context is heaviest for beginning readers and older poor readers.
Third, repetitions can be a sign of comprehension monitoring. These findings present
much more information than data from a pencil-and-paper test score (Watson & Henson,
1994). Therefore, the robust amount of information that can be gathered from miscue
analysis supports the nature of qualitative research in the current study.

In the miscue analysis of this study, miscues were marked using codes to indicate
how the words deviated from the text. Each miscue had its own markings which
represent where the student has been cued or influenced by print. These markings were
classified as semantic, syntactic, or graphophonic (Goodman, 2003f). Next, the
classifications of observed versus expected responses to text were analyzed to determine
how effectively and efficiently readers used the language systems and reading strategies
to construct meaning (Martens, 2002; Weaver, 2002).

The miscues collected using the RMI Procedure I (Goodman, Watson, & Burke,
1987) were analyzed to reveal the complexity of the students’ reading process related to
the syntactic and semantic dimension of language and graphophonic (i.e., print and
sound) cues as they read. Syntactic miscues alerted the researcher to whether or not the student accessed appropriate grammatical structures. Syntactic miscues, therefore, relate to the degree to which the sentence sounds like language. To determine whether a miscue was related to syntax, the researcher asked, “Does it sound like language?” (p. 62).

Above all, when analyzing miscues a researcher must ask whether the miscue altered the basic meaning of a passage, keeping in mind that “miscues can produce syntactically acceptable sentences that are structurally different from the expected text but still retain acceptability within the whole text” (p. 62). The semantic acceptability of a miscue depends on whether the student is producing understandable structures. The researcher in this study answered the question, “Does this sentence fit into the story as a whole?” (p. 63). Semantic acceptability is dependent upon and limited by syntactic acceptability. Furthermore, a sentence is always semantically unacceptable if it is syntactically unacceptable. Thus, semantic miscues alerted the researcher to how well the reader comprehended the meaning of a text.

The graphophonic system examines the relationship between the print cues and sound cues. Readers are able to anticipate a word by relating its physical characteristics to known items that look similar or by assigning sounds to various letters or letter combinations. In the RMI, the sound and graphic systems were evaluated separately. Only word-for-word substitutions were evaluated for both graphic and sound similarity. When evaluating for sound similarity, the researcher looked to see if the reader was predicting the sound that came next in the passage based on any patterns in the text.
When evaluating for graphic similarity, the researcher was simply examining how similar the miscue looked like the actual text.

Finally, self-corrections were recorded. Self-corrections occur when the reader makes an initial miscue and then goes back to correct it. Self-corrections gave the researcher insight into which type of miscue was corrected most often by the reader: syntactic, semantic, or graphophonic. When readers correct syntactic miscues, they are concerned that their reading sounds like language. When readers correct semantic miscues, they are concerned that their reading makes sense. It is important to compare the miscues to the oral retelling to determine if the reader has constructed the meaning of the passage appropriately despite any glaring miscues.

Each type of miscue made by the student was evaluated according to the following criteria in the RMI: semantic acceptability (total, partial, or none), syntactic acceptability (total, partial, or none), correction, meaning construction (no loss, partial loss, or loss), grammatical relationships (strength, partial strength, overcorrection, weakness), graphic similarity (high, some, none), and sound similarity (high, some, none). The marks for each section were totaled and a percentage was computed for each category. The scores in each language system for each student were compiled to build a profile of the students to determine and analyze similarities and differences within the individual performance and among the cases in the study.

Retellings

Retellings involve a response to a story that allows the reader to “relive, rehearse, modify, and integrate their interpretations of the author’s message into their reality”
In this study, the retelling in RMI Procedure I were modified to only total 10 points (Appendix F). For narrative stories, 4 points are assigned for character analysis and 6 points for “events.” For expository texts, 4 points are assigned for specifics, 3 points for generalizations, and 3 points for major concepts. The points earned were totaled and a percentage was calculated.

Interviews

There were three student interviews in this study. All students in the sample participated in all three interviews. This first interview consisted of two main questions: “Which text do you want to read first?” and “Which text did you like better?” The students’ respective responses to the first question reflected text interest; the response to the second question reflected text preferences. Each response was followed by a prompt for an explanation why either the NOcT or TLP was chosen. The analysis of these questions required both quantitative and qualitative procedures. The main questions required a tally of the students’ responses, which provided a global perspective of the text interests and preferences of the students in this study. The probing questions were qualitative in nature and coded for emergent themes.

The second and third interviews occurred the day after the oral readings. All students participated in these interviews. Responses to the second interview, which involved asking students their perceptions of different types of texts, and the third interview, which involved the use of the Burke Reading Inventory (1987), were coded for emergent patterns and themes.
After they were analyzed independently, all data sources in this study were compared across cases. The analysis included arranging patterns in “relationship to each other in the building of a grounded theory” (Merriam, 1998, p. 18). The ultimate goal of the data analysis was to generate grounded theory about the strategies students with SLD used to make meaning while reading TLP compared to NOcT.

*Field Notes*

The field-notes taken from the video-taped oral readings which included students’ spontaneous verbal and/or nonverbal behaviors (e.g., body language, facial expressions, colloquialisms, affective statements or questions) exhibited while interacting with the traditional leveled passages and the NOcT were also coded for emergent themes and analyzed across cases.

*Validity*

Validity in qualitative research can be defined as the “extent to which the research uses methods and procedures that ensure a high degree of research quality and vigor” (Gall, Gall, & Borg, 2007, p. 657). According to Merriam (1998), the nature of qualitative research is inquiry and interpretation. Consequently, researchers must be able to trust the procedures and outcomes of a study. Thus, questions about validity, as well as reliability, can be answered through careful examination of how the data were collected, analyzed, and interpreted.

In this study, methods were used to increase the trustworthiness of the outcomes. First, the procedure of triangulation was used. Triangulation is defined as “using multiple investigators, multiple sources of data, or multiple methods to confirm the
emerging findings” (Merriam, 1998, p. 204). In the current study, the researcher collected multiple forms of data, including documents, interviews, and assessments, to describe students’ with SLD experience reading NOcT and TLP. Second, peer examination was used to enhance this study’s validity. Peer examination is defined by Merriam (1998) as “asking colleagues to comment on the findings as they emerge” (p. 205). In the current study, one expert each in the field of literacy and special education examined the oral reading data, miscue analysis and interview responses during the data collection process. When disagreements occurred with the oral reading data and interview data, the experts and researcher discussed the inconsistency until agreement was achieved. In addition, this study controlled for face validity using content experts to ensure the two researcher-developed interview questions covered the content the interviews intended to measure (Fraenkel & Wallen, 2006; Nevo, 1985). These critical steps were necessary to rule out validity threats and increase the credibility of the conclusions of this study (Maxwell, 2005).

Reliability

Merriam (1998) defines reliability as the “extent to which research findings can be replicated” (p. 205). In qualitative research, reliability is difficult, if not impossible, to achieve because human behavior is never “static” (p. 205). Therefore, the concern about reliability in qualitative research is whether or not the results are consistent with the data collected. To enhance the reliability of the current study, the researcher clarified her assumptions within the study (see “Assumptions” in Chapter One), explained her position within the group (see “Role of Researcher” in this chapter), and described the participants
and social context from which the data was derived (see “Research Setting” and “Participant Selection” in this chapter). An audit trail was kept, which gave a detailed account of the procedures of the study. The audit trail involved a detailed description of “how the data were collected, how the categories were derived, and how decisions were made throughout the inquiry” (Merriam, 1998, p. 207).

Limitations of the Study

According to Gall et al (2007), methodological limitations may occur in the sampling procedures, instrumentation, data collection, and data analysis. Hence, a study’s limitations will affect its reliability and validity. One limitation of this study was that students were interviewed and asked to orally read over a period of one week. There were no long-term observations to increase the reliability of the case study findings.

A second limitation of this study involved the sample. The intent of using a purposeful sample in this study was to achieve an “in-depth understanding” of the situation (Gal et al, 2007; Merriam, 1998). The sample included a particular group of third and fourth-grade students within a specific location. However, as with many case studies, universals cannot be extracted from the particular (Merriam, 1998). Because of this, findings from this study cannot be widely generalized.

Summary

This study was a qualitative case study that employed a descriptive, cross-case (Miles & Huberman, 1994) or multi-case (Fraenkel & Wallen, 2006) design. This type of design respects each case while investigating commonalities or patterns between the cases. The current study sought to compare and explain how students with SLD make
meaning while orally reading leveled passages, from both traditional and naturally occurring texts.

Participants in this study were selected using nonrandom, purposeful sampling, holding to the criteria for selection as students with SLD in the third and fourth grades. The students were asked to orally read print passages from TLP and leveled NOcT, as well as participate in interviews.

The data sources in this study included documents, assessments, and interviews. Data were collected over a period of one week. The results of the oral readings were analyzed using miscue analysis procedures, rubrics for the retellings, and scoring aids for fluency (automaticity and expression), accuracy, and comprehension. To increase validity and reliability, the researcher used triangulation, peer examination, and content experts. The data was analyzed using a constant comparative method, and subsequently, grounded theory emerged. The findings, conclusions, and implications of this study are reported in the following chapters.
CHAPTER IV
RESULTS OF THE STUDY

The purpose of this study was to explore how elementary students with specific learning disability (SLD), who typically struggle with reading, make meaning while reading traditional, leveled passages (TLP) and leveled naturally occurring text (NOcT) passages orally. The results presented in this chapter come from analysis of data collected in relation to the three guiding research questions for this qualitative study:

1. When assessed using leveled texts identified as “naturally occurring” (NOcT) in students’ daily lives, how do students with a specific learning disability (SLD) construct meaning from print?

2. When assessed using an informal reading assessment with traditional, leveled passages (TLP), how do students with a specific learning disability (SLD) construct meaning from print?

3. When assessed with both traditional, leveled passages (TLP) and naturally occurring texts (NOcT), what similarities or differences emerge in the meaning-construction patterns of two students with a specific learning disability (SLD)?

Data sources included documents, assessments, and interviews. Upon completion of data collection, qualitative analysis procedures were used to identify common themes across data sources. Specifically, the researcher used miscue and retelling data from the Reading Miscue Inventory (RMI) by Goodman, Watson, and Burke (1987), as well as
retelling data from the *3-Minute Reading Assessment* (3-MRA) by Rasinski and Padak (2005) as the primary data sources to analyze how students made meaning using the different types of text.

To deepen her understanding of the findings from these data sources, the researcher analyzed data from three additional sources: (a) the 3-MRA reading accuracy and fluency data, (b) student interview responses, and (c) field notes recorded during and immediately after each individual assessment. The field notes documented students’ spontaneous verbal and/or nonverbal behaviors (e.g., body language, facial expressions, colloquialisms, affective statements or questions) exhibited while interacting with the traditional leveled passages and the NOcT. While the researcher collected data on all students in this study, two students were selected for in-depth analysis.

In this chapter, each research question is addressed separately. The first two research questions are addressed by a presentation of the common themes that emerged across cases related to each type of text, illustrated by pertinent examples drawn from the data. The third research question is addressed by a with-in case analysis of two students, which provides an in-depth perspective of the similarities and differences in the meaning-making process for students with SLD while reading TLP and leveled NOcT. The goal of this discussion is generation of grounded theory.

**Constructing Meaning while Reading NOcT**

The first research question asked how students with SLD construct meaning from print while reading NOcT. To investigate this question, the participants in this study were given one passage from *Highlights* magazine at their approximate developmental
reading level. Table 1 shows the title of the leveled NOcT passage each student read. Three of the four third grade students read the same passages; the developmental reading level of the student who did not read the same passage was lower than the others. All of the fourth grade students read the same passage.

Table 2 shows each student’s individual scores for Meaning Construction and Grammatical Relations with NOcT, as well as the average score across cases. According to Goodman, Watson, and Burke (1987), the Meaning Construction score reflects the reader’s attention to making sense of the text in relation to the expected meaning. This score considers the level of semantic acceptability, meaning change, and correction of the miscues. The Grammatical Relations score indicates the “reader’s ability to integrate concern for producing sentences that are syntactically acceptable, semantically acceptable, and/or corrected” (p. 100). The 71% mean (n = 8) of combined Strength (+) Partial Strength Grammatical Relations scores indicates the students frequently produced fully or partially syntactically acceptable sentences. The Grammatical Relations score indicates the students were attending to the “sound” of their reading (i.e., that their reading sounds like the English language), rather than the “meaning” they were making.

Nearly half the miscues in the sentences were semantically unacceptable, however, as evidenced by the 48% average (n = 8) Loss of meaning. Of the first 25 miscues coded, the students with SLD had an average of 11 miscues, with a range of 6-13, that were coded as having a Loss of meaning. These scores indicate that while the students were able to construct some meaning from the NOcT, constructing meaning was not their primary goal while reading.
Table 1

**NOcT (Highlights magazine) by student**

<table>
<thead>
<tr>
<th>Student</th>
<th>Title of Passage</th>
<th>Author</th>
<th>Date</th>
<th>Dale-Chall Readability (grade level)</th>
<th>Fry (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>Dazzling Dave Spins Delight</td>
<td>Cheryl Weibye Wilke</td>
<td>May 2011</td>
<td>5-6</td>
<td>11</td>
</tr>
<tr>
<td>Student 2</td>
<td>Dazzling Dave Spins Delight</td>
<td>Cheryl Weibye Wilke</td>
<td>May 2011</td>
<td>5-6</td>
<td>11</td>
</tr>
<tr>
<td>Student 3</td>
<td>Blue Line</td>
<td>Kost Dagmar</td>
<td>March 2011</td>
<td>3.98*</td>
<td>8</td>
</tr>
<tr>
<td>Student 4</td>
<td>Spreading the Word About Birds</td>
<td>Cheryl Weibye Wilke</td>
<td>May 2011</td>
<td>5-6</td>
<td>11</td>
</tr>
<tr>
<td>Student 5</td>
<td>Spreading the Word About Birds</td>
<td>Melanie Meehan</td>
<td>April 2011</td>
<td>7-8</td>
<td>14</td>
</tr>
<tr>
<td>Student 6</td>
<td>Spreading the Word About Birds</td>
<td>Melanie Meehan</td>
<td>April 2011</td>
<td>7-8</td>
<td>14</td>
</tr>
<tr>
<td>Student 7</td>
<td>Spreading the Word About Birds</td>
<td>Melanie Meehan</td>
<td>April 2011</td>
<td>7-8</td>
<td>14</td>
</tr>
<tr>
<td>Student 8</td>
<td>Spreading the Word About Birds</td>
<td>Melanie Meehan</td>
<td>April 2011</td>
<td>7-8</td>
<td>14</td>
</tr>
</tbody>
</table>

*Note. Blue Line was leveled using the Spache Readability Formula (1953).*
Table 2

RMI meaning construction and grammatical relations with NOcT

<table>
<thead>
<tr>
<th>Student</th>
<th>No Loss (+)</th>
<th>Partial Loss</th>
<th>Loss</th>
<th>Strength (+)</th>
<th>Partial Strength</th>
<th>Over-correction</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>54%</td>
<td>45%</td>
<td>73%</td>
<td>0%</td>
<td></td>
<td>18%</td>
<td></td>
</tr>
<tr>
<td>Student 2</td>
<td>52%</td>
<td>48%</td>
<td>64%</td>
<td>0%</td>
<td></td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Student 3</td>
<td>60%</td>
<td>40%</td>
<td>60%</td>
<td>0%</td>
<td></td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Student 4</td>
<td>67%</td>
<td>33%</td>
<td>89%</td>
<td>0%</td>
<td></td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Student 5</td>
<td>41%</td>
<td>59%</td>
<td>72%</td>
<td>0%</td>
<td></td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Student 6</td>
<td>48%</td>
<td>52%</td>
<td>68%</td>
<td>0%</td>
<td></td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Student 7</td>
<td>44%</td>
<td>56%</td>
<td>68%</td>
<td>0%</td>
<td></td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Student 8</td>
<td>52%</td>
<td>48%</td>
<td>76%</td>
<td>0%</td>
<td></td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>52%</td>
<td>48%</td>
<td>71%</td>
<td>0%</td>
<td></td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>

Miscues that were coded as *Loss* were semantically unacceptable, with no correction, an unsuccessful attempt at correction, or partially acceptable but with no attempt at correction (Goodman, Watson, & Burke, 1987). This type of miscue suggests the student did not make full meaning from the word in the context of the sentence or passage. For example, in the NOcT passage “Spreading the Word About Birds” (Meehan, 2011), lines 9-10 say:

As the partygoers were leaving, Mr. Appell asked David if he would like to come back as a volunteer.
Student 6 read the sentence

As the *partygloves* were leaving, Mr. Appell asked David if he would like to come back as a volunteer.

In this sentence Student 6 said the word *partygloves* in place of *partygoers*.

While this miscue has grammatical strength because it “sounds” like real language and is grammatically acceptable, *partygloves* does not make sense in the context of either the sentence or the passage. This miscue was coded as a *Loss* of meaning.

Moreover, since the goal of this study is to determine students’ meaning construction with two different kinds of texts, data analysis focused on the quality, not the number, of miscues that were semantically unacceptable in order to generate patterns and build a theory about the research questions. A closer look across cases at those miscues coded as *Loss* provides insight into the strategies and language cues students with SLD *do* utilize while attempting to construct meaning while reading NOcT. From this analysis several themes emerged.

*Strength of Grammatical Relations*

According to Goodman, Watson, and Burke (1987) by sampling the syntactic, semantic, and graphophonic systems of a text, the reader is able to make predictions prior to and during the reading event. They further observe that, “…making inferences or guessing involves risk taking because doing so may result in inappropriate predictions. Nevertheless, inferencing and guessing are absolutely necessary for reading to occur” (p. 31). After these students initiated a reading event, they immediately sampled or selected
pieces of the print to which they would attend. This print may have been the title, subtitles, bits of a passage, and pictures.

The first theme to emerge from the data was the high percentage of accurate Grammatical Relations students with SLD produced while reading NOcT. This emphasis suggests that the students made efficient syntactical predictions (i.e., their syntactical predictions “sounded” like the language they speak). For example, in “Spreading the Word About Birds” (Meehan, 2011), lines 11-12 say:

David began volunteering at the sanctuary on weekends and vacations, feeding the birds and conducting tours.

Students 6 read it this way:

David began volunteering at the sinister on weekends and on vacations, feeding the birds and conducting tours.

In this same passage, lines 17-18 say:

He now speaks with great knowledge about how hummingbirds pollinate flowers, how finches scatter seeds, and how birds of prey capture rodents.

Student 5 read it this way:

He now speaks with great knowledge about how hummingbirds pollit flowers, how fiches scatter seeds, and how birds of prey capture rodents.

Both cases produced observed responses to the text that were nonsense words. These nonsense words were read in a manner that fit the grammatical structure of the sentence. (The word sinister was considered a nonsense word because the student’s intonation suggested the word was read as a noun, which was syntactically acceptable.) Although, they were coded as a Loss of meaning, the students’ oral reading indicated they
had in fact predicted a correct grammatical relationship. Student 6 also inserted the preposition on, which is a pattern that fits the previous prepositional phrase. These observed responses were typical of other students with SLD in this study. The high Grammatical Relations compared to Meaning Construction indicates that students were more concerned about the text sounding like the English language than making sure the print made sense.

Not all miscues made by the students with SLD, however, were syntactically acceptable and semantically unacceptable. Sometimes the students produced “high-quality” miscues. This means that the miscue did not change the syntactic or semantic acceptability of the sentence. Most often the high quality miscues across the cases involved substitutions, such as articles (e.g., a for the) or pronouns (e.g., I for he), and insertions of pronouns or prepositions. A few students, though, made high quality miscues with content words and action verbs. For example, in the NOcT “Dazzling Dave Spins Delight” (Wilke, 2011), lines 3-4 say:

He spins about 13,000 yo-yo tricks each year.

Student 2 read it this way:

He spins about 13,000,000 yo-yo tricks each year.

In the NOcT “Blue Line” (Dagmar, 2011), line 8 says:

Tom patted the tape back down.

Student 3 read it this way:

Tom put the tape back down.
The high quality miscues ranged from two to nine, most often five or less, within the 25 miscues across cases. These miscues made by the students with SLD allowed them to keep the syntactical structure and construct some meaning from the passage.

*High Usage of Nonsense Words*

The high Grammatical Relations with nonsense words warrants attention. Among all students in this study, nearly half of each student’s miscues coded as *Loss* were the result of their use of nonsense words. Although most were syntactically acceptable, many of the nonsense words were substituted for high-utility content words. For example, in the NOcT passage “Dazzling Dave Spins Delight” (Wilke, 2011), lines 15-16 say:

But he also teaches the fundamentals of physics and why things spin.

Student 2 read it this way:

But he also teaches the *famiziels of fimps* and why things spin.

In the NOcT passage “Blue Line” (Dagmar, 2011), lines 5-6 say:

*Danny* had accidentally broken the wing.

Student 3 read it this way:

*Danny* has acried borking the word.

In both cases, the substitution of the first nonsense word caused a complete loss of meaning, which made it more difficult to predict and make meaning from the following content word or words in the sentence. These examples were typical of the other readers in this study. In the NOcT passage “Spreading the Word about Birds” (Meehan, 2011), the words *amphibians, ecosystem, sanctuary, Connecticut, pollinate,* and *Siberia* proved
to be difficult for most of the students. In “Dazzling Dave Spins Delight” (Wilke, 2011) several students with SLD experienced difficulty with *performs, passion, and fundamentals*. These words carry significant meaning in their respective passage.

When the content words were replaced with nonsense words, even though they were syntactically acceptable, the meaning-making process for these students was severely compromised. This reading behavior also indicates that students were not accessing their semantic cueing system by applying their prior knowledge or background experiences to prediction of the unfamiliar words. In essence, the students’ schemata were not being utilized. This frequent tendency to substitute nonsense words for the expected responses may have contributed to the high average number of miscues coded as *Loss* of meaning construction.

*High Graphophonic Similarity*

Another theme that emerged was the emphasis students with SLD placed on Graphic and Sound Similarity as they constructed meaning with NOcT. Table 3 shows individual and aggregate scores that indicate how reliant students were on Graphic and Sound Similarity. Moreover, these scores indicate that these students with SLD relied heavily on graphic information at the word level, as evidenced by the 94% mean (n = 8) *High (+) Some* Graphic Similarity. This means the students with SLD most often predicted what the word was by looking at its physical characteristics and relating those characteristics to known words. The students with SLD also relied heavily upon phonic or “sound” information when reading words, suggesting that the students with SLD were clearly attending to how much the miscue sounded like “real” language, although the
average score in *High (+) Some* Sound Similarity indicates that the students were slightly less reliant upon the miscues sounding like language than they were that the words look like words they know.

Table 3

*Graphic and sound similarity for NOC*T

<table>
<thead>
<tr>
<th>Student</th>
<th>Graphic Similarity</th>
<th>None</th>
<th>Sound Similarity</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>100%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Student 2</td>
<td>100%</td>
<td>0%</td>
<td>90%</td>
<td>11%</td>
</tr>
<tr>
<td>Student 3</td>
<td>86%</td>
<td>14%</td>
<td>82%</td>
<td>18%</td>
</tr>
<tr>
<td>Student 4</td>
<td>93%</td>
<td>7%</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>Student 5</td>
<td>94%</td>
<td>6%</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>Student 6</td>
<td>84%</td>
<td>17%</td>
<td>88%</td>
<td>13%</td>
</tr>
<tr>
<td>Student 7</td>
<td>96%</td>
<td>4%</td>
<td>95%</td>
<td>4%</td>
</tr>
<tr>
<td>Student 8</td>
<td>95%</td>
<td>6%</td>
<td>84%</td>
<td>17%</td>
</tr>
<tr>
<td>Average</td>
<td>94%</td>
<td>7%</td>
<td>89%</td>
<td>12%</td>
</tr>
</tbody>
</table>

*Weak Confirming Strategies*

According to Goodman, Watson, and Burke (1987), as readers make predictions about the syntactic and semantic structures of the text, they confirm or disconfirm their predictions according the meaning they have made of the text. When a miscue is made, a student may deem it as meaningful to the context of the passage and confirm the prediction by continuing to read. If, however, the miscue has changed the meaning, a
reader may take one or more of the following actions: (a) reread the sentence, phrase, or words and possibly self-correct, (b) pause and think through what has been read to reorganize or modify the predicted meaning, (c) read on to sample more text for additional information in order to gain clarification, and/or d) stop reading because the material is too simple, difficult, or no longer of interest (Goodman, Watson, & Burke, 1987). Comprehension, therefore, is largely the result of making meaning through accurate initial or modified predictions about the text being read.

According to Goodman et al. (1987), when readers correct miscues that are both syntactically and semantically unacceptable, they are concerned that their reading makes sense. In this study, though, the students with SLD infrequently reread a word, phrase, or sentence to correct (or attempt to correct) a miscue while reading NOcT. The students with SLD had a mean of 3.25 ($n = 8$) successful corrections (range from 0-7) out of 25 miscues. This number of successful corrections is small in proportion to the 25 coded miscues.

In the *Loss* of meaning miscues, six of the eight students made three or fewer attempts to self-correct miscues, resulting in a total of nine unsuccessful corrections. Most of the unsuccessful attempts were syntactically acceptable using nonsense words. When compared to the overall number of miscues, however, the high proportion of unsuccessful attempts demonstrate the students’ lack of effectiveness at constructing meaning from the text. Because of the high number of syntactically acceptable miscues, these behaviors provide additional evidence of the students’ emphasis on producing words that “sound” like spoken language while reading.
Student 6 paused for a significant amount of time on the word *amphibians.* Student 6 spent 43 seconds rereading parts of the word and parts of the sentence to try to predict it. He eventually said a nonsense word and then continued reading. Student 3 often paused to decode words by looking “at the different parts” of the word, a strategy that he had been taught in a private after school program. He spent approximately eight seconds or less on different words. Student 1 and Student 4 spent six seconds on the word *fundamentals.* Yet compared to the total number of miscues coded as Loss across cases, incidents of pausing to predict words were few. In fact, rather than self-correct or pause, the most utilized strategy by the students with SLD was reading beyond a miscue.

Although there is evidence that students with SLD did attempt to construct meaning by both successfully and unsuccessfully correcting miscues, those attempts were infrequent. In this study, the students skipped an average of three miscues before using a strategy to confirm or disconfirm what was read. Student 1 read beyond six and seven miscues, while the other seven students most often read beyond one and four miscues, occasionally reading beyond more than five. The behavior of reading beyond miscues suggests the students with SLD most often read word-by-word while reading NOcT, with the goal of accurate word identification rather than meaning construction. Consequently, they abandoned miscues where meaning was lost.

As noted earlier, only a small number of the 25 miscues that were coded for each student were considered high-quality miscues. Thus, the students with SLD displayed a tendency to read beyond a large number of low-quality miscues. Goodman et al. (1987) has attributed this tendency to read beyond low-quality miscues to a few potential behaviors. First, students may decide to read on to gather more information for
clarification. Second, students may not want to correct. In the school environment some students are willing to “read” when they are asked, although they do not comprehend (p. 33). Third, students may make corrections silently while reading. The following results of the retelling provide insight into the possible reason that these students with SLD most often chose to read beyond a miscue.

**Retellings**

After each student read, he or she was asked to give an unaided retelling and an aided retelling. The responses to the unaided and aided retellings were then used to determine the 3-MRA Comprehension score and the RMI Retelling score. The unaided retelling involved simply asking the students, “Would you tell me what the story was all about in your own words?” Although Student 4 was able to give a comprehensive summary with a robust set of logically ordered details, as well as a main idea, giving an unaided retelling of what was read was difficult for most of the students with SLD. With little prompting, five of the students could recall the main idea(s) of the passage with a few supporting details, which resulted in a score of three out of six on the 3-MRA comprehension rubric. Two students, however, had great difficulty recalling related or important facts, which resulted in a score of two or less. The mean \( \bar{x} = 2.63 \) across all students on the 3-MRA retelling was 2.63 out of six possible points.

When given a sequence of questions about the story in the aided retelling, all the students were able to provide more detail, yet the overall comprehension scores were still moderate. The students were asked a combination of questions, which prompted them to provide specific facts and generalizations about major concepts in the passages they had
The students had the most success with providing specifics facts, events, or details about what they read. Only two students scored less than three out of four on the rubric. The students were also successful at supplying generalizations (i.e., main ideas or topics of the passage), most often scoring two out of three on the rubric. Most students provided the generalizations first and then needed to be prompted in order to provide more specifics. For example, the questioning process for most of the students in the unaided retelling of the NOcT was similar to that of Student 1’s retelling of “Dazzling Dave Spins Delight” (Wilke, 2011):

Researcher:  Would you tell me what it was about in your own words?

Student 1:  [It was] about David yo-yoing and how he does it and he’s teaching kids how to do it because he’s the best at doing it.

Researcher:  Would you give me some examples of some of the things you just said?

Student 2:  He knows 103 tricks. He shows kids how to “walk the dog” and “cat walk”. And he shows them how to do the “tower.”

The student’s first answer to the question includes four of the main topics of the passage. Although some of Student 1’s specifics are not accurate, this student was able to extract enough meaning from the passage to generate a significant number of generalizations. Interestingly, when Student 1 was asked during the aided retelling, “What were the big ideas the author was talking about in the beginning, the middle, and the end?” she gave many more details. When probed to “put them all together” to make a big idea, however, Student 1 was not able to produce a big idea. This was a common behavior across most of the cases.
Furthermore, students demonstrated somewhat greater difficulty providing major concepts, which were views or positions abstracted from the generalizations. Three students scored one out of three, and four students scored two out of three. Overall, the mean \( (n = 7) \) on the RMI retelling was 70%. Student 8 read a NOcT passage that was fiction, so his scores stand alone. He struggled to recall the characters and the events of the story. Overall, his RMI retelling score was 50%.

It is significant that the moderate RMI retelling average score and the low 3-MRA retelling average score correspond to the weaker Meaning Construction average score in the miscue analysis. All three data sources indicate that when the students made a miscue, their observed behavior of reading beyond a miscue was to identify the correct words, but not necessarily in order to confirm or disconfirm their meaning. It may be that many of the students chose to read on simply because they did not want to correct the miscue. The moderate retelling scores also suggest that perhaps the students were adequately constructing partial meaning as they were reading, which did not necessarily evidence itself in observable behaviors.

When the students with SLD were asked if what they read made them think of anything they had read before, only one student said, “Yes.” The students were also asked if their mind had “wandered” while reading. All the students said, “No.” From the students’ responses to these two questions, it appears that the students’ attention was focused on the passage; therefore, it can be inferred that they were consciously attending to the print with the intended goal of constructing meaning. Perhaps the novelty of the topic or the vocabulary level of the passage hindered their effectiveness. This conclusion is supported by the students’ accuracy, fluency-automaticity, and expression scores. Five
of the eight students read the NOcT at a Frustration level, meaning they read words with 91% accuracy or less. All the students’ fluency-automaticity scores were nearly a full year or more below grade level; no one scored higher than 81% on the fluency-expression rubric.

Interestingly, the difficulty of the NOcT passage did not impact some students’ preference of this text. There were four students who said they preferred reading the NOcT over the TLP. Three of those four students made less meaning when reading the NOcT compared to the TLP. It appears that the content of the passage most influenced the students’ preference, not the difficulty of the passage. For example, Student 4 said he preferred the NOcT because he likes “to read about yo-yos.” Student 5 said she preferred the NOcT because “I like that anybody can work anywhere.” Student 7 said, “I like to read about birds once in a while.” In addition, when the students were asked in the In-Depth interview which text they believed was harder to read, five of the eight said NOcT. Yet, when they were asked which text they would like to read again, six of the eight said NOcT. Thus, it appears that the students knew the NOcT was more difficult to read. Yet, their collective interest in the text, not its difficulty, had the most influence on the students’ reading experience. It must also be considered, though, that the novelty among other factors may have also influenced this text preference.

The students’ attempts to construct meaning may also have been hindered by their lack of familiarity with the organizational structure of NOcT. For example, after Student 4 initially sampled the title, picture, subheadings, and columns of “Dazzling Dave Spins Delight” (Wilke, 2011), he asked, “Where do I start reading?” This unfamiliarity with the text may have been a common experience for several of the cases, because most of them
took a few seconds to scan the passage before reading it. Thus, when the students were
reading, they may have been attempting to make sense of the organizational structure of
the passage, as well as the content. In another case, when the Student 7 was asked, “Did
the pictures help or bother you?,” he said, “Bothered. I accidentally read [the caption
under the picture].” Although reading captions is a typical behavior when reading NOcT,
the location of the picture and its caption appeared to be a frustration for this student
because it interrupted the flow of his reading. These observations are supported by the
students’ lack of experience with NOcT. When students were asked if they had read
NOcT before, four students said “yes” and four students said “no.” Of the four students
who said yes, three said they did have NOcT in the classroom, although one student did
not recognize it as NOcT; two of the four said they read magazines in the non-school
environment. This data indicates that relatively few of the students had much experience
at all with this type of text in or outside of school. Therefore, the entire experience and
interaction with the NOcT was novel to half the students in this study and may have been
a factor that affected their scores.

Summary

Two big themes emerged from the data analysis of how students with SLD
constructed meaning while reading NOcT. First, students with SLD were most
concerned that their reading “sounded” like spoken language. This theme is evidenced in
the students’ emphasis on the Grammatical Relations of the words within the text.
Conversely, the students gave considerably less attention to the meaning of the text. The
emphasis on Grammatical Relations over meaning construction is evident in the students’
overuse of nonsense words while predicting unfamiliar content words, as well as the infrequent use of strategies to confirm or disconfirm miscues. Second, although the articles in the NOcT (except for “Blue Line”) were topics of interest typical of this age group (i.e., sports and science) (Sturm, 2003), interacting with NOcT was relatively new to many of the students who showed difficulty using their schemata (e.g., knowledge of textual structure) to predict unfamiliar content words. This may have been a contributing factor to the weak meaning construction across the cases. It can be concluded after analysis of all the data sources that these students with SLD were not effectively constructing meaning or efficiently reading the leveled NOcT.

Constructing Meaning While Reading Traditional, Leveled Passages (TLP)

The second research question asked how students with SLD make meaning while reading traditional leveled passages (TLP). This question was explored by giving each student a passage (TLP) from the 3-MRA booklet to read orally. The TLP was selected for each student based on his or her developmental reading level and the available topics. Table 4 shows the different TLP each student read. The third grade students, Students 1 through 4, read the same passage, except for Student 3. This student’s developmental reading level was lower than that of the others. The fourth grade students, Students 5-8, read the same passage. (N.B.: The TLP do not have titles, so a title was generated for each passage for the purposes of this discussion.)

Table 5 shows the Meaning Construction and Grammatical Relations with TLP scores for each individual student and the average across cases. The scores show that the students produced sentences that were fully or partially syntactically acceptable,
evidenced by the 62% mean (n = 8) combined Strength (+) Partial Strength Grammatical Relations score. However, 43% (n = 8) of the miscues in the sentences were semantically unacceptable. This score indicates that the students did not construct meaning from a large portion of the miscues. Of the 25 miscues that were coded, the students with SLD had an average of 10 miscues, with a range of 6 to 14, which were coded as Loss of meaning. It should be noted that two third-grade students and one fourth-grade student made fewer than 25 miscues on the TLP. The number of miscues coded as Loss in the TLP, then, suggests that overall the students did not construct meaning from many of the words in the context of the sentence or passage.

Table 4

TLP passage by student

<table>
<thead>
<tr>
<th>Student</th>
<th>Topic of Passage</th>
<th>3-MRA Readability Level &amp; Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>County Fair</td>
<td>Grade 5: Form A</td>
</tr>
<tr>
<td>Student 2</td>
<td>County Fair</td>
<td>Grade 5: Form A</td>
</tr>
<tr>
<td>Student 3</td>
<td>Milk</td>
<td>Grade 3: Form B</td>
</tr>
<tr>
<td>Student 4</td>
<td>County Fair</td>
<td>Grade 5: Form A</td>
</tr>
<tr>
<td>Student 5</td>
<td>Fishing Trip</td>
<td>Grade 7: Form A</td>
</tr>
<tr>
<td>Student 6</td>
<td>Fishing Trip</td>
<td>Grade 7: Form A</td>
</tr>
<tr>
<td>Student 7</td>
<td>Fishing Trip</td>
<td>Grade 7: Form A</td>
</tr>
<tr>
<td>Student 8</td>
<td>Fishing Trip</td>
<td>Grade 7: Form A</td>
</tr>
</tbody>
</table>
Table 5

*RMI meaning construction and grammatical relations with TLP*

<table>
<thead>
<tr>
<th>Student</th>
<th>Meaning Construction</th>
<th>Grammatical Relations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Loss (+)</td>
<td>Loss</td>
</tr>
<tr>
<td>Student 1</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Student 2</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Student 3</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Student 4</td>
<td>70%</td>
<td>29%</td>
</tr>
<tr>
<td>Student 5</td>
<td>48%</td>
<td>52%</td>
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<tr>
<td>Student 6</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Student 7</td>
<td>56%</td>
<td>44%</td>
</tr>
<tr>
<td>Student 8</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>Average</td>
<td>57%</td>
<td>43%</td>
</tr>
</tbody>
</table>

Several of the students’ miscues illustrate the loss of semantic acceptability. For example, in the passage “Fishing Trip,” lines 22-23 say:

I am anxiously awaiting next year already.

Student 7 read it this way:

I am extresially awaiting next year already.

In the passage “County Fair,” lines 25-26 say:

She got so much powdered sugar on her face that she looked like a mime.

Student 1 read it this way:
She got so much powdered sugar on her face that she looked like a *meemee*.

In the passage “Milk,” lines 16-18 say:

I love dipping cookies into milk, mixing it with ice cream, or pouring it on cereal.

Student 3 read it this way:

I love dipping cookies into milk, mixing it with ice cream, or pouring it on *coral*.

These results were similar to those of the students’ readings of NOcT: although some of the observed responses were nonsense words, they did represent an accurate grammatical structure of the English language. Moreover, particularly when compared to Meaning Construction, the high Grammatical Relations scores indicate that students were more concerned about the text “sounding” like real language than they were concerned about the text making sense. Such reading suggests the students were reading word-by-word, with little attention to the meaning represented by the words.

The percent *Loss* in the TLP is four percentage points lower than the *Loss* in the students’ readings of NOcT, suggesting that the students made slightly more meaning while reading the TLP. It is noteworthy, however, that when reading TLP the students had a higher *No Loss* than *Partial Loss* of meaning than they did when reading NOcT, as evidenced by a mean of 36% (*n* = 8) *No Loss* while reading TLP compared to a mean of 29% (*n* = 8) *No Loss* while reading NOcT. Furthermore, the TLP miscues coded as *No Loss* were almost divided equally between high quality miscues and self-corrections. The range of high quality miscues was 1-6, with a mean of 3.5 (*n* = 8); the range of corrections was 1-7, with a mean of 4.13 (*n* = 8). An analysis of these miscues coded as *Loss* of meaning construction provides insight into the reading strategies and language
cues these readers depend upon to construct meaning while reading TLP. From this analysis, several themes emerged.

**Strength of Grammatical Relations**

The first theme of how students with SLD construct meaning while reading TLP that emerged from the data was the students’ heavy emphasis on Grammatical Relations. Similar to the students reading of the NOcT, the emphasis on Grammatical Relations resulted in syntactical predictions that “sounded” like their spoken language. For example, in “County Fair”, lines 4-6 say:

> When we arrived, the fair was very crowded and finding my dad was like finding a needle in a haystack.

Student 4 read it this way:

> When we arrived, the fair was very crowded and finding my dad was like finding a needle in a haystack.

In “Fishing Trip”, lines 3-4 say:

> The drive to get to the coast was extremely long.

Student 5 read it this way:

> The drive to the coast was extremely long.

In the first example, the student’s observed response was a nonsense word. As in earlier examples, although the nonsense word was coded as a Loss in meaning, it fit the grammatical structure of the sentence. In the second example, Student 5 omitted get to in the sentence. The student’s observed response, which was an omission, preserved both the meaning of the sentence and its grammatical structure. Moreover, each of these
miscues highlights the students’ overall tendency to privilege the “sounds” of real language over the “meaning” while reading.

**Meaning and Nonsense Word Substitutions**

As noted earlier, the substitution of nonsense words caused a complete loss of meaning and, in some cases, made it difficult to predict semantically significant content-specific words in the sentence or passage that followed. This was the case for an average of 35% \( (n = 8) \) of the miscues coded as Loss across cases. Unlike “function” words (e.g., pronouns, articles, prepositions), which are primarily grammatical markers that in themselves carry little meaning, “content” words (e.g., nouns or action verbs) are essential to accurate meaning construction. For example, lines 9-10 in the “Fishing Trip” say:

> After carefully comparing prices and sizes, my dad selected a vessel to charter, and we were off.

Student 7 read it this way:

> After carefully comparing *price* and *size*, my dad selected a *vezzel* to *chapter*, and we were off.

None of the four miscues in this example significantly change the syntactic structure of this sentence. Meaning was lost, however, when the student substituted *vezzel* for *vessel*, which made it difficult to predict the following content word (i.e., *charter*).
Although nonsense word miscues were coded as a Loss of meaning, it was possible that the students did not lose full meaning of the expected response. For example, lines 4-5 say:

I had so much anticipation building in me that the drive seemed interminable.

Student 5 read it this way:

I had so much anticipation building in me that the drive seemed intermainable.

Student 5’s substitution of the nonsense word intermainable for interminable was coded as a Loss of meaning. In fact, Student 5 may not have recognized the word, even if it was pronounced correctly because it may not have been in her speaking vocabulary (Goodman et al., 1987). But, it appeared that she was able to construct the essence of the meaning of the word in the context of the sentence or passage according to her aided retelling. When she was asked to recount the passage from the beginning to the end, she included, “[The father and daughter] got in the car. The ride was extremely long.”

Another similar example involves lines 21-23 of “Fishing Trip,” which say:

My dad and I have decided to make this an annual trip. I am anxiously awaiting next year already.

Student 7 read it this way:

My dad and I have decided to make this an annaturel trip. I am extresially awaiting next year already.

The substitution of the nonsense words annaturel for annual and extresially for anxiously were both coded as a Loss of meaning. Yet, according to Student 7’s retelling, he was able to construct the essence of these words. When Student 7 was asked to describe the girl’s development from the beginning to the end of the story, Student 7 said at the end,
“Her dad told her that they would go [fishing] next year. The girl got excited.” Unlike the students’ use of nonsense word in the NOcT, these examples suggest that the students may have understood some of the [content] words even though they did not pronounce them correctly while reading the TLP (Weaver, 2002).

High Graphophonic Similarity

Another theme that emerged while analyzing the students’ miscues was the emphasis upon Graphic and Sound Similarity as they attempted to construct meaning while reading TLP. Table 6 shows the scores that indicate how reliant the students were on Graphic and Sound Similarity for each student and the average across cases. These scores show that the students with SLD heavily relied upon letter-sound information to predict words, evidenced by the 82% High (+) Some Graphic Similarity ($n = 8$) and 74% High (+) Some Sound Similarity ($n = 8$). The students’ reliance upon Graphic Similarity is higher than their reliance upon Sound Similarity, which indicates the students with SLD most often predicted what the word was by looking at its physical characteristics and relating those characteristics to known words. For example, in “County Fair” lines 17-18 say:

Shutting my eyes and pretending I was on the ground helped calm me down.

Student 4 read it this way:

Shutting my eyes and printing I was on the ground helped calm me down.

The substitution of printing for pretending has similar visual and auditory traits.
The elevated *High (+)* *Some* Sound Similarity score also indicates that the students with SLD heavily relied upon the sound information of words, meaning they focused on how much the miscue sounded like language.

**Table 6**

*Graphic and sound similarity for TLP*

<table>
<thead>
<tr>
<th>Student</th>
<th>Graphic Similarity</th>
<th>Sound Similarity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High (+) Some</td>
<td>None</td>
</tr>
<tr>
<td>Student 1</td>
<td>86%</td>
<td>14%</td>
</tr>
<tr>
<td>Student 2</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>Student 3</td>
<td>76%</td>
<td>24%</td>
</tr>
<tr>
<td>Student 4</td>
<td>44%</td>
<td>55%</td>
</tr>
<tr>
<td>Student 5</td>
<td>89%</td>
<td>11%</td>
</tr>
<tr>
<td>Student 6</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Student 7</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Student 8</td>
<td>95%</td>
<td>5%</td>
</tr>
<tr>
<td>Average</td>
<td>82%</td>
<td>18%</td>
</tr>
</tbody>
</table>

**High-Quality Miscues**

When the students read the TLP, they made a substantial number of high quality miscues indicated by the mean 18% *None* Graphic Similarity (*n* = 8) and 26% *None* Sound Similarity (*n* = 8). This suggests that across all cases some substitutions had little or no letter-sound relationship and no meaning change to the passage (Goodman et al., 1987). Most often the high-quality miscues across the cases involved articles (e.g., *the*)
for a) and content words (e.g., father for dad). Both of these scores are substantially higher than those of the NOcT. Weaver (2002) stated that, “good readers tend to substitute one pronoun or function word for another, and to omit or insert optional function words” (p. 63). Therefore, the higher number of high-quality miscues means that when the students were reading the TLP they were reading to construct meaning, rather than to identify words. This difference may have contributed to the slightly less Loss [of meaning] average score.

**Weak Confirming Strategies**

As observed earlier, the students with SLD made successful attempts at correcting miscues while reading. This behavior indicated that the students were concerned that their reading sound like language and that their reading make sense (Goodman et al., 1987). Although the students with SLD averaged 4.13 corrections across cases, which allowed some meaning construction to occur, the frequency of self-corrections is small compared to the 25 coded miscues. Within the miscues that were coded as Loss, three students made unsuccessful attempts to correct, and the attempts were two or less. Only two of the five attempts were syntactically acceptable with a combination of nonsense and content words. In fact, the proportion of successful attempts and unsuccessful attempts at self-correcting miscues varied little between the two types of texts, confirming the students’ overall lack of effectiveness at constructing meaning from the text. Instead, these behaviors appear to be further evidence of the students’ emphasis on the sound of language while reading.
One student, Student 6, used the strategy of pausing to confirm or disconfirm predicted words. Typically, this student spent up to seven seconds on difficult words such as tempt, exaggerated, and anxiously. This student also paused between correctly predicted words, presumably to think through what had been read in order to reorganize or modify the meaning (Goodman et al., 1987). For example, lines 13-15 in the “Fishing Trip” say:

We organized the rods, reels, lines, and bait, and once the captain cut the engines, we cast our lines into the sea.

Student 6 read it this way:

We organized the rods, reels, [3 second pause] lines, and bait. All once the captain cut the engines. We cast our lines into the sea.

In this example when the student paused to consider what had just been read, he appeared to reorganize the grammatical structure as evidenced by his insertion of punctuation and his substitution of All for and. No other students paused to reconsider or reorganize the text as Student 6 did in this example.

Only one other student, Student 3, paused for any considerable amount of time. This student paused for eight seconds on the word refreshing and 15 seconds on the word vitamins. The rest of his predictions of words took three seconds or less, which was the most common behavior across the cases.

Repetition of words, phrases and sentences was even less frequent. Across cases, students most often had two or fewer repetitions, and those repetitions occurred with words that had been predicted correctly. In addition, none of the students chose to end the readings because the passage was too easy, too difficult, or too boring (Goodman,
Similar to NOcT, the incidences of correcting, repeating, and pausing were infrequent when compared to the total number of miscues across cases. Instead, reading beyond the miscue in the TLP was the strategy most utilized by these learners.

As with NOcT, students constructed some meaning with successful attempts at correcting miscues in TLP. However, the attempts were infrequent. The range of skipped miscues was between zero and 14, with a mean of 4 (n = 8) skipped miscues across the cases. Student 7 only made one attempt to self-correct within the 25 coded miscues, which means he skipped 10 miscues before attempting a correction, and then he skipped the remaining 14 miscues before the passage ended. Student 5 skipped 8 and 13 miscues. The remaining students most often skipped between zero and four miscues, occasionally skipping five or more. Although the range and mean of skipped miscues in the TLP was slightly higher than the NOcT, the infrequent attempts to correct miscues suggests the students with SLD most often read word-by-word while reading TLP, and they abandoned miscues where meaning was lost. The results of the retelling give insight into the possible reason the students most often chose the strategy of reading on after a miscue.

**Retellings**

After each student read the TLP, he or she was asked to give an unaided retelling and an aided retelling. The responses to the unaided and aided retellings were used to determine the 3-MRA Comprehension score and the RMI Retelling score. When asked in the unaided retelling, “Would you tell me what the story was all about in your own
words?,” Student 4 was the only reader able to give a comprehensive summary with a main idea as well as a robust set of logically ordered details. An equal number of students earned a three, (i.e., they gave a main idea with a few supporting details), and a one, (i.e., they had no recall or minimal recall of only a fact or two from the passage.) The mean of these scores on the TLP was 2.62 \((n = 8)\) out of six possible points across cases, which was slightly less than the 2.88 mean \((n = 8)\) score across cases on the NOcT.

In the aided retelling of these fiction passages, students were asked questions that prompted their recollection of character development and plot events. Students had the most success when prompted to recall the main characters in TLP; six of the eight students earned the full two points (out of two) on the rubric. They did moderately well when asked to describe the main character and any changes in this character that had occurred from the beginning to the end of the passage. Five students earned the full two points, while three earned one point. Students had the most difficulty in recalling events from the story. Four students earned three points (out of six) when recalling events, while one student scored two points and the remaining three students scored between four and six points. These scores resulted in a mean 6.67 \((n = 8)\) out of a possible 10 points across cases on the RMI retelling of the TLP, which is slightly lower than the mean of 7.00 \((n = 8)\) across cases on the RMI retelling of the NOcT.

It could be concluded from the retelling data that the students made slightly less meaning while reading the TLP than the NOcT. However, it is difficult to compare the retelling scores because the TLP was fiction and the NOcT was nonfiction. In addition, the .33 average difference between the RMI Retelling scores and .26 average difference between the 3-MRA Retelling scores is nominal at best. The more logical conclusion
regarding how students with SLD constructed meaning while reading TLP is similar to
the conclusion of how these readers made meaning while reading NOcT. That is, the
moderate retelling scores on both assessments corresponds to the weaker Meaning
Construction average score in the miscue analysis. These data demonstrated that when
students miscued, they typically continued reading beyond the miscue, because they were
focused at the word level and concerned primarily with correct word identification
(Goodman et al., 1987).

Furthermore, when the students were asked if the TLP story reminded them of
other stories they had heard or read, five students said “Yes.” Three of these five students
made a connection with the text (Keene & Zimmerman, 1997). Below are the students’
responses to the question, “How does this story remind you of other stories that you have
heard or read?” (Student 1 and Student 2 related the question to “County Fair; Student 4
related the question to “Milk.”)

Student 1: This sounds like the Hannah Montana book and movie. They had to
go to the fair…It’s Lillie’s birthday and they had to look for her.

Student 2: The fire truck. [The book I read] was a chapter book about a little
girl’s father who was a firemen, too. They had six houses on fire and three
burned down because they couldn’t get to the rest of them.

Student 3: If you give me…a Mouse a Cookie I might want some milk.

Two students related the story to a personal life experience. Below are their responses.
(Student 4 related the question to “County Fair,” and Student 7 related the question to
“Fishing Trip.”)
Student 4: When I was a boy on the Ferris wheel I was afraid of heights. I went on it at night. I wear glasses and at night I couldn’t see nothing down there at all. It was scary and I was all the way at the top. I hate Ferris wheels when they have cars that go all the way around and flip upside down.

Student 7: Yes, my uncle and dad went fishing. They went the next year. The captain stopped the boat and they started fishing and catching a lot of fishes.

The students were also asked if they were thinking about other things (i.e., things other than those that relate to the story) while they were reading. All but one student said, “No.” The responses to both questions suggest that nearly all of the students were sensitive to the passage content and focused on the reading event. In addition, most of the students were attending to the semantic aspects of meaning-making by actively drawing on their prior life and literary experiences while reading. Perhaps, similar to the experience of the students while reading NOcT, the students may have understood the meaning of words they did not pronounce correctly (Weaver, 2002), which enabled them to make text connections and construct meaning. In fact, such responses may have influenced the slightly lower Loss score in Meaning Construction. The students’ with SLD fluency scores may support this conclusion.

Unlike the NOcT, five students read the TLP at their Instructional level, which means they read the words in the text with 92% accuracy or higher. One student read the text at an Independent level, which is 98% accuracy or higher, and two students read at the text at a Frustration level, which is 91% accuracy or lower. Five students read the text at a reading rate of grade level or above. No one scored higher than 81% on the fluency-expression rubric. The students’ accuracy and fluency-automaticity scores
suggest that the words within the TLP were slightly easier to predict than the words in the NOcT. The relatively ease of predicting words in the TLP may account for the slightly less Loss score, despite the moderate retelling scores.

Summary

Two big themes emerged from the data analysis of how students with SLD construct meaning while reading TLP. First, as evidenced by their Graphic and Sound Similarity scores, the students overly relied upon the surface features of the text compared to the syntactic and semantic cueing systems. This was demonstrated by their tendency to make substitutions involving nonsense words and/or content-specific words that were not semantically acceptable in the sentence or passage. The weak No Loss (+) Partial Loss Meaning Construction score is further evidence of the students’ over-reliance on the graphophonic cueing system. The students infrequently used reading strategies that supported comprehension by confirming or disconfirming miscues.

Second, even though there was considerable Loss of meaning while reading TLP, the students were able to use the semantic cueing system with some effectiveness. They were able to construct the essence of nonsense words and build meaning in the passage. In addition, they were able to read the passage with more accuracy and fluency, indicating that many of the content-specific words were already in their speaking vocabulary. Therefore, their use of the semantic cueing system enabled the students to identify pertinent life or literary experiences related to the passage. It can be concluded, though, that after analysis of the data sources the students with SLD were not effectively or efficiently constructing meaning from the TLP.
Similarities and Differences in Meaning Construction Between Text Types

Although the meaning construction patterns which emerged from data analysis of the two students’ TLP and NOcT assessments are nearly identical, the data identified similarities and differences worth considering. Table 7 shows the differences and similarities among the cases while reading the NOcT and TLP. The first similarity across cases was the students’ over-reliance on the graphophonic features of the text. This was evidenced in their tendency to sound out words that may not have been part of their speaking and academic vocabulary and to leave nonsense words uncorrected. This reading behavior suggests that the students were heavily dependant upon their knowledge of phonics to sound out words. This finding in both readings is supported by the responses from the Burke Reading Interview. When asked “what would you like to do better as a reader?” and “what is reading?,” the students’ responses reflected their emphasis on reading words accurately.

The second similarity among the cases was the students’ tendency to self-correct function words. Since function words are typically not central to the meaning of a passage (Weaver, 2002), frequent self-correction of function words provide further evidence that these students were heavily reliant on the surface structure of text and often reading word-by-word.

The third similarity was the students’ frequent substitution of nonsense words for content-specific words. This common behavior among the cases suggests the students did not adequately use the semantic cueing system, specifically the meaning of the preceding or following context, to make predictions. Moreover, all the students in this
study employed few, if any, strategies to monitor their comprehension when reading either text. This further suggests that the students were most concerned about accurately identifying each word in the passage. Furthermore, rather than reading for meaning, these students were more intent on decoding unfamiliar words in a way that “sounded” like spoken language.

Table 7

Cross-case comparison of meaning construction of the NOcT and TLP

<table>
<thead>
<tr>
<th>Dimension</th>
<th>NOcT</th>
<th>TLP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammatical Relations</td>
<td>71%</td>
<td>64%</td>
</tr>
<tr>
<td>Meaning Construction</td>
<td>52%</td>
<td>60%</td>
</tr>
<tr>
<td>Corrections</td>
<td>Function words</td>
<td>Function words</td>
</tr>
<tr>
<td>Nonsense Words</td>
<td>High – no meaning constructed from these words using surrounding semantic cues</td>
<td>High - meaning constructed from these words using surrounding semantic cues</td>
</tr>
<tr>
<td>Graphophonic Similarity</td>
<td>Graphic Similarity: 94% Sound Similarity: 89%</td>
<td>Graphic Similarity: 82% Sound Similarity: 74%</td>
</tr>
<tr>
<td>Confirming Strategies</td>
<td>Weak overall</td>
<td>Weak overall</td>
</tr>
<tr>
<td>Retellings</td>
<td>3MRA: 2.88/6 RMI: 7.00/10</td>
<td>3MRA: 2.63/6 RMI: 6.88/10</td>
</tr>
<tr>
<td>Accuracy-Fluency</td>
<td>Accuracy: 86% Automaticity: 55 CWPM</td>
<td>Accuracy: 94% Automaticity: 71.5 CWPM</td>
</tr>
</tbody>
</table>

There are also several differences in the way students made meaning while reading the TLP compared to the NOcT. The syntactic structure of the NOcT was more predictable for the students with SLD in this study. The language patterns used in the
NOcT were more like natural language compared to the TLP. Yet although the students made fewer syntactically acceptable predictions while reading the TLP, they made more meaningful predictions. This means the students were able to recognize more of the content-specific words in the TLP because they were already a part of their oral vocabulary. This was not true of the NOcT. Consequently, the fact that students were able to recognize and understand more of the TLP vocabulary enabled them to read this text with more accuracy and fluency. In addition, students were able to read it more effectively, since they could access the semantic cueing system to construct meaning. Thus, students were not as dependent upon the graphophonic cueing system while reading the TLP. Furthermore, the students’ increased comprehension was also evidenced in the retellings. Although the scores are nearly identical, the students made more personal connections while reading the TLP. These connections are evidence that the students’ schemata were more active while reading the TLP compared to the NOcT.

Finally, although the NOcT was more difficult to read for most, half the students preferred this text because they personally preferred the content over that of the TLP. When looking at these differences holistically, it appears the students with SLD were able to use the language cueing systems slightly more efficiently and effectively to construct meaning while reading TLP compared to NOcT.

Similarities and Differences Across Two Cases

The third research question in this study asked, “When assessed with both traditional, leveled passages (TLP) and naturally occurring texts (NOcT), what similarities or differences emerge in the meaning-construction patterns of two students
with SLD?” These two cases provide further evidence of the meaning making patterns across all cases. While factors such as gender and grade level were considered for the in-depth analysis, the two cases were selected because they appeared to construct meaning using similar patterns of behavior but with different texts. That is, Case #1 appeared to make more meaning with the TLP and Case #2 appeared to make more meaning with the NOcT.

Case #1 - Paul

Paul (Student 6) was a fourth grade boy, who was identified as having a SLD through a multi-factored evaluation in March 2010. His chronological age at the time of this study was 10 years and 11 months. Paul lived with his mother, and he had no siblings. He liked to read Captain Underpants books. He enjoyed sports, especially football, and he expressed his excitement about his upcoming participation on a local football team. Paul was eager to help the researcher with technical tasks, such as turning on the audio recorder and putting new tapes in the video recorder. During the oral readings and interviews, Paul often fidgeted in his seat and tugged at his shirt and shorts while reading and answering questions.

Paul’s IEP indicated that he received specialized instruction for comprehension and mechanics related to written expression. Paul’s IEP also stated that while writing he had difficulty recalling details and often lost his train of thought. Although his oral reading fluency was below the class average, he demonstrated strong math computation and application skills. Before participating in this study, Paul’s intervention specialist indicated that, according to assessments in the school’s basal curriculum materials, Paul
was reading at the late third-grade developmental reading level, near the reading levels of
two of the other fourth grade students in this study.

Paul’s most recent Ohio Achievement Assessment (OAA) scores from fall 2010
indicated that he had performed at the Basic level on reading tasks, which was below the
Proficient level he had demonstrated in spring 2010. Paul was specifically chosen for an
in-depth analysis because he appeared to construct considerably more meaning while
reading TLP than NOcT.

Paul’s meaning construction while reading NOcT. When given a choice of
passages to read, Paul selected the NOcT “Spreading the Word about Birds” (Meehan,
2011) to read first. He said he wanted to read that passage first because, “It looks
interesting, and I like birds.” According to the OKAPI (Wright, 2003) evaluation of the
first 200 word of this passage that he read aloud, the passage had 12 sentences, with an
average of 16.83 words per sentence. According to Intervention Central (Wright, 2011),
this passage had a Dale-Chall Grade Level readability of seventh grade.

Table 8 shows Paul’s Reading Profile, which lists his scores within Meaning
Construction, Grammatical Relations, Graphic Similarity, and Sound Similarity. These
scores indicate that Paul relied heavily upon graphophonic cues, as evidenced by the 84%
Graphic Similarity and 88% Sound similarity. Both of these scores are higher than his
Meaning Construction No Loss (+) Partial Loss score of 48% and his Grammatical
Relations Strength (+) Partial Strength (+) Overcorrection score of 60%, which suggest
Paul was not using either the language cueing systems or reading strategies proficiently.
Table 8

*Paul’s reading profile for NOcT*

<table>
<thead>
<tr>
<th>Meaning Construction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No Loss</td>
<td>32%</td>
</tr>
<tr>
<td>Partial Loss</td>
<td>16%</td>
</tr>
<tr>
<td>Loss</td>
<td>52%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grammatical Relations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>28%</td>
</tr>
<tr>
<td>Partial Strength</td>
<td>40%</td>
</tr>
<tr>
<td>Overcorrection</td>
<td>0%</td>
</tr>
<tr>
<td>Weakness</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Graphic Similarity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>63%</td>
</tr>
<tr>
<td>Some</td>
<td>21%</td>
</tr>
<tr>
<td>None</td>
<td>17%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sound Similarity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>63%</td>
</tr>
<tr>
<td>Some</td>
<td>25%</td>
</tr>
<tr>
<td>None</td>
<td>13%</td>
</tr>
</tbody>
</table>

Two patterns emerged when analyzing Paul’s grammatical relations while reading NOcT. First, he moderately used syntactic cues. Paul most often preserved the grammatical structure of the sentences while reading, even when his predictions did not make sense. Paul made a moderate number of predictions that moved him forward in the text. Moreover, he was usually concerned about the syntactic acceptability of what he was reciting orally. Two examples further describe Paul’s use of the grammatical system of language. Although lines 4-5 of the passage are, “David went to a birthday party at a bird sanctuary in Connecticut,” Paul said:

*David went to a birthday party at a bird s-sad-santenary in Connenton.*

Although he substituted the nonsense words *santenary* and *Connenton* for the expected response, Paul said them in a way that kept the grammatical structure of the sentence.
Line 5 reads, “I was reminded,” but Paul incorrectly said, “I was remained.” Paul’s substitution of remained for reminded suggests that he recognized the past tense in was and noticed the morpheme –ed when he sampled reminded. Thus, he kept this past tense in his prediction of remained. Both of these examples illustrate how Paul was able to use his knowledge of the grammatical structure of the English language to preserve the syntactic structure of the sentence.

Furthermore, even Paul’s miscues that resulted in Weakness of Grammatical Relations were not always syntactically unacceptable. In fact, Paul was able to use the grammatical structure at the beginning or end of the sentence to make reasonable predictions for almost half the miscues that resulted in Weakness. Such predictions, however, did not fit grammatical structure of the sentence as a whole, resulting in partial syntactic acceptability.

In the NOcT passage, more difficult vocabulary was usually in the middle or end of each sentence. Since the words at the beginning of the sentences were already in Paul’s reading vocabulary, they may have enabled Paul to make reasonable syntactic predictions. Consequently, Paul was able to use his knowledge of language to preserve the grammatical structure of at least part of several sentences.

The second pattern that emerged when considering Paul’s grammatical relations while reading NOcT was his tendency to read for accuracy. Of the 17 total miscues that were considered Strength or Partial Strength in Grammatical Relations, five were the result of self-corrections. An analysis of Paul’s corrections shows that they were nearly all function words with little meaning change. For example, he initially substituted has
for have, a for the, with for as, and and for about. In these instances, Paul was reading to accurately identify words (Weaver, 2002).

The remaining uncorrected miscues coded as Strength or Partial Strength were mostly substitutions of nonsense words that were said in a manner which preserved the grammatical structure. For example, Paul said *ampbs* for *amphibians*, *santenary* for *sanctuary*, *knowtel* for *knowledge*, *excontens* for *ecosystems*, and *pass on* for *passion*. Paul’s infrequent attempts to correct words that carry significant meaning in the sentence and context of the passage, again, suggest his principal goal was accurate word identification rather than meaning construction.

Two patterns emerged when analyzing Paul’s meaning construction while reading NOcT. First, Paul’s use of semantics was weak. According to Paul’s Reading Profile, only 32% of the miscues resulted in *No Loss* of Meaning Construction. Within the miscues that resulted in *No Loss*, five of the eight miscues were self-corrected. The other three miscues were high quality. For example, lines 6-7 read: “As the kids in the party…,” but Paul said: “As the *kid* in the party. Similarly, lines 11-12 are: “David began volunteering at the sanctuary on weekends and vacations.” Paul, however, said: “David began volunteering at the *sinister* on weekends and *on* vacations.” The substitutions of *kid* for *kids* in the first example and the insertion of *on* in the second example had no syntactic or semantic impact on their respective sentences. Yet, Paul made very few of this type of miscue across the 25 total coded miscues.

Paul’s substitution of *sinister* for *sanctuary* is one example of the 13 miscues that comprised the 52% *Loss* of Meaning Construction while reading NOcT. All 13 of these miscues involved content-specific words which contributed significantly to the meaning.
of the passage. Paul made six nonsense word and seven inaccurate word substitutions. For example, lines 2-6 read:

But it wasn’t until he was 10 years old that he discovered a passion for birds and a desire to save their ecosystems. David went to a birthday party at a bird sanctuary in Connecticut and felt an instant connection with the creatures.

Paul, however, read:

But it wasn’t until he was 10 years old that he discovered a passon of birds and a deserve to save their escontens. David went to a birthday party at a bird sanenary in Connenton and felt an inside connected with the creatures.

In these two sentences many of Paul’s substitutions were syntactically acceptable, however none of them contributed to the meaning of the passage. Substitutions such as these indicate that Paul did not effectively use the semantic cueing system to predict such significant words. Consequently, he was unable to make meaningful predictions in order to comprehend the text.

The second pattern that emerged when analyzing Paul’s meaning construction while reading NOcT was his minimal use of schemata. In some instances, Paul’s substitution of actual words suggested an attempt to access schemata. Line 17, for example, read: “hummingbirds pollinate flowers,” but Paul said: “hummingbirds pot flowers.” Paul struggled with the word pollinate. He quickly sampled the text beyond and struggled to make sense by using the word pot with the word flowers. Although the phrase pot flowers was apparently familiar to him, it was not relevant to the context of this passage. Moreover, Paul’s use of schemata to make predictions of key terms in an
example such as this was infrequent, providing further evidence that he did not prioritize the use of schemata as a meaning-making resource.

Paul’s graphic and sound similarity scores while reading NOcT indicated that he heavily relied upon this cueing system. Paul’s scores for Graphic Similarity were High 63%, Some 21%, and None 17%. His scores for Sound Similarity were High 63%, Some 25%, and None 13%. The totals of Graphic Similarity High (+) Some of 84% and Sound Similarity High (+) Some of 88% are high scores. These high scores indicate that Paul’s was heavily reliant on the surface features of the text when he lost sense of the syntactic and semantic structures of the text (Goodman, Watson, & Burke, 1987). For example, the substitutions *santenary* for *sanctuary*, *tortured* for *toured*, and *amphbs* for *amphibians* have high graphic and sound similarity.

Most of Paul’s observed responses that resulted in high Graphic and Sound Similarity were similar in both surface text features and sound in the beginning, and occasionally they were similar to both the beginning and end of the expected response. For example, lines 8-9 of “Spreading the Word about Birds” (Meehan, 2011) say: “Mr. Appell was impressed with David.” Paul read it this way: “Mr. Appell was *improved* with *Daniel*.” There is graphic and sound similarity between *improved* and *impressed* at the beginning and end of each word. In the second substitution where Paul said *Daniel* for *David*, only the beginning graphics are the same and only the first sound of each word is the same. Both miscues also preserve the grammatical structure of the sentence. Although, Paul may have constructed the essence of the word *impressed* by substituting *improved, improved* does not make sense in this sentence. This was the case with many of his miscues with high graphophonic similarity. Thus, Paul’s demonstrated an overuse
of graphic cues and underuse of syntactic and semantic cues as well as prior knowledge and context to make predictions (Weaver, 2002).

Paul’s use of strategies to confirm his predictions while reading NOcT was weak. From the preceding discussion, it is evident that Paul did not use the correction strategy with proficiency. In fact, he only made five successful self-corrections, which means he infrequently corrected miscues that were syntactically or semantically unacceptable.

Paul also paused infrequently when attempting to confirm or disconfirm the meaning he was constructing. Similarly Paul infrequently repeated words, phrases, or sentences to confirm or disconfirm predictions, making just four repetitions in the coded section of the passage. Most often, Paul read past miscues, even when the text did not appear to make sense.

Overall, Paul made a moderate number of predictions that were syntactically acceptable, but most were not semantically acceptable. Paul’s semantically unacceptable predictions, as shown by the score of 52% in Loss of Meaning Construction, indicate that Paul also did not monitor his comprehension. Thus, both predicting and monitoring were weak reading strategies for Paul.

Three patterns emerged from the analysis of Paul’s retelling scores First, Paul had difficulty with many of the content-specific words in this passage. His apparent struggle to make meaning is supported by his accuracy and fluency scores, which indicate his reading rate was slow and laborious. He read the NOcT with 76% accuracy, which equates to a Frustration level, and an automaticity rate of 39 CWPM. His automaticity rate equates to the fall of second grade. Further insight into Paul’s laborious reading is provided by his response to the question, “What were the easiest and hardest parts of the
story?” Paul said, “The easiest part was learning about the story and geese. The hardest part was pronouncing the words.” This observation and his low fluency scores corroborate other evidence that Paul’s meaning-making efforts were focused on identifying individual words rather than on constructing broader meaning from the passage.

The second theme that emerged from the analysis of Paul’s retelling scores while reading NOcT was his moderate comprehension. According to the 3-MRA, Paul’s comprehension score was a “3” (out of “6”). He was able to recall the main idea of the passage with a few supporting details. Paul’s RMI score was a “6” (out of 10). He was able to recall the nature of the passage. That is, the boy, David, “liked birds and he felt bad for them.” Paul also stated that, “The owner of the sanenary helped David to help the birds and become a volunteer to help people to learn about the birds.” He demonstrated the most difficulty recalling Specific information about the passage. When prompted for further details and facts about the story, Paul would often repeat the same information he had cited in his earlier responses. Interestingly, such details were either from the beginning or end of the passage, the places where he had the most difficulty predicting words.

When Paul was later asked what reading is, he said it was “to learn something to some people. You’re teaching yourself.” He also said that if he could read either the TLP or NOcT again, he would like to read the NOcT “so I can go back and look through and see if I could pronounce the words again.” These two comments suggest that Paul saw the purpose of reading as “teaching” or “learning.” Yet, it appeared that Paul often read to pronounce words correctly, not to construct meaning from the text. A synthesis of these
observations suggests that perhaps Paul views reading as an act of learning to read words accurately instead of learning how to read for meaning.

The final theme that emerged from the analysis of Paul’s retelling while reading NOcT was his low interest in the text content. Although Paul was offered the NOcT with the belief that authentic text, particularly when self-selected, might support the meaning-making process, retelling and interview data suggest that this text was of low-interest text to Paul. Although initially Paul stated he wanted to read the NOcT first because he liked birds, when asked, “What questions were you wondering about as you read the story?” Paul responded:

“I wondered why birds are special to some people because some birds can fly a lot and some birds when they’re babies they can’t fly. Birds are not special. To some people they are and to some people they aren’t.”

This response shows he understood that David, the boy in the passage, thinks birds are special and, from other responses in the retelling, he knows birds need help. But, it is also evident he did not construct enough meaning to determine why David embraces this belief that birds are special and why they need help (i.e., many birds and their ecosystems are endangered). Surprisingly, from this response, Paul appears disinterested in birds when he said, “I wondered why birds are special to some people…” and “Birds are not special.” Since the initial vocabulary hindered accurate prediction, perhaps Paul’s failure to make meaning from the passage dampened his interest.

In summary, Paul’s ability to predict on the basis of all the language cueing systems while reading NOcT was weak. When Paul read the NOcT, he was most concerned that his reading sounded like the English language and that his predictions
looked like words he knew. He read word-by-word, paying most attention to the surface structure of the text. His substitutions, whether they were actual or nonsense words, most often preserved the grammatical structure, but not the meaning, of the passage. This is more evidence that he attended to the “sound” of his reading rather than the “meaning” he was constructing.

Moreover, Paul exhibited few strategies to correct sentences that were syntactically or semantically unacceptable. Although Paul was able to recall relatively few details from the story, he did identify some major concepts. Looking at Paul’s Reading Profile holistically, though, he did not efficiently or effectively construct meaning while reading NOcT.

Paul’s meaning construction while reading TLP. Paul chose to read the TLP passage, “Fishing Trip,” after the NOcT. This passage had 205 words with a total of 13 sentences. The average number of words per sentence was 15.76 (Wright, 2003). According to the 3-MRA booklet, this passage has a readability level of seventh grade.

Table 9 shows Paul’s Reading Profile for TLP, which lists his scores within Meaning Construction, Grammatical Relations, Graphic Similarity, and Sound Similarity. These scores show that Paul most often relied upon the surface features of the text, such as lengths and graphic shapes of familiar words, to predict unfamiliar words while reading TLP. Furthermore, when compared to the NOcT passages, Paul’s cumulative scores suggest that he used the language cueing systems slightly more proficiently while reading the TLP.
Two themes emerged from the analysis of Paul’s grammatical relations while reading TLP. First, Paul moderately used the syntactic cues in the passage. According to the Reading Profile, Paul has moderate strength in Grammatical Relations as shown by the 64% *Strength (+) Partial Strength* score. This score indicates that Paul was able to make some reasonable syntactical predictions.

Of the 15 miscues coded as *Strength* or *Partial Strength*, eight were the result of self-corrections. Most of his corrections involved function words, including prepositions (e.g., *of* for *on*), pronouns (e.g., *my* for *me*) and articles (e.g., *a* for *the*). The majority of these miscues were coded as acceptable or partially acceptable syntactically.

The remaining uncorrected miscues were mostly substitutions for content vocabulary or action verbs, which preserved or partially preserved the grammatical
structure of the sentence but were semantically unacceptable. For example, lines 4-5 read: “I had so much anticipation building in me that the drive seemed interminable.” Paul, however, read: “I had so much antipats building in me that the drive seemed intermable.”

In this example, Paul read antipats as an object and intermable as an adjective, both of which were parts of speech consistent with the original text. He made many other similar predictions throughout the text. Paul’s corrections and miscues that preserved the grammatical structure of the sentences while reading TLP suggest he applied his knowledge of the grammatical structures of the English language to make reasonable syntactic predictions.

The second theme that emerged from the analysis of Paul’s grammatical relations while reading TLP was his tendency to read for accuracy. When reading TLP, Paul most often made miscues that were both syntactically and semantically unacceptable. He did not effectively use the beginning or the end of the sentence to help make reasonable predictions. For example, line 11 reads: “Grayish blue and calm, the waters seemed to be inviting us, but Paul read: “Grayish blue and clam, the waters seemed to be inviting us.” In this instance, Paul did not follow the structure of the phrase Grayish blue and calm, which involves two adjectives. Instead he substituted a noun. Although he did try to self-correct, he was unsuccessful.

Furthermore, when Paul lost the syntactic and semantic structure of the sentence he relied upon the graphophonic cues of the text. Nearly all of Paul’s miscues that resulted in Weakness in Grammatical Relations while reading TLP had high graphic similarity with the expected response (e.g., antipats for anticipation, intermable for
interminable). In these instances, Paul appeared to read to “get” the word, which consequently resulted in miscues that were syntactically and, thus, semantically unacceptable.

The analysis of Paul’s meaning construction while reading TLP evidenced two patterns. First, Paul’s use of the semantic cues in the passage was weak. According to Paul’s Reading Profile, 48% of his miscues resulted in No Loss of Meaning Construction, which is nearly half of the 25 coded miscues. Eight of the 12 miscues were self-corrections, more than half of which involved function words.

Four of 12 miscues resulting in No Loss were high-quality miscues that did not significantly change the structure or meaning of the sentence (Goodman, Watson, & Burke, 1987). For example, lines 12-13 read: “Our captain was very efficient and got us right to work,” but Paul read: “Our captain was very effective and got us right to work.” The other high-quality miscues were father for dad, arrive for arrived, and the insertion of a pronoun.

Paul made only three miscues that resulted in partial semantic acceptability represented by the 12% Partial Loss. These miscues involved an auxiliary verb, preposition, and a content-specific vocabulary word. Except for the content vocabulary word, the other words are function words. The corrections, high-quality miscues, and Partial Loss miscues are evidence that at times while reading TLP, Paul was attempting to read for meaning. However, these instances were infrequent. Thus, Paul was not using the semantic cueing system effectively.

The second theme that emerged from the analysis of Paul’s meaning construction while reading TLP was his moderate use of schemata. Paul’s Reading Profile also
suggests that 40% of his miscues resulted in Loss of Meaning Construction. Within this category, Paul’s substitutions included three function words, three nonsense words, and four content-specific words. Paul’s use of actual words for substitutions is important, even when there appears to have been a Loss of meaning. When Paul used an inaccurate content-specific word as a substitution for an expected response, which resulted in syntactic and semantic unacceptability, there is evidence that he was trying to construct meaning by applying his personal experience. For example, lines 9-10, read: “After carefully comparing prices and sizes, my dad selected a vessel to charter and we were off.” Paul, however, said: “After carefully comparing pieces and sizes, my father selected a vessel to charter, and we were off.” In this example, Paul substituted the word pieces for prices, which was coded as partially semantic acceptability. Paul may have applied his world knowledge to make this prediction. It would make sense that when someone is making a comparison, they would analyze the similarities and differences among pieces of an item or items. This perhaps suggests that Paul used the semantic cueing system of this sentence to making a personal connection (Keene & Zimmerman, 1997) by accessing his schemata about human behavior.

In addition, Paul appeared to interact personally with this passage. In the aided retelling, for example, Paul mentioned how he liked to go fishing. He said that he often went fishing with his family at a reservoir, which made him feel happy. In the Short interview Paul shared that he liked reading the TLP because it was about fishing. His interaction with the content on a personal level may have also enabled him to make more syntactically and semantically acceptable predictions while reading TLP. Therefore, his
prior knowledge and personal experience enhanced his meaning construction of the passage.

Paul’s graphic and sound similarity scores while reading TLP showed that he moderately relied upon this cueing system. Paul’s combined score of the High (+) Some Graphic Similarity is 79% and his combined score of High (+) Some Sound Similarity is 63% are moderate scores. When compared to the High (+) Some scores in Grammatical Relations and Meaning Construction, they confirm that Paul gave considerable attention to the surface features of text to make predictions since over half of these miscues had similar letters at the beginning and end of the word. For example, he substituted *recollect* for *recently*, *antipats* for *anticipation*, *intermable* for *interminable*, *remained* for *reminded*, and *pass on* for *passion*. This pattern of miscues suggests that Paul tried to read words accurately.

Paul relied only moderately upon the sound of his observed response to represent the sound features of the expected response. Furthermore, Paul either self-corrected or made several high-level substitutions that resulted in very little change in the meaning of the sentence or context of the passage. Thus, in his oral reading of the TLP, Paul did not overuse the graphophonic cueing system. These data analysis results suggest that Paul was able to construct some meaning while reading the TLP.

While reading the TLP, Paul relied upon the confirming strategy of reading beyond miscues. Paul made eight successful self-corrections and two unsuccessful attempts at corrections within the 25 coded miscues. Although the successful corrections allowed Paul to construct some meaning from the text, his use of this strategy to confirm or disconfirm text was infrequent. Moreover, Paul rarely paused to reconsider,
reorganize or modify the meaning he had predicted. He spent five and seven seconds on two different words. There were eight different instances, though, when he resampled the text by rereading phrases to confirm or disconfirm the meaning he was constructing while reading. Both of these strategies were infrequent, though, compared to the 25 total coded miscues.

The most common strategy Paul used to confirm or disconfirm text was simply reading beyond the miscues. Whenever Paul used this strategy he appeared able to acquire more information to help him predict the meaning with some accuracy, as evidenced by his ability to construct the essential meaning of a passage despite uncorrected nonsense and content words. Paul also had few miscues that were clustered together. When miscues are spaced apart, he could more effectively build meaning with the acceptable predictions surrounding the miscue. Therefore, it appeared that Paul silently confirmed or disconfirmed the meaning he was constructing as he read beyond miscues and continued to sample the text.

Three patterns emerged from the evaluation of Paul’s retellings after reading the TLP. First, Paul’s comprehension of the passage was moderate. Paul’s Comprehension score as rated by the 3-MRA Comprehension rubric was 3 out of 6. In the unaided retelling, he was able to recall the main idea of the passage with a few supporting details. On the RMI retellings, he scored 7 out of 10, which was slightly higher than the average among all cases.

Paul showed the most strength in his recall of the characters and character development. For example, when asked to describe the main character, Paul said she was “bored by doing nothing [in the car],” then she became “excited to fish [with her dad],”
and at the end “she was happy that she got to fish but she didn’t catch nothing…but she wasn’t sad.” While Paul’s recollection of character was impressive, he had difficulty remembering the events in the story. Although he mentioned the same events he described in the character development, he had trouble recalling any others.

The second theme that emerged from Paul’s retelling scores was his relative ease with the vocabulary in the TLP. Paul’s accuracy and fluency score may also have supported his meaning construction while reading the TLP. He read the TLP passage with 91% accuracy, which is a Frustration level, but he was only one percentage point away from reading this passage at an Instructional level. He made 39 CWPM, which is equivalent to the level a third-grade student would read in the fall. His fluency-expression was 47%. In the In-Depth interview Paul said that he found the TLP was easier to read than the NOcT. When asked why he said, “The words and the whole passage was easy, with all the words.” Paul may have found the words in the TLP easier to read because there were only 22 words that were not on the Dale Familiar 3000-word List (Wright, 2003). Therefore, many of the words in this passage may have already been in Paul’s speaking vocabulary and were, thus, easier to read.

Another reason Paul may have been able to construct more meaning while reading TLP is that he did not struggle with the vocabulary in this passage until the third sentence. The first two sentences contained the characters and main idea of the passage: the father took the daughter on a fishing trip to the Atlantic Ocean. Paul read these two sentences with few miscues, which allowed him to build some context to the passage. This knowledge base may have enabled him to make more successful predictions or
construct the essence of content-specific words that appeared later in the passage. Thus, he may have been able to construct more meaning while reading the rest of the passage.

The third theme that emerged from Paul’s retelling scores was his interest in the text content. In the Short-Interview, Paul said that he preferred reading the TLP over the NOcT. When asked why Paul said: “You can help fish by feeding them, just throwing worms into the water. And, you can do that same thing to the birds…will probably get them. The fish will wait and then eat them.” This statement shows that Paul had confidence in his knowledge about the behavior of fish and that he was surmising about the behavior of birds. It also appears that Paul may have interpreted the TLP as having the same theme as the NOcT, which is helping animals (i.e., the girl “helped” the fish by feeding them worms). This pattern of thinking suggests Paul was using applied level of thinking. This higher order thinking, according to Bloom’s Taxonomy (Krathwohl, Bloom, & Masia, 1973), means he was able to use a concept in a new situation or unprompted use of an abstraction. In the aided retelling, he was asked, “Did you like what you read?” Paul response was, “Yes. You can tell by the fish that you can really catch, and feel happy as soon as you go home.” This statement indicates that Paul had personal, pleasurable experience fishing. The content of this passage appeared to coincide with Paul’s personal knowledge and experience with fishing, which also enabled him to use higher order thinking. Thus, it appeared to be a high-interest text. This may have been a contributing factor to Paul’s considerably higher meaning construction with this text compared to the NOcT.

In summary, Paul’s miscues while reading the TLP were most often syntactically and semantically unacceptable. Yet, when Paul’s miscues were syntactically successful
they most often resulted in full or partial semantic acceptability. Therefore, many of Paul’s miscues while reading TLP still carried meaning in the context of the passage. There is also evidence of this in his moderate Graphic and Sound Similarity scores. Although Paul’s reliance on the semantic cueing system was weak, he was able to make personal connections.

Moreover, Paul made noticeably more predictions that appeared to be based on his existing schemata about fishing. In fact, his activated schemata about fishing may have made it unnecessary to employ confirming strategies other than reading beyond a miscue to gather more information. When considering Paul’s Reading Profile of the TLP from a holistic perspective, though, he did not efficiently or effectively construct meaning on the basis of all the cueing systems while reading TLP.

**Summary of Paul’s reading of NOcT compared to TLP.** Despite not reading the NOcT or the TLP with proficiency, there were subtle differences in Paul’s approach to the TLP, which enabled him to make more meaning with this text compared to the NOcT. First, Paul used the syntactic cueing system with slightly more efficiency with the NOcT than with the TLP. The language structure of the NOcT was more predictable for Paul. Second, he was able to use the semantic cueing system of the TLP with slightly more effectiveness. This means that more of the content-specific words in the TLP were in Paul’s speaking vocabulary. Third, because more words in the TLP were in Paul’s speaking vocabulary, he was able to use the confirming strategy of reading beyond a miscue for more information to clarify the meaning he was making. While reading both texts, though, Paul had significant difficulty with the content-specific vocabulary. Fourth, Paul’s slight increase in use of the semantic cueing system with the TLP
compared to his use with the NOcT allowed him to rely less heavily on the graphophonic cueing system to make predictions. Fifth, Paul made slightly more self-corrections while reading the TLP than while reading the NOcT. However, his corrections with both texts were largely function words (i.e., a for the, of for on, to for the), which added little or no meaning to the passage. Finally, although his ability to retell the passages was nearly the same, Paul appeared to interact on a more personal level with the TLP than he did with the NOcT, probably because he could relate to the content on a personal level.

Case #2 – Hunter

Hunter (Student 8) is a fourth grade boy, who was identified as having a SLD through a multi-factored evaluation during the 2007-2008 academic year when he was in first grade. His chronological age at the time of this study was 11 years 3 months. Hunter lives with his parents and two brothers. Hunter said he enjoys roller coasters and Diary of a Wimpy Kid books. Hunter was very quiet and obliging during the oral readings and interviews. At times during the interviews it was difficult to elicit detailed responses from Hunter, because he did not express his thoughts in complete sentences. Hunter was selected for this in-depth analysis because, unlike Paul, he appeared to make more meaning while reading NOcT than TLP.

According to Hunter’s IEP, he was medically diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). For some time he had been receiving specialized services for reading comprehension and mechanics related to written expression. Hunter’s IEP also stated that he had a tendency to ignore details and rush through his school work. He demonstrated strength in math problem solving skills, spelling, and
basic reading skills. His intervention specialist said that based on the school’s basal materials, Hunter was reading at the early fifth grade developmental level. She also said that Hunter had detailed knowledge about certain topics. Hunter’s IEP corroborated this, noting that he was curious and sought information about topics in which he was interested. His most recent Ohio Achievement Assessment (OAA) scores from fall 2010 suggested he performed at the Basic level on reading tasks during that assessment, which is below the Proficient level he demonstrated in spring 2010.

Hunter’s meaning construction while reading TLP. When given a choice of which text to read first, Hunter selected the TLP entitled “Fishing Trip.” When he was asked why he chose that one, he said, “I don’t know.” Table 10 shows Hunter’s Reading Profile, which lists his scores within Meaning Construction, Grammatical Relations, Graphic Similarity, and Sound Similarity. These scores show that Hunter was heavily reliant upon graphophonic cues, as evidenced by the 95% High (+) Some Graphic Similarity and 85% High (+) Some Sound Similarity. Both of these scores are higher than his Meaning Construction No Loss (+) Partial Loss score of 36% and his Grammatical Relations Strength (+) Partial Strength (+) Overcorrection score of 52%, which suggest he was not using the language systems or reading strategies proficiently.

The analysis of Hunter’s grammatical relations while reading the TLP evidence two themes. First, Hunter use of syntactic cues was weak. According to the Reading Profile, Hunter had low strength in Grammatical Relations, as shown by the 52% Strength (+) Partial Strength scores. This means that barely more than half his predictions sounded like spoken language, indicating that Hunter made some syntactic predictions that moved him along in the text. For example, lines 4-5 of the passage read:
“I had so much anticipation building in me that the drive seemed interminable.” Hunter, however, said, “I had so much expansion building in me that the drive seemed interble.” Similarly, line 12 reads: “Our captain was very efficient,” but Hunter said, “Our captain was very infinite.”

Table 10

_Hunter’s reading profile while reading TLP_

<table>
<thead>
<tr>
<th>Meaning Construction</th>
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<tbody>
<tr>
<td>No Loss</td>
<td>16%</td>
<td>36%</td>
</tr>
<tr>
<td>Partial Loss</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Loss</td>
<td>64%</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Grammatical Relations</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>16%</td>
<td>52%</td>
</tr>
<tr>
<td>Partial Strength</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Overcorrection</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Weakness</td>
<td>48%</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Graphic Similarity</th>
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<tbody>
<tr>
<td>High</td>
<td>70%</td>
<td>95%</td>
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<tr>
<td>Some</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>5%</td>
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<table>
<thead>
<tr>
<th>Sound Similarity</th>
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<th></th>
</tr>
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<tbody>
<tr>
<td>High</td>
<td>55%</td>
<td>85%</td>
</tr>
<tr>
<td>Some</td>
<td>30%</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>15%</td>
<td></td>
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</tbody>
</table>

In the first example, Hunter used nonsense words that fit the part of speech of the expected response; that is, a noun and an adjective. In the second example, Hunter substituted infinite for efficient; both words were adjectives. In both examples, Hunter was aware of the syntactic structure of the text, and he was able to make predictions that kept this structure. Thus, while Hunter was making predictions he attended to how his reading sounded in the context of the language he uses. However, this attention was low
compared to the other areas of his reading profile, especially when considering its impact on meaning construction.

Hunter’s observed responses indicated that he had very few self-corrections while reading TLP. Of the 13 miscues coded as *Strength (+)* *Partial Strength*, three were the result of corrections. These three miscues included two insertions and a substitution using a nonsense word. The remaining uncorrected miscues involved substituting pronouns, content vocabulary words, and mostly nonsense words for the actual text. While all of these miscues fully or partially preserved the grammatical structure of the sentences, almost half of them did not preserve the meaning of the sentence.

The second theme that emerged from the analysis of Hunter’s grammatical relations while reading the TLP was his tendency to read for accuracy. Hunter’s score of 48% *Weakness* in Grammatical Relations indicates that nearly half of his sentences did not sound like language and, more importantly, did not make sense in the context of the passage. Consequently, Hunter was not efficiently using the syntactic cues at the beginning or end of the sentence to make predictions. Moreover, these miscues were mostly syntactically and semantically unacceptable. Many of his predictions were based on previously read grammatical structures or content. For example, lines 19-20 read: “With a few nibbles here and there, the day passed quickly,” but Hunter read, “With a few nibbles *were* and there, the day passed quickly.” The substitution of *were* for *here* is syntactically and semantically unacceptable. It appeared that Hunter predicted that a verb should come at the beginning of the sentence, which was the pattern throughout the text. In any case, the substitution makes no sense and suggests that Hunter is not constructing meaning from the passage.
When Hunter lost the syntactic and semantic structure of a sentence, it appeared that he most frequently relied upon the graphophonic cues to make predictions. For example, lines 12 reads, “Our captain was very efficient and got us right to work,” but Hunter read, “Our captain was very infinite and got just right to work.” The substitution in question is just for us. The word just does not fit the syntax or semantic structure of the sentence, but it does contain the word us. It appeared that Hunter said the first word he knew that looked and sounded like the expected response. Thus, Hunter’s goal while reading the TLP was to identify the words.

Hunter’s meaning construction while reading the TLP evidenced two themes. First, Hunter’s use of semantic cues in the passage was weak. According to the Reading Profile, Hunter had low Meaning Construction, as shown by the 36% combined No Loss and Partial Loss. Of the 16% that resulted in No Loss, three of the four miscues were self-corrections. One of the corrections involved a substitution of a nonsense word and two involved an insertion of a pronoun and a preposition. The fourth uncorrected miscue was the only high-quality miscue.

Of the six miscues that resulted in the 20% Partial Loss of meaning two of the five miscues were because Hunter changed the structure of the sentence by changing the location of the end punctuation. For example, lines 18-20 read: “His stories may have been exaggerated, but I enjoyed listening to them. With a few nibbles here and there, the day passed quickly.” Hunter, however, read: “His stories may have been exstrange but. I enjoyed listening to them with a few nibbles here and there. The day passed quickly.”

The way he reconstructed the two sentences involved minimal meaning loss. In the first sentence, it appears as though Hunter said exstrange but in a way that describes
the father’s stories. If that was the case, it was logical that he would end the sentence there because that would be the end of a subject-verb-object pattern in the sentence. He even may have interpreted *exstrange but* as a positive characteristic of the father’s stories because the following sentences suggest the girl enjoyed them. The remaining three miscues coded as *Partial Loss* involved a content vocabulary word, a pronoun, and an insertion of a conjunction.

The *No Loss* and *Partial Loss* miscues described within the context of Hunter’s Meaning Construction comprise only nine of the 25 coded miscues. Of these nine that were corrected or uncorrected, five involved function words. Most of these miscues, though, made some change in the grammatical structure and meaning of the sentence. Therefore, Hunter’s low number of high-quality miscues, self-corrections and miscues coded as Partial Loss of meaning suggest he was not effectively reading for meaning.

The second theme that emerged from Hunter’s meaning construction while reading the TLP was his minimal use of schemata. Hunter’s Reading Profile indicates that 64% of his miscues were coded as a *Loss* of meaning. Most of these miscues involved substituting nonsense words and content-specific vocabulary that were unrelated to the meaning in the original text. For example, line 17 reads: “My dad regaled me with stories of past fishing trips,” but Hunter said: “My dad *reglad* me with stories of past fishing trips.” In this example, Hunter substituted the nonsense word *reglad* for *regaled*, which fit the syntactic structure but it did not make sense.

Yet, there is some evidence that Hunter’s schemata about fishing were activated while reading. Like Paul, Hunter’s nearly equal use of actual and nonsense words implies this possibility. As noted earlier, line 16 read: “It was pleasant waiting for our
bait to tempt some aquatic creature.” Hunter said: “It was pleasant waiting for our bite to tempt some aquit capture.” These substitutions appear to have no syntactical or semantic acceptability. Yet, the actual words bite and capture fit the context of the previous sentence that says,

We organized the rods, reels, lines, and bait, and once the captain cut the engines, we cast our lines into the sea.

It would make sense, then, that the next line might talk about a fish that might bite and it may be a size they could capture. Although these miscues were both syntactically and semantically unacceptable, as predictions they did fit the context of fishing, and perhaps even Hunter’s personal experience fishing. Another example that may be evidence that Hunter schemata was activated involves lines 9-10, which read: “After carefully comparing prices and sizes,” but Hunter read: “After carefully comparing pieces and sizes.” The substitution of pieces for prices is identical to Paul’s, and it does make sense that one might compare pieces of an item or items. This prediction would come from Hunter’s knowledge of human behavior. In this example meaning was only partially lost. It is significant, however, that these two instances in which schemata may have been used to construct meaning were infrequent within the 25 coded miscues.

Perhaps Hunter lacked adequate schemata about fishing and this hindered his meaning construction while reading TLP. For example, in the RMI aided retelling, he also recalled that the father and daughter went fishing and then they went home. Interestingly, he added that they “built fishing rods, I think.” He constructed this detail from lines 12-13 that read: “Our captain was very efficient and got us right to work preparing our equipment.” When Hunter was asked, “What questions were you
wondering about as you read the story?,” he said, “How do you make fishing rods?”

Therefore, it appeared that Hunter had some prior knowledge about fishing (i.e., he made substitutions such as *bait* and *capture*), but perhaps minimal prior experience (i.e., he thought they made fishing rods before fishing). Moreover, the few text connections and his frequently uncorrected miscues on content-specific vocabulary suggest he was not effectively using the semantic cues of the text.

Hunter’s graphic and sound similarity scores while reading the TLP indicated that he heavily relied upon this cueing system. Hunter’s scores in Graphic Similarity are *High* 70%, *Some* 25%, and *None* 5%. His scores for Sound Similarity are *High* 55%, *Some* 30%, and *None* 15%. Like Paul’s scores, these scores indicate Hunter was heavily reliant on the surface feature of text (Goodman, Watson, & Burke, 1987). Many of Hunters miscues matched the beginning and ending graphics of the expected response. For example, he substituted *interble* for *interminable*, *exstrange* for *exaggerated*, *chatnter* for *charter*, and *capture* for *creature*. Although many of the words sounded like spoken language, most of them did not make sense. The very few miscues coded as *None* in both categories suggest Paul was most concerned about identifying words than reading for meaning.

The analysis of Hunter’s use of reading strategies while reading the TLP shows his confirming strategies were weak. Similar to the other cases in this study, Hunter did not use the self-correcting strategy with proficiency. He made only three corrections out of 25 coded miscues. There was no evidence of repetitions or pausing as strategies to confirm or disconfirm the meaning he was constructing.
It is evident that reading beyond miscues was the most frequently used strategy. Hunter read past an average of six miscues, with a range of six to 11, before attempting to self-correct. However, his low Meaning Construction score and his weak retelling scores suggest he did not use this strategy to confirm or disconfirm text. Rather, Hunter read beyond miscues to simply identify words, with little regard to their intended meaning.

Two themes emerged from Hunter’s retellings after reading the TLP. First, his comprehension of the passage was low. Hunter’s comprehension score as rated in the 3-MRA was a one out of six. This score means he had minimal recall of only a fact or two from the passage. His RMI score, which involved an aided and unaided retelling, was “5” out of “10.” He was able to recall the characters in the story, but he was not able to describe the main character’s development with much detail. He described her as “bored in the beginning” and “happy at the end,” with no detail to explain why.

He also struggled to describe the events in the story. He was able to recall that they went on a trip and stayed in a hotel. Again, he was not able to provide more details. Hunter read this passage at an Instructional level with 93% accuracy. He also read it at a rate of 96 CWPM, which is equivalent to the winter of fifth grade. His expression was rated 50%. Despite reading at such a rapid pace, Hunter’s retellings had minimal detail even when prompted. It appeared that, although Hunter read the passage at a high reading rate with high accuracy in word identification, he did not comprehend the passage. These data analysis results confirm that Hunter’s primary reading goal was to identify words accurately rather than to construction meaning.

The second theme that emerged from Hunter’s retellings of the TLP was his low interest in the text content. Hunter may not have constructed much meaning from the
TLP because this text may not have represented the genre he prefers. In an interview, Hunter shared that he enjoys reading *Diary of a Wimpy Kid* books, which are fiction, although other comments indicate that he appeared to prefer nonfiction. When he was asked what he reads in the classroom, he said, “Books that ain’t real.”

When he was asked why he liked reading the TLP, Hunter said, “Because it was exciting…it was fun,” in a quiet voice with a tone that was flat and seemed automated. When he was asked why it was fun, Hunter said, “Because of the end.” It is striking that he did not expand on the comment by identifying a specific feature of the story’s end that he enjoyed. By contrast, when Hunter was asked why he enjoyed reading the NOcT, which was nonfiction, his face visibly lit up and he said, “Because it was discovering.” When pressed for more detail he said, “There was more a lot about…because it was about birds.” These comments suggest that although Hunter said the TLP was easy to read, he perhaps was not interested in what he was reading. This disinterest may have contributed to the paucity of meaning he constructed from the text.

In summary, Hunter’s ability to predict on the basis of all the language cueing systems while reading TLP was weak. When Hunter was reading the TLP, he did not effectively rely upon either semantic or syntactic cues to make predictions. Instead, he often relied upon the graphophonic features of the text. Hunter also frequently read beyond miscues without monitoring his comprehension. It appeared that Hunter often read to “get” the word, especially content-specific vocabulary. This conclusion was supported by his poor retelling scores. When considering Hunter’s Reading Profile holistically, he did not efficiently or effectively construct meaning while reading the TLP.
However, a contributing factor may have been that Hunter lacked adequate schemata for or interest in the topic or genre.

_Hunter’s meaning construction while reading NOcT._ Table 11 shows Hunter’s Reading Profile for NOcT, which lists his scores within Meaning Construction, Grammatical Relations, Graphic Similarity, and Sound Similarity. These scores show that, similar to his experience reading TLP, Hunter heavily relied upon the surface features of the text, lengths and graphic shapes of words to predict unfamiliar words while reading NOcT, as shown by the 95% High (+) Some Graphic Similarity and the 84% High (+) Some Grammatical Relations.

Table 11

_Hunter’s reading profile for NOcT_

<table>
<thead>
<tr>
<th>Meanings</th>
<th>Construction</th>
<th>No Loss</th>
<th>Partial Loss</th>
<th>Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strength</td>
<td>40%</td>
<td>52%</td>
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<tr>
<td>Partial</td>
<td></td>
<td>12%</td>
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<tr>
<td>Strength</td>
<td></td>
<td>48%</td>
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<tr>
<th>Grammatical Relations</th>
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<tbody>
<tr>
<td>Strength</td>
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<td>Partial Strength</td>
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<tr>
<td>Overcorrection</td>
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<td>Weakness</td>
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<td>Strength</td>
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<td>Partial Strength</td>
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<td>Overcorrection</td>
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<td>Weakness</td>
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<table>
<thead>
<tr>
<th>Graphic Similarity</th>
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<tbody>
<tr>
<td>High</td>
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<tr>
<td>High</td>
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<td>Some</td>
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<table>
<thead>
<tr>
<th>Sound Similarity</th>
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<tr>
<td>High</td>
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<tr>
<td>Some</td>
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<tr>
<td>None</td>
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</table>

Two themes emerged from the analysis of Hunter’s grammatical relations while reading the NOcT. First, he moderately used the syntactic cues in the passage. According
to the Reading Profile, Hunter has moderate strength in Grammatical Relations, as shown by the 76% Strength (+) Partial Strength score. This score is evidence that Paul made more reasonable predictions based on the syntactic cues in the NOcT. Specifically, Hunter made twice as many syntactically acceptable predictions while reading the NOcT, which is represented by the 40% Strength in Grammatical Relations. Seven out of ten of the syntactically acceptable predictions were the result of successful corrections. This means that Hunter was attending to the syntactic and semantic structure of the text, and consequently building meaning. For example, the lines 12-14 read: “He learned as much as he could as quickly as possible so he could share the information,” but Hunter said: “He learned as much as he could as quickly as possible he could share the information.”

Initially, Hunter had omitted the word so, which may have been a result of predicting there was a period between possible and he (even though his intonation did not suggest this). As he continued to sample the text he may have perceived that he was not capitalized, and thus did not start a new sentence. He then appropriately attached the coming phrase with the previous part of the sentence by correcting his omission, so it sounded like a complete sentence and also made sense.

Another example also illustrates Hunter’s attention to the syntactic cues of the passage. Lines 2-3 read: “But it wasn’t until he was 10 years old that he discovered a passion for birds.” Hunter, however, said: “But it wasn’t until he was 10 years old he discovered a passion for birds.” Hunter omitted the word that, which meant that the first part of the sentence until the word old stood alone as a dependent clause. Initially, Hunter predicted a new sentence by reading a noun (i.e., he) after the independent clause, but his prediction was disconfirmed as he continued to sample the text. He then corrected
his omission by reading the word *that*, which served as a relative pronoun to connect both clauses in the sentence. By doing this, the sentence sounded like spoken language and Hunter also preserved the meaning of the passage. Thus, Hunter’s knowledge of language helped him construct syntactically acceptable sentences that were also semantically acceptable.

Hunter also used nonsense words to preserve the grammatical structure of the sentence. Nonsense words accounted for nearly all the miscues comprising the 36% Partial Loss in Grammatical Relations. The use of nonsense words that fit the grammatical structure of the sentence shows that Hunter had a sense of what parts of speech were needed in different positions in the sentence, yet demonstrates that he was not attending to meaning. The nonsense words he substituted for actual words involved nouns, action verbs, and one adverb. For example, lines 4-5 read: “David went to a birthday party at a bird sanctuary,” but Hunter said: “David went to a birthday party at a bird saditary.” Hunter appeared to know that the word bird in this sentence was used as an adjective and, therefore, it must modify a noun. Thus, he said the word *saditary* that looked and sounded like the noun *sanctuary*.

The second theme that emerged from the analysis of Hunter’s use of grammatical relations while reading TLP was his minor difficulty with grammatical shifts. Hunter only had six miscues that resulted in loss of syntactic acceptability, represented by the 24% Weakness in Grammatical Relations. Most often the miscues involved substitutions of different parts of speech for verbs or nouns. It appeared that Hunter did not adjust to the shift in tense or quantity when he made a prediction. For example, line 17 reads: “He now speaks with great knowledge about how hummingbirds,” but Hunter said: “He knew
speaks with great knowledge about how hummingbirds.” The previous sentence in the passage was past tense, using the phrase grew to understand. Hunter then predicted the sentence in line 17 to be past tense, also. Even in cases such as this, Hunter was using his knowledge of language, but he did not adjust to grammatical shifts in this passage.

Of these six miscues, three miscues had high graphophonic similarity and two had no graphophonic similarity (the sixth miscue involved an omission). When considering the minimal number of miscues that resulted in Weakness in Grammatical Relations and that only half had high graphophonic similarity, it appears that Hunter was reading for meaning more than trying to merely identify words.

Three themes emerged from Hunter’s meaning construction while reading NOcT. First, his use of semantic cues in the passage was moderate. According to Hunter’s Reading Profile 40% of his miscues resulted in No Loss of Meaning Construction. Of the 10 miscues that resulted in No Loss, seven were self-corrected. Most of his corrections involved function words, such as articles, prepositions, conjunctions, and adverbs. The remaining three miscues coded as No Loss were high-quality miscues that did not change the syntactic or semantic structure of the sentence. These miscues involved end punctuation, verb tense, and an article. Thus, Hunter had 10 miscues that were corrected or high quality. This amounts to nearly half the miscues in the coded section. Moreover, these miscues were mostly function words that did not alter the meaning of the passage. Consequently, Hunter was applying his knowledge of the syntax and semantics to construct meaning with considerable strength.

The second theme that emerged from Hunter’s meaning construction scores while reading the NOcT was his minimal use of schemata. Two corrections stood out because
they showed Hunter’s attention to the semantic cues of the text to form personal connections with the text. Line 17 reads: “He now speaks with great knowledge about how hummingbirds pollinate flowers.” Hunter initially said: “He knew speaks with great knowledge about how hummingbirds pollute flowers.” Hunter’s substitution of pollute for pollinate fits the grammatical structure of this phrase. Thus, Hunter’s self-correction of this miscue indicated that he recognized that this prediction did not make sense in the context of the passage.

The second example was at the end of the sentence, which extends into line 18. It reads: “… and how birds of prey capture rodents.” Hunter, however, said: “and how birds for prey capture rodents.” In this example, the substitution of the word for for of resulted in syntactic acceptability and partial semantic acceptability. Yet Hunter corrected this miscue, perhaps based on his knowledge of animal behavior. That is, birds of prey capture other animals. However, there were few observations of Hunter applying schemata about the content of the passage predictions and self-corrections while reading the NOcT.

The final theme that emerged from Hunter’s meaning construction scores was his ability to make sense of nonsense words. Hunter substituted eight nonsense words for content-specific vocabulary while reading the NOcT. All of Hunter’s substitutions that involved nonsense words were coded as having no semantic acceptability, represented by the 48% Loss of Meaning Construction. Yet, all of the nonsense words resulted in either full or partial syntactic acceptability. The miscues that resulted in full syntactic acceptability may have allowed Hunter to construct the essence of the word and construct some meaning in the sentence or context of the passage. For example, when Hunter
substituted *saditary* for *sanctuary*, he most likely interpreted *saditary* as a noun based on the context of the sentence (“the kids in the party toured the sanctuary”). Hunter was able to hypothesize that if a group of children can take a tour of it, a *saditary* must be a big place. In the aided retelling, when Hunter was asked if he learned anything new, he said “Birds can be nice. You can go to a *saditary* and work for them.” From the grammatical structure of the sentence and the context of the passage, Hunter constructed the meaning of *saditary* as a place for birds where a person can work. Perhaps Hunter was able to construct the essence of some of the nonsense words, even though they were not pronounced correctly (Weaver 2002).

Hunter’s graphic and sound similarity scores while reading NOcT indicated that he heavily relied upon this cueing system. Hunter’s scores for Graphic Similarity are 79% *High*, 16% *Some*, and 5% *None*. His scores for Sound Similarity are 79% *High*, 5% *Some*, and 16% *None*. The combined scores for the 95% *High (+)* Some Graphic Similarity and 84% *High (+)* Some Sound Similarity are high. These scores indicate that Hunter was heavily reliant upon the surface features of text as well as the sounds of the words he was producing to make predictions. Most of these miscues had similar letters at the beginning and end of the word, and some of the miscues had similar medial letters. For example, Hunter substituted *expectedly* for *especially*, *constucting* for *conducting*, *red-bleast* for *red-breasted*, and *internacts* for *interacts*. This pattern of miscues suggests that during Hunter’s interaction with the NOcT, he frequently attempted to read words accurately.

The analysis of Hunter’s reading strategies indicated that he used the confirming strategy of reading beyond miscues. Hunter had twice as many successful self-
corrections while reading NOcT than he had with the TLP. This increase in the number of corrections suggests that Hunter was more focused on reading in a manner that not only sounded like language but also made sense. Moreover, when the text did not make sense, he self-corrected. Three of Hunter’s corrections were coded as having partial semantic acceptability, and three of the corrections were codes as having full semantic acceptability. This is evidence that Hunter was paying attention to the meaning he was constructing while reading the NOcT. Yet, the attempts were infrequent compared to the 25 total coded miscues. Furthermore, Hunter did not demonstrate the strategies of pausing and repeating, except in the instances of the successful and unsuccessful corrections.

Hunter most often applied the strategy of reading beyond miscues to confirm or disconfirm predictions. He read past an average of two miscues with a range of 0-4. In addition, his miscues were not clustered in the text, which may have supported his ability to gain essential meaning from the miscues by reading beyond them for more information. Thus, Hunter may have silently confirmed or disconfirmed predictions as he continued to sample the text. For example, lines 7-8 read: “David asked question after question of owner Kem Appell,” but Hunter read: “David asked questions after question of their them Appell.” In this sentence, Hunter’s substitution of their for owner was neither syntactically nor semantically acceptable. Yet, in Hunter’s aided retelling he indicated that “the guy who runs the place told [David] he could take care of the birds.” It is evident that when Hunter read past the miscue, he silently constructed the meaning of the word owner that was acceptable within the context of the passage.
The analysis of Hunter’s retellings after reading the NOcT evidenced three themes. First, Hunter’s comprehension of the passage was moderate. Hunter’s retelling of the NOcT as rated by the 3-MRA Comprehension rubric was “3” out of “6”, which was slightly higher than the average across cases. Hunter was able to recall the main idea with a few supporting details. He was able to remember that the boy in the story likes reptiles, amphibians, and birds. He also recalled that the owner of the sanctuary told the boy he could take care of the birds. On the RMI retellings, Hunter scored “6” out of “10”, which was slightly lower than the average across all cases. Hunter had the most difficulty recalling the Specifics (i.e., facts and details) from the passage, scoring two out of four.

Hunter was most successful recalling Generalizations and Major Concepts, scoring two out of three in both areas. The Generalizations he made were: (a) The boy liked animals, especially birds and (b) the boy wanted to take care of the birds. The Major Concepts he extracted from the Generalizations were: (a) you can take care of animals, and (b) you can work where they take care of animals. Although Hunter was not able to recall many details from the passage, his Generalizations and Major Concepts indicate he was able to use the language cueing systems with enough effectiveness to identify what the passage was generally about and apply those ideas to life outside the school context.

The second theme that emerged from Hunter’s NOcT retelling scores was his difficulty with the content-specific vocabulary. Hunter’s fluency scores indicate this text was more difficult to read than the TLP. He read the NOcT with 86% accuracy, which was at a Frustration level. He read 69 CWPM, which is a rate that is equivalent to the fall
of third grade. His expression was rated 50%. One impediment to his meaning-making was the vocabulary load in the passage. There were critical terms for which Hunter lacked familiarity with either the concept or the word label. When Hunter was asked if he learned any new words, for example, he immediately pointed to the words *amphibians, ecosystems,* and *Connecticut* within the text. He and the researcher spent a considerable amount of time discussing the meaning of each word and where the word might be seen again. It can be surmised that while reading the NOcT, Hunter had been questioning key vocabulary words. During the In-Depth interview, he also indicated that the NOcT was more difficult to read because the word were harder and “it was longer.”

The third theme that emerged from Hunter’s NOcT retelling scores was his interest in the text content. When asked which text he preferred reading, he said the NOcT because, “It had more life to it. More real stuff. What happened really in real life.” It appears that even though Hunter applied minimal schemata in the form of personal knowledge or experience to construct meaning from this passage, Hunter was more interested in this passage than the TLP because it represented the nonfiction genre. Thus, Hunter made more meaning from a text that was more difficult to read because it was a high-interest text.

In summary, Hunter was able use semantic cues with some effectiveness in his reading of the NOcT. Although he had minor difficulty with grammatical shifts in tense and quantity, Hunter demonstrated that he could make reasonable syntactic predictions that also made sense. Hunter’s heavy reliance upon the graphophonic cues of the text indicates preference for the surface features of a text when predicting words. Interestingly, Hunter demonstrated in his retelling that he could determine the essence of
the intended meaning through his use of nonsense words. Despite Hunter’s difficulty reading the text, as evidenced by his accuracy and fluency scores, he was able to construct more meaning from the NOcT. One important contributing factor to this observation may have been Hunter’s high-interest in this text. Although Hunter constructed meaning while reading the NOcT, his scores, holistically, show that he did not read this text with proficiency.

Summary of Hunter’s reading of NOcT compared to TLP. Like Paul, Hunter did not read the NOcT or TLP with proficiency. There were, however, significant differences in his approach to the NOcT that enabled him to construct more meaning while reading this text compared to the TLP. First, Hunter was able to use both the semantic and syntactic cueing systems of the NOcT to make more acceptable predictions. Hunter was not only able to predict the grammatical structure of the NOcT with more success but also able to preserve more meaning from his predictions. Second, Hunter made slightly more self-corrections while reading the NOcT. Yet, the self-corrections made in both texts were largely of function words (e.g., he for the) that added little to the meaning of the passage. Third, although Hunter had difficulty with the content-specific words in both texts and many predictions were nonsense words, he was able to determine the essence of these words in the NOcT by reading beyond the miscue for more information. This also suggests Hunter was relying more on the semantic cueing systems with the NOcT, a tendency he did not display with the TLP. Fourth, Hunter’s retelling scores indicate that he constructed more meaning with the NOcT. Although he did not recall many details, Hunter was able to generate more main ideas with the NOcT. Finally, Hunter’s interest in the text may have enabled him to construct more meaning.
This observation suggests that a critical component of Hunter’s meaning-making process is the congruence of a passage topic and Hunter’s interest.

Summary

The purpose of this study was to explore how elementary students with SLD made meaning while reading leveled naturally occurring text (NOcT) and traditional, leveled passages (TLP). Data sources included documents, assessments, and interviews. Upon completion of data collection, qualitative analysis procedures were used to identify common themes across data sources. Specifically, the researcher used miscue and retelling data from the Reading Miscue Inventory (RMI) by Goodman, Watson, & Burke (1987), as well as retelling data from the 3-Minute Reading Assessments (3-MRA) by Rasinski & Padak (2005) as the primary data sources to analyze how students made meaning using the different types of text. To deepen the understanding of the findings from these data sources, three additional sources were analyzed: (a) the 3-MRA reading accuracy and fluency data, (b) student interview responses, and (c) field notes on the students’ spontaneous verbal and/or nonverbal behaviors while interacting with each type of text. While the researcher collected data on all students in this study, two students were selected for in-depth analysis.

The data analysis for the first question, which asked how students with SLD construct meaning while reading NOcT, revealed two major themes. First, the students were able to predict the syntactic structures of the NOcT with moderate success. However, the students were not able to construct effective meaning from these predictions. The unfamiliar content-specific words used in the NOcT passages inhibited
the students’ accuracy and fluency while reading and promoted their over-use of nonsense words.

Second, although the articles in the NOcT (except for “Blue Line”) were topics of interest typical of this age group (i.e., sports and science, Sturm, 2003), interacting with NOcT was relatively new to many of the students. They exhibited difficulty predicting the vocabulary and, thus, making personal connections with the text. This may have been a contributing factor to the weak meaning construction across the cases.

The findings from the data analysis of the second question, which asked how students with SLD construct meaning while reading the TLP, also revealed two major themes. First, the students with SLD attended only slightly more to the syntactic cueing system than the semantic cueing system. Both scores, however, are weak when compared with their attention to the graphophonic cueing system. The students demonstrated a tendency to make substitutions involving nonsense words and/or content-specific words that were not semantically acceptable in the sentence or passage. The students’ infrequently used reading strategies that support comprehension by confirming or disconfirming miscues, as well as their moderate retelling scores.

Second, even though there was considerable Loss of meaning while reading TLP, the students were able to use the semantic cueing system with some effectiveness. They constructed the essence of nonsense words to build meaning in the passage. In addition, they were able to read the passage with more accuracy and fluency, indicating that many of the content-specific words were already in their speaking vocabulary. Therefore, their use of the semantic cueing system enabled the students to identify pertinent life or literary experiences related to the passage.
A comparison of the themes that emerged from the data indicates that the students with SLD approached both texts similarly. They exhibited over-reliance on the graphophonic features of the text and the syntactic cueing system. The over-reliance on these systems resulted in the high usage of nonsense words and self-corrections of function words. Thus, the students did not monitor their comprehension while reading either text. After analysis of the data sources, it was concluded that the students with SLD were not effectively or efficiently constructing meaning from either text.

The comparison of the themes also revealed differences in how students constructed meaning while reading both texts. The students were better able to make syntactic predictions from the NOcT, but they exhibited difficulty making-meaning from these predictions. Thus, the TLP had more unpredictable language structures, but it had more words that were already part of the students’ oral vocabulary. The familiar vocabulary enabled the students to read the passage with more accuracy and fluency and make sense from the text. As a result the students’ schemata were more active and the students were able to make more personal connections with the TLP. However, the higher accuracy, fluency, and Meaning Construction scores across all cases with the TLP did not necessarily influence their text preference. The students most often chose a text with content to which they could personally relate, regardless of its difficult readability.

The third research question asked what the in-depth analysis of two profiles demonstrates in patterns of constructing meaning with naturally occurring text (NOcT) and traditional, leveled passages (TLP). This analysis showed that neither student read either the NOcT or TLP with proficiency. Yet, their scores indicated that they made more meaning with one type of text compared to the other. Paul was able to read the
TLP with more accuracy and fluency, which also enabled him to construct more meaning and make personal connections. Although, Hunter had more difficulty reading the NOcT, he made more syntactically and semantically acceptable predictions enabling him to build more meaning with this text. Across both cases, though, there was evidence of few strategies to confirm predictions, a high reliance on the graphophonic cueing system, and difficulty with content-specific vocabulary.

The findings from this study demonstrate that while reading the NOcT and the TLP, students with SLD showed an over-reliance on the graphophonic cueing system, and gave preference to the syntactic cueing system rather than the semantic cueing system. The influence of the natural language used in the NOcT enabled the students to make more syntactic predictions, yet the familiar vocabulary in the TLP facilitated more meaning construction. As an attempt was made to link these findings to what is presently known about the reading behaviors of student with SLD, theory was generated that is grounded in these data.
CHAPTER V

DISCUSSION: CONCLUSIONS AND IMPLICATIONS

. . . . I pulled out a piece of text to which Johnny could relate. It was text that was from his life outside school, his mainstream culture. When I placed the piece of naturally occurring text in front of him, he immediately sat up and became engaged in the text. His demeanor and attitude completely transformed. He read for me without complaint, without hesitation. I was able to get the data I needed to monitor his IEP goals, and Johnny enjoyed reading. It was a win-win situation.

This chapter is composed of four major sections. First, the summary of the study includes the purpose of the study, research questions, and the research methods used. Second, the results of this study are presented and are subsequently followed by the major conclusions in regard to the research questions. Next, implications are discussed, including implications for teachers, administrators, and curriculum developers. Finally, recommendations for further research are shared including recommendations for research in reading assessment, NOcT as a classroom text, and testing the grounded theory.

Summary of the Study

Purpose

Reading for meaning is the best strategy for reading (Keene & Zimmerman, 1997). To gain optimal meaning from the text, the reader must use reading strategies and the language cueing systems efficiently and effectively (Goodman, 1975). Yet, traditional, leveled texts used in the elementary classroom for assessment often have
contrived language (Goodman, 2003d), or they have been modified to fit the purposes of state- and district-wide assessments (IRA, 2009a). These characteristics of traditional leveled passages (TLP) can make it difficult for students with SLD, who experience weakness in skills necessary for reading, to use the syntactic and semantic cueing systems to make-meaning of the text.

The purpose, then, of this study was to investigate how students with SLD make meaning by using the different language cueing systems and reading strategies while reading TLP and naturally occurring texts (NOcT), a print type found in the students’ out-school-context known to help students who struggle with reading (Opitz, Ford, & Zbracki, 2006). NOcT have been used in research studies for a variety of purposes (Alvermann & Van Arnam, 1984; Bednarek, 2006; Goetz, 1992; Goodman & Bird, 2003; Hindle, 1988; McVee, Dunsmore, & Gavalek, 2005; Wolf & Gibson, 2004). However, research on using this type of print text for oral reading assessment in the elementary classroom was lacking. Therefore, it was important that this topic be explored.

Research Questions

The three guiding questions for this qualitative study were:

1. When assessed using leveled texts identified as “naturally occurring” (NOcT) in students’ daily lives, how do students with a specific learning disability (SLD) construct meaning from print?

2. When assessed using an informal reading assessment with traditional, leveled passages (TLP), how do students with a specific learning disability (SLD) construct meaning from print?
3. When assessed with both traditional, leveled passages (TLP) and naturally occurring texts (NOcT), what similarities or differences emerge in the meaning-construction patterns of two students with a specific learning disability (SLD)?

Methodology

In order to answer the research questions, this study used a descriptive, cross-case (Miles & Huberman, 1994) or multi-case design (Fraenkel & Wallen, 2006). The study took place in a kindergarten through Grade 5 elementary school in an urban school district in a Midwestern state. To find suitable participants, the researcher employed nonrandom, purposeful sampling techniques (Merriam, 1998) by using the district-wide information system to find students in grades three and four who were identified as having a SLD and who had an IEP with reading goals. Nine students were identified with these characteristics, but eight students assented to participate in the study. Each student with SLD represented a separate case.

The researcher gathered data from documents, assessments, and interviews. Specifically, the researcher used miscue and retelling data as the primary data sources to analyze how students made meaning using the different types of text. Additional sources were used to deepen the understanding of the findings from these data sources. The additional sources included accuracy and fluency data, interview responses, and field notes. Triangulation of data using multiple data sources and peer examination of the researcher-developed interviews and data were used to establish validity.

An iterative and dynamic process of data analysis was used to establish patterns through different data sources (Cresswell, 2002; Grbich, 2007). During the process of
data analysis, various themes emerged related to the research questions. Moreover, through the complex and ongoing process of analysis, new theory was generated for how students with SLD make meaning while reading NOcT and TLP.

Results of the Study

The following is a discussion of the findings of this study related to the research questions. The findings of the first and second research question are addressed by presenting the themes that emerged across the cases while reading each text type, as well as the similarities and differences between the themes of the different texts. The findings from the third question are addressed by describing what was learned from an in-depth, within-case analysis of two students.

*Meaning Construction while Reading NOcT*

Upon analysis of the data, two main themes emerged while the students with SLD read the NOcT. First, the students were attentive to the “sound” of their reading. That is, they relied heavily upon the graphophonetic cueing and syntactic cueing systems to ensure their reading sounded like spoken language. Often, the students would use nonsense words that looked and sounded like the expected response, yet they did not make sense. Although students with SLD typically experience difficulty with oral or written language (IDEA, 2004), the attentiveness to the syntactic features of the NOcT suggests the students predicted the language structures of the NOcT with moderate success.

The second theme that emerged was the students’ limited experience interacting with the NOcT. The results from the interviews showed that the students had difficulty navigating the NOcT article. The students also experienced weakness using the semantic
meaning construction while reading TLP

Upon analysis of the data, two main themes also emerged while students read the TLP. First, the students were more dependent on the graphophonic cueing system than the syntactic or semantic cueing systems of the TLP. The students frequently substituted nonsense and inaccurate content-specific words that were semantically unacceptable in the passage. Thus, the students did not use reading strategies to support their comprehension of the text.

The second theme that emerged was that although the students struggled with content-specific vocabulary, they recognized enough of these words to build meaning despite weak syntactic predictions. This means that the students had difficulty with the grammatical structures of the TLP, but they were able to read this text with a measure of accuracy and fluency to construct the essence of nonsense words and content-specific vocabulary. Hence, they were able to utilize the semantic structures of the TLP, which allowed them to make personal connections.

Similarities and Differences Across Both Texts

When comparing the themes of the texts across the cases, it was evident that there were similarities and differences for consideration. The first similarity was the students’

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When comparing the themes of the texts across the cases, it was evident that there were similarities and differences for consideration. The first similarity was the students’
over-reliance on the graphophonic cueing system while reading both texts. The students relied heavily on the physical and sound features of the text at the expense of the syntactic and semantic features. This was evidenced in the students’ tendency to substitute nonsense words for expected responses and self-correct function words. This finding implies that the students were relying upon their knowledge of phonics, an accepted method for teaching reading to students with SLD (Denton, Fletcher, Anthony, & Francis, 2006; Wanzek & Vaughn, 2007).

The second similarity in the themes of the texts across the cases was the students’ inadequate use of the semantic cueing systems of both texts. The students’ did not use the preceding or following context of the sentence or passage to make meaningful predictions. Hence, the students made many nonsense word substitutions. This type of frequent substitution resulted in the considerable loss of meaning while reading both types of texts.

The final similarity in how the students constructed meaning while reading both texts was their infrequent use of confirming strategies while reading. The students infrequently self-corrected or paused to consider the meaning they were building while reading the texts. This finding supports the findings from previous research regarding the common tendency of students with SLD to not demonstrate metacognition or exhibit strategic processes while reading (Gersten, Fuchs, Williams, & Baker, 2001).

Although the students with SLD approached both texts with similar reading behaviors, there were subtle differences. The students were better able to predict the syntactic structure of the NOcT compared to the TLP. The language structures of the NOcT were more familiar to the students. However, despite the familiar grammatical
structures, the students experienced more difficulty constructing meaning with the NOcT compared to the TLP. This finding suggests that there was more content-specific vocabulary that was part of these students’ speaking vocabulary in the TLP compared to that of the NOcT. Thus, the students were less dependent on the graphophonic features of the TLP.

Consequently, the students made more meaning with the TLP, which was also evidenced in their ability to make more personal connections. The students’ accuracy and fluency scores were higher for the TLP, which also supported their increased meaning construction. Yet, despite the relative ease while reading the TLP compared to the NOcT for all the cases, half preferred the NOcT over the TLP because they personally preferred the content.

Within-case Analyses

The results from the data analyses of both in-depth profiles indicate that Paul and Hunter did not read either the NOcT or TLP with proficiency. Yet, each case was able to better utilize the language cueing systems and reading strategies with one type of text than the other. Consistent with the other cases in this study, both Paul and Hunter were heavily reliant on the graphophonic features of the text, and they made more syntactically acceptable predictions with the NOcT. Paul, however, was not able to construct as much meaning from the NOcT as the TLP, while Hunter was able to construct more meaning with the NOcT. This means that Paul recognized more of the vocabulary in the TLP, and Hunter recognized more of the vocabulary in the NOcT. Both cases implemented more confirming strategies with the text in which they recognized more content-specific
vocabulary words. Paul appeared to prefer the TLP, which was the text he read with more accuracy and fluency. Interestingly, Hunter preferred the NOcT, which he read with less accuracy and fluency than the TLP, because of his interest in the topic.

Conclusions

Toward a Grounded Theory

The grounded theory approach to data analysis provides a meticulous method for analyzing qualitative data, as well as a frame of reference to reconstruct the context of an everyday setting. When data are constantly compared (Glaser & Straus, 1967) to other data, patterns or themes emerge. These themes ultimately lead to a “substantive” theory (Merriam, 1998) that is grounded in the data, one in which there is minimal prior knowledge and a need for a new theoretical explanation (Grbich, 2007). The current study sought to generate new theory to describe how students with SLD make meaning while orally reading TLP and while orally reading NOcT, an area in which there has been little research. A discussion of the tenets of this theory that emerged from the data follow.

Text types serve different purposes. TLP are commonly used in the elementary classroom for oral reading assessments, and they have beneficial purposes (Brabham & Villaume, 2002). This type of text encourages teachers to question how they select texts for reading instruction, basing the selection of the text on the appropriateness for the student. These texts also free teachers from dependency on grade-level materials that may not fit the needs of their students. In addition, data in this study demonstrated that students with SLD, who typically have difficulty with academic vocabulary, recognized
the content-specific words as part of their speaking vocabulary within the TLP. The recognition of these words facilitated meaning construction for these students while reading the TLP.

Within the literature, though, concerns have been addressed about the overuse of TLP in the elementary classroom. For example, teachers have the tendency to become inflexible in their use of texts outside the students’ reading level as assigned by a number or letter (Glasswell & Ford, 2010). Consequently, students often begin to read these texts for the teacher (Szymusiak & Sibberson, 2001) instead of having a meaningful transaction with the text and the social event (Rosenblatt, 1978). In addition to these concerns, the data in this study demonstrated that these students with SLD, specifically, did not recognize the grammatical structure of the TLP while orally reading. This means that this group of learners, who typically struggle with oral or written language, struggled with the syntactical organization of the sentences and the passage.

NOcT is not a text commonly used in elementary classrooms to assess students’ oral reading in order to drive instruction. This type of text, though, is commonly used for self-selected, independent reading (Cunningham & Allington, 2003) and to reinforce curriculum content (Flood, Lapp, & Bayles-Martin, 2000). NOcT is also often used in the classroom specifically to meet the needs of struggling readers (Opitz, Ford, & Zbracki, 2006). This study added to this body of research by using NOcT as a text for oral reading assessment. The findings of the study suggest that NOcT may be an appropriate text to assess the oral reading of students with SLD, because the language structures are more predictable, which is beneficial for these learners who typically
struggle with oral and written language. However, the vocabulary in these texts is more challenging, which hindered these students’ meaning-construction.

Furthermore, the TLP and the NOcT are able to serve different purposes in the classroom for students with SLD. This group of learners should interact with TLP, because it contains familiar vocabulary that enables meaning construction. This type of text is also written and organized in a manner consistent with other classroom-based texts that will allow students to navigate curriculum materials. The NOcT, though, specifically meets the linguistic needs of students with SLD, because they have difficulty with oral and written language (IDEA, 2004) and the NOcT preserves the more natural language structures to which these learners are accustomed.

*Critical role of schemata and interest.* Weaver (2002) stated that students’ schemata enable them to construct personal meaning from the text. These “mental files” provide focus and direction for helping children enhance their comprehension (Keene & Zimmerman, 1997, p. 51). The findings from this study demonstrated that the students’ schemata played a critical role in their ability to construct meaning from the TLP and NOcT. Specifically, across all cases, the students had more prior knowledge or experiences related to the TLP than the NOcT.

The data in this study also showed that the relative difficulty in readability of a text had little influence on the students’ text interest. This was evidenced in the data that showed that half the students preferred the NOcT, even though the students read it with less accuracy and fluency than the TLP. In fact, several students preferred the NOcT not because they had related schemata, but because they were simply interested in the new topic and thus desired to build new schemata.

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Role of schemata and topic in assessment. The idea of matching students’ schemata and interests with text content leads to an important conclusion for the current assessment-driven educational environment in the United States. Many students who struggle with reading, whether from a disability or another condition, often experience reading avoidance (Deeney, 2010; Powers, Hurt, & Dunathan, 1981). Students who experience reading avoidance have unsuccessful interactions with written materials, because the effort to coordinate multiple literacy processes is exhausting. Students with SLD are one such group who most often struggle with reading (Moats, 1995, 2004; Swanson, 1999). This struggle has been evidenced in the poor reading scores of students with disabilities in the Nation’s Report Card (NAEP, NCES, National Assessment Governing Board, IES, USDOE, 2010).

This current study showed that these students with SLD made more personal connections with topics in which they had more schemata or interest. In fact, in one case in this study, the student made increased meaning from a passage that was more difficult to read. Moreover, the match between students’ with SLD schemata and interests and assessment materials is critically important to support their ability to not only construct meaning, but to do so with difficult texts.

SLD students and meaning construction. The cumulative findings of this study demonstrate that ultimately students with SLD construct meaning while reading in predictable ways, ways that are similar to those of typically developing students. Each of these students, for example, was influenced by his or her interest in and prior knowledge of the topic. Each used the semantic, syntactic and graphophonic cueing systems to predict potential meanings. The new theory, then, that is grounded in the data suggests
that students with SLD are able to interact with different texts based on their understanding of the process of reading, and they can make word-level predictions using the language cueing systems.

Yet the findings in this study indicate that the students with SLD had an over-reliance upon the graphophonic cueing system with both NOcT and TLP texts. Perhaps because of this over attention to the graphophonic system, these students did not make adequate use of either the syntactic or semantic cueing systems. In fact, while reading the NOcT, these students did not rely on semantic cues at all. While reading the TLP, they were somewhat able to use the semantic cueing system, but only to predict nonsense words that “sounded” like real language.

Furthermore, results of this study clearly demonstrate that the type of text did not influence the students’ initial approach to the print text. All the students approached the text primarily by accessing the graphophonic cueing system. Instead, the type of text influenced their ability to access either the semantic or syntactic language cueing systems. Proficient readers are able to access all three cueing systems strategically and with more ease.

The research of Gersten, Fuchs, Williams, and Baker (2001) has found that instead of being deficient in skills, students with SLD have the tools to perform literacy tasks. Their tools, however, are not working efficiently or effectively. Results of this study add to their research by demonstrating that while the meaning-making process of these students with SLD is similar to that of typically developing students, the process was not “working efficiently.” Like all readers, these students were influenced by topic and context, activated schemata, and used the cueing systems to construct meaning.
These students were not, however, using meaning-making strategies “efficiently” or “effectively” with either NOcT or TLP text. In fact, while these students were deliberate in their approach, they over-used the graphophonic system and operated largely at the word identification level.

Spache (1972) and Spear-Swerling and Sternberg (1996) note that students with SLD will have this disability for a lifetime, but with appropriate instruction, they are capable of learning to read well. Results of this study suggest the soundness of this observation. The reading instruction of these students had focused chiefly on decoding words phonologically. Consequently, these students approached each text primarily through the graphophonic system. The other cueing systems were invoked less frequently. Moreover, as they approached text these students were not influenced by genre or other textual futures. Results of this study suggest that the reading instruction of students with SLD should, like good reading instruction for all students, emphasize a range of meaning-making strategies, include a variety of genres, and provide opportunities for students to read widely.

Implications

Results of this study offer implications for teachers, administrators, and curriculum developers.

Teachers

The findings and conclusions have important implications for teachers of elementary students with SLD. For the participants in this study, the match between the
topics of the passages used for oral reading assessment and the students’ personal knowledge and experience was essential in the meaning-making process while reading the NOcT and TLP. Just as important, though, was the match between the students’ interest in learning about new topics and passage selection. Moreover, this study highlights the importance of not selecting reading passages solely based on the scope or sequence of curriculum materials. Rather, teachers should choose materials that are not only developmentally appropriate in difficulty level, but also materials in which the students’ interest lie (Hansen, 1994; Stager, 2008). In addition, teachers should provide experiences with print representing a variety of genres and print types, including NOcT (Deeney, 2010; Duke, 2000). Magazines, in particular, include many types of writing on many different topics with varying lengths, which appeal to a variety of interests.

The findings in this study also demonstrated that students with SLD were able to better predict the language of the NOcT. Furthermore, this group of learners should have more intentional interactions with this type of print text during assessment and instruction. These findings follow the insights from Brabham and Villaume (2002) who suggest that print that lie outside of books offers readers the most insight into the meaningfulness of written language. Moreover, NOcT can provide an authentic experience with real language in the school context, which may act as an intervention for students’ with SLD weak oral and written language abilities.

The use of NOcT in the classroom, though, must be accompanied by instruction on how to interact with the expository texts. Research indicates that students in third grade have little knowledge about expository text structure, of which most NOcT is comprised, which hinders their comprehension of the text (Kamberelis & Bovin, 1999; Langer,
Thus, students often need a base of prior knowledge of a topic in an expository text, such as those included in typical NOcT, with its greater density of content for adequate comprehension (Best, Floyd, & McNamara, 2008).

This study suggests that teachers need to intentionally use NOcT in the assessment-to-instruction process. Yet, NOcT should not replace school literacy practices. This finding supports Myer’s (1992) research with students who read NOcT, which proposes that school and out-of-school literacy practices serve different purposes, both of which are valued by students. Both types of text in this study allow the students with SLD to access and utilize all language systems; they can privilege the NOcT to enhance their interpretation of natural syntactic speech patterns in written text, and they can privilege the TLP to utilize the semantic system (i.e., academic vocabulary).

Although the findings in this study showed that the students with SLD had more vocabulary from the TLP in their speaking vocabulary than the NOcT, the students had difficulty with the content-specific vocabulary or academic vocabulary in both texts. The students’ knowledge of academic vocabulary words and their meaning appeared to be a critical factor in the meaning-making process in this study. Academic vocabulary includes specialized terms that represent content areas, technical terms, and formal use of English terms that are more complex and abstract to which students are not typically accustom (Gunning, 2003). Consequently, instruction in word study should focus attention on the morphological as well as phonological characteristics of words (Nagy & Scott, 2000), with the goal of building metalinguistic awareness in students. Moreover, since a high percentage of academic and content vocabulary is of Latin or Greek origin,
instruction should include systematic study of roots (i.e., affixes and bases) (Padak, Newton, Rasinski & Newton, 2008).

Results of this study endorse the use of NOcT for the development of academic vocabulary. NOcT not only represents the out-of-school, sociocultural context, but this study also showed that this type of text contains more recognizable language structure. Moreover, teachers should pay increased attention to improving students’ with SLD academic vocabulary through oral language and writing, as well as connected text activities using NOcT.

Finally, the findings of this study demonstrated that students with SLD had an over-reliance on phonics and accuracy as a means of reading each type of passage, and they exhibited weakness in their application of strategies that facilitate meaning construction (e.g., self-correcting and pausing to reconsider the text). These findings are also a reflection of how the students defined reading as word calling rather than as meaning-making. It further demonstrated how an over-emphasis on phonics instruction can limit the students’ tools while reading. While phonics is a beneficial method for teaching reading and accuracy is one piece of fluent reading, these should be only small pieces of a reading program. Thus, teachers need to provide explicit and systematic instruction in phonics, but embedded in meaning-making strategies for students with SLD. A reading program with these components will equip students with SLD to have more meaningful transactions with different types of texts.

Administrators
This study showed the importance of using NOcT in the classroom to facilitate the use of natural language in texts used for assessment. These texts, however, are used mainly for self-selected reading (Cunningham & Allington, 2003; Opitz, Ford, & Zbracki, 2006). Thus, administrators need to support teachers in the intentional and meaningful integration of these materials into the elementary curriculum for use with students with SLD. Specifically, administrators should promote the use of both TLP and NOcT, which most often contain nonfiction and occasionally fiction passages, to meet the Reading Standards for Literature and Informational Texts, which are part of the Common Core State Standards (National Governors Association Center for Best Practices and Council of Chief State School Officers, 2010).

In addition, administrators should publicize how teachers can access NOcT in a cost effective manner. This can be done by purchasing curriculum materials that include NOcT (e.g., Treasures: Time for Kids, 2011), by informing teachers where these materials can be accessed via the World Wide Web, or by promoting the use of grants and funding available for teachers to purchase NOcT subscriptions.

Teacher Education

This study demonstrated how students’ understanding of the reading process can either promote or inhibit their ability to construct meaning from text. The students’ miscues and interview responses suggest that they understood reading as decoding words and not as making meaning. Thus, it is critical that pre-service teachers in regular education and special education programs have a conceptual understanding that reading is a meaning-making thought process (Smith, 1971), during which the reader must rely
upon and utilize the language cueing systems to make-sense of the printed text. To develop this conceptual understanding, teacher education programs need to include deliberate instruction on theory and practice of teaching reading and instructional practices that emphasize reading as the process of constructing meaning from an author’s encoded message represented graphically on a page (Goodman, 2003e), not just identifying letter-sound relationships.

**Curriculum Developers**

This study demonstrated the importance of integrating NOcT into curriculum materials for intentional use in the assessment-to-instruction process for students with SLD. NOcT, such as *Highlights* magazine, is beneficial for these learners, because it often contains multiple levels, providing parts that almost every student can read (Opitz, Ford, & Zbracki, 2006). However, NOcT does not easily transfer to classroom use for teachers. The readability of the articles is not known, and the key content-specific vocabulary is not identified. Thus, in order to effectively use NOcT in the elementary classroom with students with SLD, teachers would need to spend considerable time and effort to make these texts more assessment-ready (e.g., generate estimated readability levels, create reading probes, and identify key vocabulary before the assessment can be administered). This process can be arduous because the range of passage difficulty within one publication can widely vary. As noted by Paris (2001), teachers become overwhelmed when determining a balanced and comprehensive literacy protocol for their classroom. Therefore, teachers may avoid introducing new mediums like NOcT for oral reading assessments. Thus, curriculum developers and publishers of NOcT could make
these passages more teacher-friendly by making a few accommodations such as the following.

First, while assigning strict readability levels to any text can be restrictive and constraining (Brabham & Villaume, 2002; Smith, 1997), and they do not take into account a reader’s prior knowledge, motivation, or comprehension (Bailin & Grafstein, 2001), curriculum developers could provide general guidelines for determining the relative difficulty of the NOcT passages. For example, the table of contents could list passages as “easy,” “medium,” or “hard,” which is the method used by Highlights magazine. Or, publishers could include a dialogue box instructing students how to use the “Five Finger” Rule (Baker, 2002). This method instructs students to read the first paragraph, for example, of a passage, counting the number of difficult words using one hand. If there are more than five unknown words, the text would be deemed too difficult.

Second, publishers could highlight key content-specific terms, with a dialogue box to describe how to determine the meaning of the words through structural analysis and context clues (Rasinski, Padak, Newton, & Newton, 2008). Equipping students to construct the meaning of vocabulary using this method could be generalized to curriculum-based materials and thus applied to TLP.

Finally, curriculum developers could provide generic templates and rubrics within the NOcT, specifically child-oriented magazines. These rubrics would enable teachers to collect oral reading data, such as accuracy and fluency, as well as comprehension data such as retellings of fiction and nonfiction passages.

This study also challenges the notion of readability levels. The texts in this study were assigned readability levels by the publisher (i.e., TLP) or by web based programs
To the maximum extent possible, the readability levels were aligned between the two different types of text. However, when determining the levels, it was evident that even web-based programs that provided the same readability calculations generated different levels for the same passage. With this in mind, a consistent method was used to select passages at a developmental level commensurate with the school’s curriculum materials. Yet, the levels still did not match the student’s instructional reading level. As a result, passages were selected that were two to three readability levels higher than the curriculum readability levels. Interestingly, a few students even read these more difficult passages at an instructional level. Three students read passages with less than 25 miscues and with the ability to construct meaning. Moreover, the notion of readability as a mere mathematical calculation is challenged by the results of this study. The implication, then, for curriculum developers is to view readability level as a construct that lies within the reader rather than a mathematical calculation. Although readability levels can be a guide for selecting texts, a student’s relative preference in the topic needs to be factored into what makes a text a low or high readability level.

Implications for Future Research

The present study provided an in-depth analysis of how these students with SLD constructed meaning while reading NOcT and TLP. The findings and conclusions of this study provide direction for future research related to students with SLD in the context of reading assessment, using NOcT as a classroom text, and testing the grounded theory.

Reading Assessment
Due to the design and nature of this study, the investigation only involved eight participants in one-school building over a short period of time. Research is needed on the observation of reading NOcT, with its more natural language, on a long-term basis in informal assessment settings. This research would yield more data that could be collected and analyzed in relation to the degree of coherency and effectiveness with the current study. Furthermore, this line of future research may yield data that describe state- and district-wide assessment outcomes for students with SLD who read NOcT for assessment in the school setting.

Additionally, this study only investigated third- and fourth-grade students with SLD. As students progress through school and reading becomes more complex, the necessary literacy strategies become more complex. Students with SLD, specifically, have difficulty keeping pace with the general curriculum as they progress through school with its increased literacy demands. Thus, research is needed on older students with SLD and the potential benefits of using NOcT for assessment and instruction.

**NOcT as a Classroom Text**

This study showed that both kinds of texts, NOcT and TLP, enabled students to access on some level their prior experience related to the topic. However, there was a notable difference in the degree to which the students predicted the syntactic structures of the NOcT compared to the TLP. In addition, there was a considerable difference in the vocabulary load and placement of the vocabulary within the NOcT compared to the TLP. Namely, the TLP used considerably more words on the Dale 3,000 Familiar Word List than did the NOcT, and the words that were not on the list were often introduced later in
the passage. Thus, research is needed on the cohesiveness and organization of the natural speech patterns of the NOcT and how those patterns can be integrated into curriculum-based texts.

**Testing the Grounded Theory**

The data in this study support that these students with SLD construct meaning while reading both TLP and NOcT in predictable ways, ways that are similar to those of typically developing students. Students with SLD are able to interact with the text based on their understanding of the process of reading and make word-level predictions using the language cueing systems. This theory needs to be tested with different populations and in a variety of settings to determine its credibility. For instance, future research should investigate how well teachers understand and use this theory in everyday classroom situations. Moreover, future research should explore if the implications of this theory enhance the teaching and assessment of reading for students with SLD. Merriam (1998) explained that although each classroom context is unique, universal properties of teaching are present. “The general lies in the particular; that is, what we learn in a particular situation we can transfer or generalize to similar situations subsequently encountered” (p. 210).

**Summary**

This study sought to investigate how students with SLD constructed meaning while reading NOcT and TLP. The findings in this study suggest that students with SLD were able to construct meaning with both text using similar strategies and language cues as those used by typically developing students. Although they approached both texts
similarly, the type of text allowed the students to access the semantic or syntactic cueing system with relatively more ease. Thus, both texts serve important purposes in the elementary classroom setting for students with SLD.

The participants in this study, though known for their weakness in reading, evidenced their ability to construct meaning from texts to which they could personally relate. Despite their over-reliance on phonics as a method to interpret text, the students in this study evidenced the benefit of using both TLP and NOcT for oral reading assessment in the classroom. Thus, the implication is that NOcT needs to be given more consideration as a text that can benefit students with SLD in the assessment-to-instruction process.

Further research in this area will perhaps yield more data to support these findings and consequently provide more meaningful reading experiences for students with SLD and other diverse learners. The findings and contributions of this study provide educators and others involved in reading education a better understanding and further insight into how students with SLD make meaning as they interact with different types of texts and possible factors influencing oral reading performance. These improved understandings and insights will assist educators in making more appropriate text choices in the assessment-to-instruction process for elementary students with SLD, students just like Johnny.
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APPENDIX A

CHILD LETTER OF ASSENT

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Akron, OH 44325-4205
(330) 972.5483 Office
(330) 972.5209 Fax

Child Letter of Assent

Principal Investigator: Sarah Hamsher

Hi, [Student Name],

My name is Ms. Hamsher and I am a student like you. But, I go to The University of Akron. I am working on a big project and I would like your help. I would like you to be a reader in my study, so I can learn how students like you read with different types of reading materials. Reading materials are anything that can be read, such as books, magazines, travel guides, and brochures.

I would like you to read out loud two times while I take some notes and then ask you some questions. It will take about 10 minutes to read out loud and 5 minutes to ask you about what you read. I may then ask you a few more questions on a different day. If you agree to be in this study, I will ask your teacher for one or two different times to come to your school. I want you to know that reading out loud to me and answering questions isn’t a test. You won’t be graded on your answers. For you, this will be just for fun.

I have already talked to your parents, and they said it is OK for me to ask you to be a part of this project. But, you can choose to help or not help me with this project. If you don’t want to be a part of my project, that is OK. Even if you start the project and decide later to not help me, no one will be upset. You can ask any questions you have about the study at any time. If you agree to be in this study, you will help me better understand how students just like you read.

Will you help me with my project?

Yes __________________  No __________________

[DATE]
Printed Name of Student

___________________

Signature

___________________

Date

_____ This letter was read to the student.
APPENDIX B

TEXT INTEREST SHORT INTERVIEW PROTOCOL

Scenario:
During the short interview, the following questions will be asked to determine, if any, text preferences and interests. The two different texts the child read will be in front of the child while the child answers the questions.

Prior to the student’s first oral reading ask Questions 1 and 2.
Question 1:
Here are both the text I’d like you to read today. Which one would you like to read first?

Question 2:
Why did you choose that one?

Upon completion of both oral readings and both retellings, ask Questions 3 and 4.
Question 3:
You read both of these texts. Which one do you like better? (Have the child point or tell which one he/she likes better.)

Question 4:
What did you like about that one?
APPENDIX C

TEXT INTEREST IN-DEPTH INTERVIEW PROTOCOL

Department of Curricular and Instructional Studies
College of Education

Scenario:
During the in-depth interview, the following questions will be asked of student participants to determine text preferences and interests. The two different types of text (i.e., NOcT and leveled, informal texts) will be in front of the child while the child answers the questions.

Question 1:
Was one of the texts you read harder to read than the other? What made it harder? What made the other text easier?

Question 2:
If a friend was trying to decide which of these texts to read, which one would you recommend? Why would you choose that one?

Question 3:
If your teacher were to read to the class, which text would you want read to the class? Why did you choose that text?

Question 4:
Would you like to read one of these texts again another time? Which text? Why that text?

Question 5:
Which text did you think you understood the best when you were reading it? Why do you think so?

Question 6:
What do you read in the classroom? What do you read out loud for your teacher?

Question 7:
When you are not in school, what type of texts do you read? When do you read them?

**Question 8:**
Have you read this type of text [NOcT; point to NOcT] before today in school or somewhere else?
- *If the student has read them,* where have you read it?
- *If the student has not read them,* have you seen it before? If so, where?

**Question 9:**
Tell me about anything you liked about this type of text [NOcT] while you were reading it. Now, tell me anything you did not like about it.

**Question 10:**
Does your teacher have this type of text [NOcT; point to NOcT] in the classroom?
- *If so,* does your teacher talk about what is in these texts or read them to you or let you read them? Tell more about what [the teacher does].
- *If not,* would you want to have this type of text in the classroom? Why would you want this type of text or why would you not want them?

**Question 11:**
If your teacher asked you to read out loud using this type of text, how would you feel? Tell me why you would feel that way.

*This interview protocol is an adaptation from the one developed by Livingston, 2006.*
APPENDIX D

BURKE READING INTERVIEW

Name ___________________________  Class ___________________________
Date ___________  Interviewer ___________________________

1. When you are reading and you come to something you don’t know, what do you do?
   Do you ever do anything else?

2. Who is a good reader that you know?

3. What makes him/her a good reader?

4. Do you think that she/he ever comes to something she/he doesn’t know when she’s/he’s reading?

5. (If yes)  When she/he does come to something she/he doesn’t know, what do you think she/he does about it?
   (If no)  Pretend that she/he does come to something that she/he doesn’t know. What do you think she/he does about it?

6. If you knew that someone was having difficulty reading, how would you help them?

7. What would your teacher do to help that person?

8. How did you learn to read?
   What do (they/you) do to help you learn?

9. What would you like to do better as a reader?

10. Do you think that you are a goo reader? Why?

11. What is reading?

APPENDIX E

ADMINISTRATION AND SCORING AIDS
**ADMINISTRATION AND SCORING AIDS**

**Word Recognition Accuracy (Decoding)**
Divide the total number of words read correctly by the total number of words read (correct and incorrect). For example, if the student read a total of 94 words in the 60-second reading and made 8 errors, the percentage of words read correctly would be reflected in the following fraction:

\[
\frac{86}{94} = 91.3\%
\]

Instructional reading level: 92-98%. Independent reading level: 99-100%.

**Comprehension**
After the student has completed the 60-second oral reading and after you have read the entire passage to the student, remove the passage from view. Ask for a retelling of what he or she remembers. Next, ask if there is anything else the student can recall from the passage. If the student is unwilling or unable to retell anything, you may probe for specific information (e.g., "What is the main idea of this story?"). When the student has told you as much as he or she can remember from the passage, rate the recall on the Comprehension Rubric:

- Student has no recall or minimal recall of only a fact or two from the passage. Rating Score: 1
- Student recalls a number of unrelated facts of varied importance. Rating Score: 2
- Student recalls the main idea of the passage with a few supporting details. Rating Score: 3
- Student recalls the main idea along with a fairly robust set of supporting details, although not necessarily organized logically or sequentially as presented in the passage. Rating Score: 4
- Student recall is a comprehensive summary of the passage, presented in a logical order and/or with a robust set of details, and includes a statement of main idea. Rating Score: 5
- Student recall is a comprehensive summary of the passage, presented in a logical order and/or with a robust set of details, and includes a statement of main idea. Student also makes reasonable connections beyond the text to his/her own personal life, another text, etc. Rating Score: 6

**Reading Fluency-Automaticity**
Count the number of words the student has read correctly during the 60-second oral reading. Words read correctly include those initially misread but corrected by the student. Use this chart to interpret results.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Fall</th>
<th>Winter</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>wcem</td>
<td>wcem</td>
<td>wcem</td>
</tr>
<tr>
<td>1</td>
<td>0–10</td>
<td>10–50</td>
<td>30–90</td>
</tr>
<tr>
<td>2</td>
<td>30–80</td>
<td>50–100</td>
<td>70–130</td>
</tr>
<tr>
<td>3</td>
<td>50–110</td>
<td>70–120</td>
<td>80–140</td>
</tr>
<tr>
<td>4</td>
<td>70–120</td>
<td>80–130</td>
<td>90–140</td>
</tr>
<tr>
<td>5</td>
<td>80–130</td>
<td>90–140</td>
<td>100–150</td>
</tr>
<tr>
<td>6</td>
<td>90–140</td>
<td>100–150</td>
<td>110–160</td>
</tr>
<tr>
<td>7</td>
<td>100–150</td>
<td>110–160</td>
<td>120–170</td>
</tr>
<tr>
<td>8</td>
<td>110–160</td>
<td>120–180</td>
<td>130–180</td>
</tr>
</tbody>
</table>

*wcem=words correct per minute

**Reading Fluency-Expression**
Listen to the student's 60-second oral reading. Rate it on the Multidimensional Fluency Scale.

<table>
<thead>
<tr>
<th>Circle One ▶</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression &amp; Volume</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Phrasing and Intonation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Smoothness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Pace</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Reads words as if simply to get them out. Little sense of trying to make text sound like natural language. Tends to read in a quiet voice.
2. Begins to use voice to make text sound like natural language in some areas but not in others. Focus remains largely on pronouncing the words. Still reads in a quiet voice.
3. Makes text sound like natural language throughout the better part of the passage. Occasionally slips into expressionless reading. Voice volume is generally appropriate throughout the text.
4. Reads with good expression and enthusiasm throughout the text. Varied expression and volume to match his or her interpretation of the passage.

*This scale is an adaptation of one developed by Zutell & Rasinski, 1991.
Kimberly McFarland, a third-grade teacher at Bon View School in Ontario, California developed the format above for the scale.

**Total Score:**
APPENDIX F

READING MISCUE INVENTORY – RETELLING MODIFIED RUBRICS

Reading Miscue Inventory – Retelling Modified Rubrics

<table>
<thead>
<tr>
<th>Fiction (TLP)</th>
</tr>
</thead>
</table>

Passage: ____________________________________________

*Character Analysis – 4 points*

- Recall of Characters
  
<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than all characters named</td>
<td>All characters named</td>
</tr>
</tbody>
</table>

- Character Development
  
<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal description of characters</td>
<td>Fair to robust description of characters</td>
</tr>
</tbody>
</table>

*Events – 6 points*

<table>
<thead>
<tr>
<th>1-2 point</th>
<th>3-4 points</th>
<th>5-6 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal detail with no sequence of events</td>
<td>Fair amount of detail with some sequence of events</td>
<td>Robust detail with full sequence of events</td>
</tr>
</tbody>
</table>

Total out of 10 points: ______________
Nonfiction (NOcT)

Passage: __________________________________________________

**Specifics – 4 points**

<table>
<thead>
<tr>
<th>1 point</th>
<th>2-3 points</th>
<th>4 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal details</td>
<td>Fair amount of details</td>
<td>Robust details</td>
</tr>
</tbody>
</table>

**Generalizations – 3 points**

<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 synthesis of information from text</td>
<td>2 syntheses of information from text</td>
<td>3 syntheses of information from text</td>
</tr>
</tbody>
</table>

**Major Concepts – 3 points**

<table>
<thead>
<tr>
<th>1 point</th>
<th>2 points</th>
<th>3 points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 major topic recalled</td>
<td>2 major topics recalled</td>
<td>3 major topics recalled</td>
</tr>
</tbody>
</table>

Total out of 10 points: ____________
APPENDIX G

IRB APPROVAL LETTER
NOTICE OF APPROVAL

March 30, 2011

Sarah Hamsher
12542 Back Massillon Road
Orville, Ohio 44667

From: Sharon McWhorter, IRB Administrator

Re: IRB Number 20110319 "Making Meaning Using Different Texts for Assessment: Students with Specific Learning Disability"

Thank you for submitting an IRB Application for Review of Research Involving Human Subjects for the referenced project. Your protocol represents minimal risk to subjects and has been approved under Expedited Category #7.

Approval Date: March 30, 2011
Expiration Date: March 30, 2012
Continuation Application Due: March 16, 2012

In addition, the following is/are approved:

☐ Waiver of documentation of consent
☐ Waiver or alteration of consent
☒ Research involving children
☐ Research involving prisoners

Please adhere to the following IRB policies:

• IRB approval is given for not more than 12 months. If your project will be active for longer than one year, it is your responsibility to submit a continuation application prior to the expiration date. We request submission two weeks prior to expiration to insure sufficient time for review.
• A copy of the approved consent form must be submitted with any continuation application.
• If you plan to make any changes to the approved protocol you must submit a continuation application for change and it must be approved by the IRB before being implemented.
• Any adverse reactions/incidents must be reported immediately to the IRB.
• If this research is being conducted for a master's thesis or doctoral dissertation, you must file a copy of this letter with the thesis or dissertation.
• When your project terminates you must submit a Final Report Form in order to close your IRB file.

Additional information and all IRB forms can be accessed on the IRB web site at:
http://www.uakron.edu/research/orssp/compliance/IRBHome.php

Cc: Ruth Oswald- Advisor
Cc: Stephanie Woods - IRB Chair

☑ Approved consent form/s enclosed

Office of Research Services and Sponsored Programs
Akron, OH 44325-2102
330-972-7666 • 330-972-6281 Fax

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