

Effectiveness of Guided Reading on the Reading Ability of Students with Learning Disabilities

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Rashika Carlson, M.Ed.

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Dianne M. Gut, Ph.D.

Associate Professor of Special Education

John E. Henning, Ph.D.

Professor and Chair of the Department of Teacher Education

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Abstract

Many of the approximately 1.5 million students identified with a learning disability (LD) receive ineffective instruction for reading problems. Deficits in phonics, phonemic awareness, vocabulary, fluency and comprehension are cumulative: these discrepancies become more problematic over time as the gap between more proficient and less proficient readers widens. Therefore there is a need to identify evidence-based instructional strategies that are effective for remediating reading deficits for students with learning disabilities. The purpose of the current study was to implement and examine the effectiveness of a guided reading intervention on the reading ability of three students identified with learning disabilities using heterogeneous grouping. The aim of this study was to determine if an intervention program that provided explicit strategy instruction for independent reading using differentiated instruction in phonics, vocabulary, and comprehension of narrative and expository texts would have any positive effect on students' reading ability as indicated by an improvement in one or more components of reading. An examination of the results suggests that overall there appeared to be improvements in several reading components. Implications for practice are identified.

Martin, Martin and Carvalho (2008) suggested there is a correlation between struggling to read, and a failure to function successfully in society, as found in their study of prison populations and reading difficulties. According to Martin et al., approximately 75% of the U.S. prison population has reading difficulties, a deficit that they purport stems from a frustration with reading and the school system, increasing the likelihood that struggling readers might struggle to succeed in society as indicated by their prison records. Denton and Al Otaiba (2011) also highlighted the connection between reading difficulties and social maladjustment, connecting poor reading skills with delinquency and suicide. These statistics are disconcerting considering that the National Early Literacy Panel's (NELP) Report in 2000 estimated that about 37% of fourth grade students in the United States failed to achieve basic levels of reading achievement (NELP, 2008). It is therefore essential that effective reading programs are implemented to teach reading, and that students are taught to learn to read proficiently, a literacy goal that is exacerbated by the diverse nature and needs of students served in the US education system.

It is estimated there are approximately 1.5 million students identified with a learning disability (LD) receiving special education services in the US education system (Swanson & Vaughn, 2010). Most receive services for developmental delays in reading (Martin et al., 2008; Sencibaugh, 2007). Swanson and Vaughn reported that although 40% of these students received instruction in the resource room, it was often ineffective and counterproductive, as reflected in the results of several longitudinal studies, which indicated declining verbal IQ scores over a period of time. This problem is especially disturbing considering other research which indicated that struggling readers did not generally improve their skills over time, but that these skills in fact had deteriorated as they got older (Martin et al., 2008).

Students with learning disabilities constitute a growing number of students receiving special education services under the auspices of intervention specialists either in resource rooms, or in the general education classroom. It is imperative to understand their reading problems and are able to locate strategies that successfully support students' skills development. It is therefore necessary to understand the characteristics, educational needs of students identified with learning disabilities, and current reading instruction practices to contextualize this literacy problem and identify possible solutions.

The following is a brief review of current literature to define learning disabilities, describe typical characteristics of students identified with a learning disability, and outline reading instruction methods and strategies that are most prevalent in resource rooms or general education classrooms today. Current instructional practices will be examined to identify possible deficits in instructional design, and to locate possible alternate instructional designs or methods, which might be more suitable for the needs of this student population.

Definition of learning disabilities. The Individuals With Disabilities Education Act of 2004 (IDEA) defines specific learning disabilities as “a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, write, spell, or do mathematical calculations” (Kavale, Spaulding, & Beam, 2009). IDEA further identifies several criteria for determining whether a specific learning disability exists

The child does not achieve adequately for the child's age or to meet State-approved grade-level standards in one or more of the following areas, when provided with learning experiences and instruction appropriate for the child's age or State-approved grade-level standards: oral expression; listening comprehension; written expression; basic reading

skills; reading fluency skills; reading comprehension; mathematics calculation; mathematics problem solving (U.S. Department of Education, 2006).

This means that to qualify as a student with a specific learning disability and receive necessary services, a student may have a learning deficit in just one of the areas listed above. The National Reading Panel's (NRP) report of 2000 identified phonemic awareness, phonics, fluency, vocabulary and comprehension as the five essential areas or components of reading in which students need effective early reading instruction (Roberts, Torgensen, Boardman & Scammacca, 2008). This suggests that individually and as a set of skills, basic reading skills, reading fluency skills, and reading comprehension might be considered essential skills or components of reading necessary for literacy and reading proficiency.

Reading attributes of students with learning disabilities. Students with learning disabilities constitute the largest percentage of students who receive special education services in U.S. schools across grades K-12. Therefore, the literature defining and describing students with learning disabilities, and examining instructional methods and materials for this group of students is extensive (Vaughn, Levy, Coleman & Bos, 2002), and continuously expanding to reflect dispositions and topical research methods that at any specific time, might be assumed to be effective instructional strategies. The following examination of the literature reflects the current description of student characteristics in each of the five components of reading.

Phonics and phonemic awareness. Many students with learning disabilities struggle with letter-sound correspondence and cannot decode words, especially multisyllabic words efficiently (Robert et al., 2008) which are related to deficits in phonological awareness (Swanson & Vaughn, 2010). This means that students are unable to analyze the parts of words or recognize and remember the phoneme or sound for each grapheme, or word part, when reading a

word that can usually be read using the basic skills learned during phonics instruction. There are two other information-processing issues that compound this problem. Students with learning disabilities often cannot access phonological information fast enough, and when they do, it is often represented inaccurately as reflected in their incorrect spelling (Martin et al., 2008; Swanson & Vaughn, 2010). This research supported the work of Eisenmajer, Ross and Pratt (2005), who described how poor phonological processing manifests in poor spelling and becomes a challenge for young readers making it very difficult for students to remember letter sound relationships, resulting in very poor decoding and an inability to read unfamiliar words proficiently.

There are many strategies that readers may utilize to decode unfamiliar words. A challenge for students with LD is that they over-rely on contextual clues as a strategy to decode unfamiliar words, which is only effective about 10% of the time (Denton & Al Otaiba, 2011). This overreliance means they spend considerable time repeatedly reading words, without successfully reading the word or deciphering the meaning of the word or the text. This inefficient strategy also means these readers are unable to successfully comprehend the text (Denton & Al Otaiba, 2011; Sencibaugh, 2007).

Vocabulary. Poor readers are unlikely to read very often (Denton & Al Otaiba, 2011; Roberts et al., 2008). It is therefore not surprising they tend to encounter fewer words and are largely unfamiliar with grade level texts (Martin et al., 2008). The ability to read grade-level text is essential for academic success (Roberts et al., 2008). Students with learning disabilities usually take the same formative and summative assessments as their peers without special needs, requiring they have the same content-specific and general vocabulary as their peers. Roberts et al. (2008) noted that academic success relied heavily on students' store of content-specific words

so effective strategies may be employed to determine meaning, which in the case of students with L.D. are often so minimal as to result in academic failure. Denton and Al Otaiba (2011) explained that because of less engagement with texts “a decoding problem may eventually become a generalized reading deficit characterized by low fluency, poor vocabulary... all contributing to impaired reading comprehension (p.1).

Fluency. Morgan and Sideridis (2006) defined fluency as, “the ability to read quickly, accurately, and with proper expression” (p.191). The ability to read quickly is a result of recognizing words almost instantly, or with automaticity. Proficient readers read with a higher degree of automaticity that is essential for comprehension (Denton & Al Otaiba, 2011; Roberts et al., 2008). This allows readers to read words that flow smoothly so that words, or phrases can be decoded in part and in aggregate, in ways that makes sense to the reader. Students with LD on the other hand, read very slowly, focusing on decoding unfamiliar and multisyllabic words (Roberts et al.). According to Allor and Chard (2011) “slow and effortful reading hampered by word identification problems is an indication of poor fluency” (p.1) which slows the reader down significantly, often resulting in poor comprehension because words are decoded so laboriously that the student often forgets the meaning of most of the initial part of a sentence, and so the meaning is lost before the sentence is even completed (Chard, Vaughn, & Tyler, 2002).

Comprehension. Antoniou and Souvignier (2007) identified reading comprehension skills as the most accurate indicator of academic and professional success, noting that, “ the main prerequisites for successful reading comprehension include the ability to decode words and read fluently, as well as the use of active strategies to understand the meaning of printed texts” (p. 42). These include adjusting the reading rate, and using background knowledge to understand

new information (Roberts et al., 2008). The deficits in decoding and fluency that characterize the reading difficulties for these students often mean they cannot comprehend what they read.

Students with LD may also exhibit other deficits that result in poor text comprehension. They are often unable to recall or apply strategies for comprehension, and a lack of constant monitoring of reading and comprehension renders their attempts at understanding texts very minimal (Antoniou & Souvignier, 2007; Roberts et al., 2008). Katz and Carlisle (2009) concluded that students with learning disabilities lacked sufficient “knowledge and application of cognitive strategies” compared to peers, requiring an intensive intervention which explicitly teaches higher level decoding strategies (p. 325). According to Sencibaugh (2007), students cannot identify or recall specific details of a text, which hinders the use of effective comprehension strategies such as making inferences, drawing conclusions and making predictions (p.6).

Deficits in phonics, phonemic awareness, vocabulary, fluency and comprehension are cumulative: these discrepancies become more problematic over time as the gap between more proficient and less proficient readers widens. Therefore there is a need to identify evidence-based instructional strategies that are effective for remediating deficits if they present a problem for students with learning disabilities. This differentiated remediation would teach students effective reading strategies, with the purpose of preparing them for successful inclusion in the general education classroom.

Instructional Strategies and Grouping

There have been expanded efforts to identify research-based methods for creating effective instructional strategies to differentiate reading instruction for students with specific learning disabilities, as reflected by the literature specifically examining all components of

reading instruction for this subgroup of students. This includes studies that examine, observe, or provide a meta-analysis of various instructional practices and dispositions.

In a meta-analysis examining reading comprehension interventions for students with learning disabilities, Sencibaugh (2007) reported that most research focused on strategy instruction primarily because students with learning disabilities were ideal candidates for this intervention due to their erratic and disorganized reading behaviors. Sencibaugh concluded, “When students were taught how to utilize cognitive strategies to improve their comprehension, significant gains are made.” (p. 14). Two specific conclusions that impact instruction are notable; using language-dependent strategies such as pre-reading and post-reading strategies, summarizing and self-questioning was more effective than the use of visual aids such as graphic organizers, and self-questioning strategies that include paragraph restatements were most effective for improving comprehension.

Antoniou and Souvignier (2007) also identified explicitly taught cognitive strategies as an effective intervention for improving the comprehension skills of students with learning disabilities. Using a four-part, yearlong program, students in their study “were explicitly instructed on how to apply reading and self-monitoring strategies in order to better comprehend texts” (p. 47), which included the “use of small steps in which students are guided through initial practice and lots of practice, modeling, corrective feedback and reinforcement” (p. 43). This suggests students with learning disabilities benefited from explicit strategy instruction, and that they required an intensive intervention period to make significant gains in strategy knowledge and application (Antoniou & Souvignier; Denton & Al Otaiba, 2011; Sencibaugh, 2007).

While the above findings are important, neither Sencibaugh (2007) nor Antoniou and Souvignier (2007) differentiated between the interventions provided in resource rooms and those

provided in general education classrooms. Swanson and Vaughn (2010) drew attention to this deficit in the body of research, emphasizing that although there has been widespread consensus teachers should use research-based interventions for teaching reading to students with learning disabilities, there has been a distinct absence of any research over the last decade investigating the extent to which this is part of resource room instructional repertoire. This differentiation is important for two reasons; the nature of interventions provided in resource rooms inherently warrants that individual students' specific needs are considered, and appropriate interventions are differentiated when designing learning objectives, materials and instructional strategy; and because there have been several studies that have suggested reading instruction in the resource room is ineffective (Swanson & Vaughn).

Swanson's (2008) purpose for a meta-analysis of reading instruction for students with learning disabilities in both the resource and general education classrooms between the periods 1980 to 2005 was to identify components of effective instruction, and to identify changes in student progress. Among other findings, the analysis identified the amount of reading instruction, comprehension instruction, and instructional grouping as components of effective reading instruction. Swanson reported that the amount and quality of reading instruction provided to students in the resource room varied significantly across studies, and that "resource room teachers spent only 44% of the time focused on reading activities and twice as much time on non-reading activities, including off-task behavior, waiting and classroom management (p. 120). These findings supported a study by Vaughn, Levy, Coleman and Bos' (2002) study that reported approximately one hour of each day in the resource room was wasted on off-task behaviors. Another disturbing trend emerged regarding comprehension instruction, which was only reported in 3 of the 25 studies examined: instruction was of poor quality, constituted about

8% of instructional time, and included many low level questions, which do not improve comprehension (Swanson, 2008,p. 125). This finding supports a similar conclusion by Vaughn et al., who concluded, “reading comprehension is a neglected element of reading instruction in some resource rooms” (2002, p. 9). More recently, Berkeley, Scruggs and Mastropieri (2010) reiterated this concern in their meta-analysis of reading comprehension instruction noting a lack of strategy instruction across resource rooms and general education settings.

Another disturbing trend arose from an examination of instructional grouping. Swanson (2008) cited several studies reporting that across the resource room and general education classroom, teachers used whole group instruction more often than any other grouping. Yet another group of studies included in Swanson’s meta-analysis identified “ undifferentiated seatwork” (p. 125) as the primary academic task most students were engaged in while the teacher was occupied with small group instruction, in which students were grouped by grade level, not instructional needs. This supported the conclusion by Vaughn et al. (2010), who in recognizing that undifferentiated seatwork constituted 50% of instructional activity in the resource room, suggested multiple instructional grouping and intensive instruction as possible instructional designs to address this problem (p.11). Swanson’s (2008) synthesis of the research suggested that resource room instruction was still essential for at least 50% of students identified with LD because they failed to make significant academic gains in reading in the general education classroom. An examination of the research on instructional grouping is therefore warranted to locate the best possible combinations of reading instructional methods.

Vaughn, Hughes, Moody and Elbaum (2001) identified several noteworthy observations in an examination of the research on the instructional grouping practices for reading instruction for students with disabilities. Students in small cooperative groups learned more than students in

other groupings, teachers provided better instruction in smaller group sizes, and that students with LD indicated a preference for mixed ability groups due to the scaffolding available from peers (Vaughn et al., p. 133). Schumm, Moody and Vaughn (2000) whose study examined grouping for reading, also mentioned this preference for mixed ability groups. Swanson's (2008) meta-analysis on reading instruction also concluded "students who have difficulties benefit from small group instruction that provides support from the teacher," (p. 116). Denton and Al Otaiba (2011) cited the U.S. Department of Education's What Works Clearinghouse that recommended "students with serious reading difficulties who have not responded adequately to regular classroom reading instruction and lower intensity interventions should receive *daily, intensive small-group reading intervention* in addition to daily classroom reading instruction" (p. 5). These studies suggest that instructional methods that provide very explicit, small group instruction in heterogeneous in groups might be beneficial to students with LD. This raises questions about the characteristics of this intensive small group instruction.

Denton and Al Otaiba's review of evidence-based practices identified key elements of a successful reading program for students with LD, including:

- Appropriate for students who will be instructed in terms of age, reading level, and instructional needs.
- Designed for the delivery of explicit instruction (directly teaching and modeling content and skills, providing guided and independent practice),
- Includes, or is designed to correlate with, text of increasing difficulty, in which students can apply the skills they are learning.

Guided reading. Guided reading is an instructional approach that allows teachers to provide instruction tailored to the needs of individual students. Iaquina (2006) defined guided reading as an approach that involves the teacher providing scaffolded reading and comprehension instruction to small, flexible groups of students as part of reading instruction. Iaquina highlighted the essential feature of the strategy that makes it so effective: scaffolded instruction. This principle is core to guided reading, because the aim is to teach students strategies to decode, read and comprehend texts so that they become more effective, proficient and independent readers. Citing Rogoff's (2008) idea of "guided participation" Fisher (2008) describes scaffolding as a process during which "the teacher provides bridges from what is known to what is new through sharing responsibility for problem solving, then transferring responsibility" (p. 20). As students become more proficient, they move to groups that address other literacy needs that they may have.

Fountas and Pinnell (2006) defined key components and outlined essential elements of Guided Reading as an instructional method in their book titled *Guided Reading: Good First Reading for all Children*. According to the authors,

Guided Reading is the context in which a teacher supports each reader's development of effective strategies for processing novel texts at increasing levels of difficulty. The ultimate goal in guided reading is to help children learn how to use independent reading strategies successfully. (p. 2)

Fountas and Pinnell (1996) further elaborated on why Guided Reading was an essential part of a balanced reading program. They identified reading for meaning through the use of independent reading strategies as the ultimate goal of guided reading instruction.

This sentiment was shared by Routman (2003), who located Guided Reading in what she referred to as the Optimal Learning Model, which includes whole class instruction, Guided Reading and finally independent reading as core components of a good, early literacy program. These authors stressed that for children to become effective, critical, fluent readers they require a variety of reading opportunities to progress toward independence, the core being Guided Reading.

A description of the Guided Reading process and elements provides the rationale for including this as an essential reading intervention strategy for struggling readers. Fountas and Pinnell (1996) identified three components critical to the success of the method, namely, the prereading, during reading and after-reading activities that make the method suitable for young or struggling readers. Roberts et al. (2008) referred to these components as “instructional strategies that have received general research support” (p. 67). In the prereading stage, the teacher selects a leveled text for the group, hands a copy to each student and activates prior knowledge by asking questions and referring to the elements of the text, such as the pictures, subtitles or the cover. This gives students an opportunity to predict what the content will be, and to ask questions that are a critical part of reading for comprehension. Students then read softly, during which time the teacher listens to gauge reading fluency. After reading, the teacher revisits the text, by rereading difficult parts with the students to gauge understanding while modeling comprehension strategies along the way. This modeling helps students learn how to decode texts that would otherwise be too difficult of them to read independently. Students talk about the story again, providing the teacher with an opportunity to gauge comprehension (Fountas & Pinnell, 1993, p. 7-9).

Guided Reading contains the essential features of an instructional strategy that appears appropriate as a component of an effective reading program for students with learning disabilities and contains several of the key components of an effective strategy as discussed in the preceding review. It is conducted in small groups that allows for cooperative learning (Fisher, 2008; Swanson, 2008; Vaughn et al., 2001), during which students discuss a text through the process of before, during and after reading activities (Roberts et al., 2008) to create meaning and comprehension (Schumm et al., 2000; Swanson, 2008; Vaughn et al., 2001). It also teaches cognitive strategies (Antoniou & Souvignier, 2007; Roberts et al., 2008; Sencibaugh, 2007) through a process of explicit, intensive instruction (Antoniou & Souvignier, 2007; Katz & Carlisle, 2009; Swanson, 2008). This would suggest that guided reading would be an ideal strategy for providing intensive reading intervention in the resource room for students with disabilities. The preceding literature review did not identify any current studies in which intervention specialists specifically identified this evidence-based strategy as a component of their intervention repertoire.

The purpose of the current study was to implement and examine the effectiveness of a Guided Reading intervention on the reading ability of three students identified with learning disabilities using heterogeneous grouping. The aim of this study was to determine if an intervention program that provided explicit strategy instruction for independent reading using differentiated instruction in phonics, vocabulary, and comprehension of narrative and expository texts would have any positive effect on students' reading ability as indicated by an improvement in one or more components of reading.

Method

Participants

The three participants in this study were fifth grade elementary school students who attend a small, rural school in Athens County in Southeastern Ohio. All participants were diagnosed with a specific Learning Disability for which they had an Individualized Education Program (IEP). They received daily hour-long reading instruction in the intermediate grade resource room in which the researcher was a student teacher during the quarter preceding the implementation of this study. The intermediate grade levels at this school include both 4th and 5th grade students who are assigned to specific classrooms for instruction on the basis of a dynamic ability-grouping system. This means that students with similar skills and needs receive instruction in the same class; in the resource room this included students identified as at-risk for academic failure, and students with IEPs for mild to moderate disabilities.

Upon approval from both the school principal to conduct the study with intermediate grade students who qualified, and from the local university's Office for Research Compliance, the researcher contacted the intermediate Intervention Specialist to recruit prospective participants. The Intervention Specialist was asked to select six students in either 4th or 5th grade who had a diagnosis of a specific learning disability for which they received reading instruction in the resource room, and to provide the approved consent forms to prospective participants for parental consideration. The researcher decided that for the purposes of this study, a group size of 2 – 4 participants would be ideal. Therefore, the first three prospective participants to return the consent form with parental approval within two days of receiving the document, and provide assent on a student assent form, which clearly explained all relevant details pertaining to the study, were selected as participants.

Description of participants. It is essential to note that for the purpose of this study, students were selected on the basis of a disability category that qualified them for reading intervention. This means that while there was a specific component, or components of each student's reading ability that required remediation, students were not required to have similar reading abilities. In fact, the study required distinct, albeit marginal differences in reading ability, thereby accounting for heterogeneity in the grouping. The researcher expected these marginal differences in reading ability would be an integral part of the group dynamics during discussions, as participants used their knowledge and skills to offer scaffolded instruction and support to each other. This grouping was designed to simulate groupings that might be used in a typical resource room or classroom that include students with learning disabilities for reading, which would most likely be designed to teach specific reading strategies and provide remediation that all group members needed at a specific time, instead of creating ability-grouped, homogenous reading groups. The researcher attempted this by designing lesson plans and selecting activities and materials that supported the instructional requirements of all three participants as identified by an examination of pre-test results and through continuous monitoring of progress during the intervention.

Two male and one female Caucasian student participated in the study and were all eleven years old at the time of the study. Data pertaining to each participant's socioeconomic characteristics were unavailable, though the school is located in an area characterized by high poverty. All participants receive instruction in the resource room for reading, mathematics, and language arts with other 5th grade students who meet the criteria for being in this class, either as students at-risk for academic failure, or students with IEPs. Pseudonyms were assigned in

accordance with the confidentiality agreement applicable to all aspects of this study, and all reported data pertaining to the participants reference these aliases.

Sarah. Sarah is a student identified with a learning disability and comorbid attention deficit hyperactivity disorder (ADHD). Sarah's IEP goals and objectives for reading and written language reflected areas in her literacy development that require intensive instruction. These included, but were not limited to, sight words, vocabulary and fluency.

Thomas. Thomas is also a student identified with a learning disability and comorbid ADHD for which he receives special education services as delineated in his IEP. Thomas' IEP goals for reading focused on objectives for improving comprehension, including analyzing text, summarizing and answering questions to demonstrate comprehension. Thomas also receives services through Tri County Mental Health's ADHD treatment program.

Max. Max is a student identified with a learning disability, as indicated in his IEP, which outlined objectives for reading comprehension, sight words, and fluency.

Procedures

The data collection and reading intervention were implemented on the school campus over a period of three weeks during late spring quarter, 2011. Each session including pretests, intervention, and posttests sessions lasted for approximately one hour each, and were conducted in either the computer lab, or a tutoring station located outside the school library, during the participants' regularly scheduled reading class. Every session was audio-recorded using a digital recorder placed on the desktop. An AB design was selected because it provided an ideal design for pre-intervention and post-intervention comparisons of each participant's reading and comprehension performances; participants first completed the Qualitative Reading Inventory-5 (QRI-5) pretests, then participated in the intervention, and finally completed the QRI-5 posttests.

The data obtained from the administration of the *Self Report Reading Scale* (Johns & Lenski, 2005) and the *Inventory of Experiences* interest survey (Johns & Lenski) was used to select and design appropriate materials, leveled texts, and lesson plans.

Intervention. A total of eight Guided Reading lesson plans were developed based on the data analyzed from the pretests. Specifically, the researcher identified specific reading problems that at least two participants struggled with, and which the third participant had not yet mastered. The researcher began each session with a mini lesson during which the participants received instruction in phonics and decoding to preview vocabulary words from the selected text for the day. Each participant took turns reading the words out loud, after which the group repeated the word. Corrective feedback and decoding strategies such as chunking, blending, and segmenting were used to help students read unfamiliar or challenging words.

Each lesson included pre-reading, during reading and after reading discussions, during which the researcher provided instructions on previewing the texts, making connections to prior knowledge, using graphic organizers to make predictions, identifying the main idea, highlighting the text to identify important details, and summarizing the text. Participants were encouraged to engage in active discussions by answering questions posed by the researcher, and by participating in post-reading, cooperative group multiple choice comprehension activities after each lesson, which required that each person provide rationales for choosing an answer during the group discussions to find the correct answer. Each lesson provided multiple opportunities for each participant to either read out loud preselected portions of the text which were marked on each person's copy of the text, or for each participant to simultaneously read a selected portions of the text in its entirety while the researcher listened to each person read and provided feedback as required. Additionally, the researcher designed three lessons to include sight word vocabulary

practice that provided additional opportunities for participants to apply decoding skills and practice fluency.

Materials

A total of two narrative texts and two expository texts were selected for this intervention. Selection was based on two criteria; each participant's instructional levels, which were identified by analyzing the results of the administered QRI passages, and the participants' interests as indicated in their responses to the *Inventory of Experiences* survey. The researcher obtained all leveled texts and supplemental materials including comprehension questions and lesson worksheets such as graphic organizers from Reading A-Z, a reading resource website that includes teaching materials for multiple components of reading instruction (<http://www.readinga-z.com/>). Sight word vocabulary practice worksheets were accessed from the grades 2-3 material contained on the Florida Center for Reading Research (FCRR) website, a repository of reading instruction materials for all components of reading (<http://www.fcrr.org/>).

Instrumentation

The Qualitative Reading Inventory- 5 (QRI-5). The QRI-5 (Leslie & Caldwell, 2011) was administered for the pretest and posttest. As a screening, diagnostic, and planning tool, the QRI is a multi-purpose instrument, which can be used to describe specific reading behaviors as a guide to intervention, verify a suspected problem by providing specific data about a student's current performance in each reading component, monitor progress, determine reading level, and identify individual instructional reading level (Leslie & Caldwell). In a review of this instrument, McCabe and Margolis (1999) noted that criterion-referenced reading tests such as the QRI are widely popular among reading specialists who believe these informal instruments to be

“more accurate than standardized norm referenced tests in estimating student reading levels and related needs” (p. 387).

The QRI consists of two graded subtests: word lists, and passages. Results from the administration of word lists are typically used to assess decoding skills during word identification and decoding speed and automaticity (Leslie & Caldwell, 2011). Each grade level list contains words found in corresponding grade level passages: therefore the lists may be used to determine a starting point for administration of the grade passages. Similarly, results from the administration of the passages may be used to determine a student’s reading level, reading fluency, and reading comprehension (Leslie & Caldwell), which includes the student’s ability to access pertinent information from both narrative and expository texts, a necessary skill for independent reading and comprehension. Inter-rater reliability and test-retest reliability of the QRI was established and acceptable as reported in the manual. Concurrent validity between the QRI and Woodcock Reading test were reported as statistically significant (Leslie & Caldwell).

The researcher administered the same word lists and passages individually to each participant on two occasions; first as a pretest to obtain baseline data, and again as a posttest to obtain treatment data. On both occasions, the same protocols were followed. The researcher explained all aspects of each subtest and provided directions, placed the audio recorder on the table, and provided all relevant materials. After the participant was provided with directions and requested to start the test when he or she was ready, the researcher sat and observed quietly while following along on an examiner copy to determine the number of errors. In each instance, the participant would continue to read word lists until requested to stop, which usually occurred when a participant read more than six words incorrectly on a grade list. Results from this test

were used to identify the instructional level used to select grade level passages for the next subtest.

One of the most useful applications of the results of the QRI is the determination of a student's reading level. Scoring of students' oral reading using criteria-based error analysis yields three performance levels that indicate various levels of proficiency; examiners are able to identify a student's independent, instructional, and frustration reading levels by analyzing the accuracy of an oral reading. The concept of reading levels is based on the work of Betts (1946) who suggested that "when students are presented with tasks that are sufficiently familiar, yet provide some degree of challenge, optimal learning occurs" (Treptow, Burns, & McComas, 2007, p. 159). Treptow et al. identified this as the instructional reading level. This information is necessary when designing reading instruction because it allows the teacher to select appropriate texts for reading instruction, and design lessons that allow for strategy instruction because the texts are at the right level for the student.

The researcher administered the passages by providing directions and requesting the participant to begin when he or she was ready. For this subtest, the participant was required to read the entire text of the selected narrative and expository passages. The researcher then asked the participant to orally answer the explicit and implicit comprehension questions provided with each passage, the results of which reflect each participant's oral comprehension ability.

Data Analysis

On each occasion, all participants' pretests and posttests were scored and analyzed on the same day. The researcher did this to try to maintain consistency in scoring the comprehension responses that are scored using a 3-point scale. Data was then analyzed using the scoring and

analysis sheets included in the QRI-5 test manual. These results are reported and analyzed in the results section below.

Results

The findings reported below are based on the scoring of each participant's oral readings of word lists, passages, and answers provided in response to the comprehension questions read out loud by the researcher during testing sessions.

Word Lists

Each 20-item word list was scored to determine several estimates of reading ability, including an estimation of each participant's automatic word identification, knowledge of letter-sound matches, and total number of correct words to determine the three reading levels: independent, instructional and frustration.

Estimation of automatic word identification. Each word participants were able to read within one second was counted to obtain a score for *total correct automatic*. These are words that are read without the use of decoding strategies and are generally referred to as sight words. Leslie and Caldwell (2011) noted, "the more words that a reader identifies automatically, the more likely she or he will be a fluent reader in the corresponding level of passages" (p. 41).

Knowledge of letter-sound matches. Each word participants read correctly that took longer than one second to read was counted to obtain a score for *total correct identified*. Leslie and Caldwell (2011) identified these as words that are read using decoding strategies, suggesting that an examination of students' errors in pronunciations would provide insight about their remediation needs.

Total number of correct words. The total numbers of correct words read in a list are calculated by adding the scores for *total correct automatic* and *total correct identified*. These

numbers are compared to the range of scores listed for each reading level to determine a student's independent, instructional or frustration reading level.

The results in Table 1 summarize an analysis of Sarah's scores on the word list. Sarah's pretest results placed her on the independent levels on both the primer and first grade lists, with scores on total number correct being 17 and 15 respectively. While there appeared to be no significant change in her reading level in the posttests, as indicated by total number correct scores of 19 and 18, there are a noteworthy aspects of the change in results. An examination of the scores on the total correct identified for the first and second grade lists suggests that Sarah used decoding strategies more often during the posttests. Interestingly, Sarah's score on the second grade list indicate a one-point decline. An examination of the results indicated that Sarah's errors were attributed to a failure to read the /s/ in plural words and the suffix /ed/ in verbs.

Table 1

Scores on the Graded Word List: Sarah

| Measure | Graded lists | | | | | |
|--------------------------|--------------|----------|---------|----------|---------|----------|
| | Primer | | First | | Second | |
| | Pretest | Posttest | Pretest | Posttest | Pretest | Posttest |
| Total correct automatic | 15 | 19 | 15 | 16 | 10 | 5 |
| Total correct identified | 2 | 0 | 0 | 2 | 2 | 6 |
| Total number correct | 17 | 19 | 15 | 18 | 12 | 11 |

Thomas's scores reported in Table 2 indicate an overall improvement in his ability to read words. Thomas' results were however, mixed. Pretest results indicate that he read grade level words at the independent level on both the second grade list and the fourth grade list, but at an instructional level on the third grade list. This might be a feature of his phonics skills: Thomas often reads verbs with the suffix /ed/ incorrectly. The results

indicate that while he did not demonstrate any significant gains in his ability to use decoding, his scores on the posttest indicate that his level changed from the frustration to the independent level on the third grade word list, and from the instruction to the independent level on the fifth grade word list.

Table 2

Scores on the Graded Word List: Thomas

| Measure | Graded lists | | | | | | | |
|--------------------------|--------------|----------|---------|----------|---------|----------|---------|----------|
| | Second | | Third | | Fourth | | Fifth | |
| | Pretest | Posttest | Pretest | Posttest | Pretest | Posttest | Pretest | Posttest |
| Total correct automatic | 19 | 18 | 12 | 14 | 14 | 14 | 13 | 14 |
| Total correct identified | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total number correct | 18 | 18 | 12 | 14 | 15 | 14 | 13 | 15 |

The results from Max's tests are reported in Table 3. An examination of these scores indicates that he scored at the independent level on the second grade list and at the frustration level on all other word lists administered. His scores indicate that when Max's use of decoding strategies decreased, the number of words that he identified automatically increased as indicated by his scores on the fourth and fifth grade lists which show an increase from 7 to 8, and 4 to 10 respectively. Even though his scores show no change in his reading level, he increased the number of words read correctly from 9 to 10 on the third grade list and from 10 to 12 on the fifth grade list.

Table 3

Scores on the Graded Word List: Max

| Measure | Graded lists | | | | | | | |
|--------------------------|--------------|----------|---------|----------|---------|----------|---------|----------|
| | Second | | Third | | Fourth | | Fifth | |
| | Pretest | Posttest | Pretest | Posttest | Pretest | Posttest | Pretest | Posttest |
| Total correct automatic | 15 | 15 | 8 | 8 | 7 | 8 | 4 | 10 |
| Total correct identified | 1 | 0 | 1 | 2 | 5 | 3 | 6 | 2 |
| Total number correct | 16 | 15 | 9 | 10 | 12 | 11 | 10 | 12 |

Passages

The graded passages were scored to obtain estimates of each participant's oral reading rate or fluency, analyze miscues, and assess comprehension. The researcher used a timer to record the duration each oral reading and used this to calculate the total number of seconds it took each participant to read a passage.

Oral reading fluency. Each participant's oral reading fluency was calculated using the following formula:

$$\frac{[(\text{Number of words in the passage} - \text{number of miscues}) \times 60]}{\text{time taken to read passage (seconds)}}$$

Leslie and Caldwell (2011) refer to the product of this calculation as *correct words per minute* or CWPM, which is essentially a measure of fluency. This oral reading rate or fluency rate is a good indicator of a reader's decoding abilities and an analysis of this measure may identify important characteristics about a student's reading skills.

Analysis of miscues. Each word read incorrectly was recorded using the symbols provided in the manual. Insertions, omissions, substitutions, and reversals of letters, letter sounds or words were all scored using appropriate symbols. The QRI offers two estimates of accuracy: one that counts self-corrections during oral reading as miscues, and another that does not. The

researcher is of the opinion that self-corrections are an essential feature of the reading process in young children, and clearly indicates the reader is monitoring and thinking about the text. For the purposes of this study, the researcher chose to omit self-corrections as a miscue. The QRI provides a formula for calculating this score and reports this as *total acceptability*.

Oral reading comprehension. After a participant orally read a passage, he/she answered eight explicit and implicit questions the researcher read from the examiner's copy. These responses were scored using a 3-point scale provided in the QRI manual. The researcher computed the scores by expressing the number of correct responses as a percentage of total questions.

Table 4 summarizes the scores on the narrative and expository passages for all three participants. Although Sarah's results on the oral reading fluency indicates that she made no gains, her scores on the total acceptability indicate that she made a gain of two percentage points on the narrative text and 1 % on the expository text. This suggests that the number of miscues or words read incorrectly decreased during the posttest read for both passages. Thomas and Max's scores on the oral reading fluency increased significantly: Thomas' average increase across the narrative and expository texts was about 30 correct words per minute and Max made an average gain of about 13 correct words per minute. Although Max's results show insignificant changes in total acceptability, Thomas' results show that he made gains of at least four percentage points on the narrative text, and two percentage points on the expository texts, suggesting that his posttest reading had less miscues. All three participants also made significant gains in comprehension, especially with regards to the responses to the questions on the expository texts.

Table 4

Scores of Oral reading fluency, Total acceptability and Oral comprehension

| | Measure | Narrative Text | | Expository Text | |
|--------|----------------------------|----------------|-----------|-----------------|----------|
| | | Pretest | Post test | Pretest | Posttest |
| Sarah | Number of words in passage | 304 | | 197 | |
| | Oral reading fluency | 52cwpm | 51 cwpm | 61 cwpm | 61 cwpm |
| | Total acceptability | 96 % | 98 % | 97 % | 98 % |
| | Oral reading comprehension | 50 % | 75 % | 38 % | 88 % |
| Thomas | Number of words in passage | 308 | | 281 | |
| | Oral reading fluency | 89cwpm | 120 cwpm | 103 cwpm | 133cwpm |
| | Total acceptability | 95 % | 99 % | 97 % | 99 % |
| | Oral reading comprehension | 88 % | 63 % | 75 % | 88 % |
| Max | Number of words in passage | 304 | | 197 | |
| | Oral reading fluency | 85 cwpm | 112 cwpm | 93 cwpm | 102 cwpm |
| | Total acceptability | 97 % | 98 % | 98 % | 98 % |
| | Oral reading comprehension | 63 % | 88 % | 88 % | 100 % |

Note: Thomas read different texts for both the narrative and expository test. These selections were based on his instructional level based on his word list scores.

Cwpm = correct words per minute

Discussion

This study was designed and implemented to determine the effectiveness of a Guided Reading strategy on the reading ability of students with learning disabilities. The aim of the intervention was to teach students how to independently read and comprehend both narrative and expository texts, and read with fluency using decoding strategies based on phonics and phonemic awareness. Participants were taught how to use reading strategies such as contextual clues to read unfamiliar words, skipping the word and returning to it, chunking words, and identifying familiar word parts first to help read words. Using specific strategies for decoding words and comprehension of the text, participants were instructed on the use of before reading, during reading, and after reading comprehension strategies and activities to read the text with greater

comprehension.

The researcher hypothesized that providing such an intensive and differentiated instruction in a small group would offer an ideal setting for participants to learn the strategies, and receive the type of feedback necessary to improve their skills. The researcher provided three lessons that focused specifically on strategies to decode words, repeated readings of affixes and suffixes, and fluency practice of sight words. An examination of the results suggests that overall there appeared to be improvements in several reading components. Specifically, there was an improvement in all participants' sight word reading scores as evidenced by their *total number correct* scores and *total correct automatic* on the word lists. This means that participants appeared to have learned to read the words more frequently with automaticity, rather than with the use of decoding. While decoding is a necessary process for younger and struggling readers, reading words with automaticity is indicative of a good reader.

These results support Denton and Al Otaiba's (2011) conclusions that students with reading disabilities require "intensive instruction...delivered to small groups in highly interactive formats over extended periods of time" (p. 6). Swanson (2008) cited the National Reading Panel's (NRP) (2000) report, which concluded, "phonemic awareness instruction is most effective when provided in small group settings" (p. 130). Providing phonics and phonemic awareness instruction in Guided Reading groups is especially helpful for students with learning disabilities because they are able to listen to the words several times as they are read incorrectly and correctly. This process helps them to make sense of the word, and perhaps memorize it too. Another essential feature of guided reading groups that support student skill development is the aspect of feedback. Denton and Al Otaiba (2011) noted that students with reading disabilities need feedback to decrease their errors or reading miscues, and increase their motivation to read.

An examination of the scores on the passages identifies three other positive gains. The most significant gain was in oral reading comprehension, in which all participants showed an improvement across all passages. Adapting Morgan, Moni and Jobling's (2009) work, the researcher provided explicit instruction on the meaning of the *who*, *when*, *why*, *where*, *what* and *how* questions. This may have helped participants answer the questions more accurately. Additionally, the increased fluency rate might have enabled participants to understand larger chunks of text more quickly and easily, resulting in an improvement in comprehension. Roberts et al. (2008) cited the NRP report (2000) which stated that, "repeated oral reading as a means for improving general reading fluency in young students also had an impact on their reading comprehension" (p. 65).

The opportunity to repeat a reading helps students to become familiar with the text content, thereby accounting for the improved comprehension. This result supports Swanson and Vaughns' (2010) summary of research evidence that repeated readings improves the oral reading fluency of students with learning disabilities (p. 488). Finally, the total number of miscues or words read incorrectly expressed as a percentage decreased as measured by the total acceptability. While this is not a significant gain, the results suggest that participants made fewer errors.

Limitations

While there appears to be significant improvement in several components of reading for the three participants in this study, the results should be interpreted with caution. The case study design of the intervention decreases the generalizability of the study. The non-experimental design also means that the researcher did not control for extraneous variables such as the effects of other reading instruction or incidental learning on the student's abilities, or that the pretest

results might have been affected by intrinsic factors such as the students' motivation, or emotions during the testing session.

Another limitation stems from the type of subtest chosen for this study. While the QRI contains specific passages and supplemental materials to determine silent reading comprehension, the researcher chose to examine and report oral reading rates and comprehension. The rationale for this was that the duration of the intervention was too short: it was not possible for the researcher to provide sufficient instruction in the limited time available. This means the reported comprehension scores are measures of oral responses. This is an inaccurate reflection of typical academic circumstances such as standardized tests or formative assessments during which students are required to read and write answers. Allowing the participants to provide oral answers removed a significant obstacle that Sarah, Thomas, and Max struggle with: reading. It might be argued that the results reported in this study are therefore skewed and an inaccurate reflection of each participant's ability.

Another limitation with regards to the results arises from the reading level of the texts selected for this intervention. Even though all three students were in a fifth grade placement, their intervention and test materials averaged between two to three grade levels below grade placement. Therefore, the positive results might need to be interpreted with caution. However, the gains still indicate that some degree of positive change occurred in their reading skills: whether these skills are retained and generalized is uncertain at this point.

Implications for Practice

There are numerous opportunities available for a student in the context of a Guided Reading group to repeatedly read texts, receive feedback, and learn how to use reading strategies. These factors are essential features of an effective reading program for students with

learning disabilities who often struggle with several components of reading. Teachers need to examine the type of comprehension strategies they teach to students with learning disabilities. These students need very explicit, step-by-step instruction of strategies to read and make sense of both narrative and expository texts. This can be taught during short Guided Reading mini-lessons so students have an opportunity to receive feedback as they work, and include a mini-lesson on phonics or vocabulary that could provide students with the type of feedback this grouping affords. Educators who work with students with learning disabilities should consider this type of instructional grouping to provide the intensive instruction these students require. However, further research with an experimental design is required to determine the degree to which this intervention affects each reading component.

Summary

Students identified with learning disabilities constitute a growing number of students receiving special education services for Reading disabilities in both the general education classroom, and resource rooms. It is imperative that educators employ evidence-based instructional strategies to provide differentiated instruction that include explicit strategy instruction in small groups to remediate the literacy challenges these students encounter. Research indicates that as an instructional strategy Guided Reading includes many research-based instructional practices that could support the literacy development of students with learning disabilities toward becoming successful, motivated and independent readers.

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