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Case Studies of Resource Room Reading Instruction for Middle School Students with High-Incidence Disabilities

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Case Studies of Resource Room Reading Instruction for Middle School Students with High-Incidence Disabilities

by

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Dedication

Jonathan Joseph Kethley who never, never, never gave up.

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Case Studies of Resource Room Reading Instruction for Middle School Students with High-Incidence Disabilities

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The middle school special education resource room may provide the last opportunity for students with high-incidence disabilities who have reading goals and objectives on their IEPs to acquire basic reading skills. Fortunately, a body of literature exists that attests to effective interventions and instructional components for adolescents who struggle with reading. An analysis of the observational studies of reading instruction for students in elementary special education resource rooms has shown little evidence of the influence of what are known to be effective reading interventions for students with high-incidence disabilities. However, a similar convergence of evidence regarding the utilization of reading research in middle school resource rooms is lacking.

This multiple case study examined the use of evidence based reading interventions (decoding, fluency, vocabulary, and reading comprehension) and effective instructional components (advance organization, practice, corrective feedback, grouping, and reduction of task difficulty) in middle school special education resource rooms. A replication logic was employed to identify and select four teachers. Teachers were

selected on the basis of special education certification, years of experience, service delivery setting (i.e., resource room), student disabilities, and language of instruction. The following qualitative methods of data collection were utilized: direct observation, formal interviews, and review of documents. Qualitative data analysis procedures were employed to obtain a description of reading instruction.

Findings indicated that teachers implemented decoding and fluency interventions, In contrast, vocabulary interventions were limited to verbal association level routines, and only one teacher implemented a reading comprehension intervention. Most of the time allotted to comprehension was spent in assessment rather than instruction. Findings also indicated that the teachers provided decoding and fluency practice with corrective feedback but were less consistent in their use of advance organization. The teachers provided limited amounts of instruction in alternative grouping formats. Based on the needs of middle school students for vocabulary development and reading comprehension strategy instruction, there is a need to identify the reasons teachers do not use of evidence based vocabulary and reading comprehension interventions and to identify effective ways to help teachers implement vocabulary and comprehension interventions.

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Glossary

Advance Organization	The teacher utilizes activities such as reviewing, prompting students to scan materials to be read, directing students to focus on particular portions of materials, providing information prior to discussion, stating objectives or importance of the lesson in order to bridge the gap between a student's existing knowledge and the new information to be learned (Darch & Gersten, 1986). Can include the use of graphic organizers, semantic maps, or relationship matrices. "An advance organizer is a statement written in abstract, inclusive terms deliberately introduced before a text and intended to provide a conceptual bridge between what the reader already knows and the propositions in the text that it is hoped he will understand and learn" (R. C. Anderson & Pearson, 1984, p. 258).
Alternative Grouping Formats	The use of grouping formats that includes pairs, small group, and multiple grouping formats as an alternative to whole class instruction or independent seat work (Gersten, Schiller, & Vaughn, 2000).
Comprehension Assessment	"Teachers asking questions and telling students whether their answers were right" (Durkin, 1979; Rosenshine & Stevens, 1984, p. 760) "Teacher does/says something in order to learn whether what was read was comprehended. Efforts could take a variety of forms – for instance, orally posed questions; written exercises; request for picture of unpictured character in a story" (Durkin, 1979, p. 490).
Comprehension Instruction	"Teacher does/says something to help children understand or work out the meaning of more than a single, isolated word" (Durkin, 1979, p. 488).

Corrective Feedback	Teacher response that occurs after a student response in which the teacher provides the correct answer or guides the student to the correct response (Carnine, Silbert, & Kame'enui, 1997)
Decoding	Students use strategies (plan of attack) to pronounce unfamiliar words (Lenz & Hughes, 1990)
Differentiated Instruction	Assignments, materials, instruction that is presented in a format that is different for a particular student (Gelzheiser & Meyers, 1991)
Distributed/spaced practice	Practice in which the sessions are separated by a time interval (Donovan & Radosevich, 1999)
Explicit Instruction:	Systematic instructional approach that includes delivery and design procedures derived from effective schools research and behavior analysis. Components include: group instruction with high level of teacher and student interactions, emphasis on big ideas, conspicuous strategies, mediated scaffolding, strategic integration, judicious review, and primed background knowledge (Kameenui & Carnine, 1998)
Fluency	A combination of reading rate and accurate word reading (Lenz & Hughes, 1990)
Guided practice	"The practice is guided by the teacher through factual or process questions and/or teacher demonstration. During this practice, the teacher provides feedback, evaluates understanding, and provides additional demonstration if necessary" (Rosenshine & Stevens, 1984, p. 759)
Independent Practice	"The students practice without teacher guidance and continue until their responses are rapid and firm. If necessary, the specific stages are recycled, although if the instruction consists of small steps and explicit directions, there should be little need to do so" (Rosenshine & Stevens, 1984, p. 759).

Independent Seatwork	Students work alone on same activity as other students (Lenz & Hughes, 1990; Mayer, 1987)
Individualized	Each student works on materials unlike other students – may be alone or may be with teacher/aide (Vaughn, Gersten, & Chard, 2000)
Individualized approach	"In individualized approaches [where each child received 3 minutes of instruction per hour and would be expected to work alone for 57 minutes each hour] a student is expected to learn a great deal on his or her own, to teach himself or herself through the worksheets" (Rosenshine & Stevens, 1984) p. 748.
Intervention	Treatments that have been designed to enhance reading performance of adolescents who struggle with reading (Swanson, Hoskyn, & Lee, 1999)
Instructional Activity	General teaching procedures or routines that are used for reading instruction (e.g., worksheets, homework)
Massed Practice	Condition in which students practice a task continuously with no time interval between trials (Donovan & Radosevich, 1999)
Mediated Scaffolding:	This temporary support/guidance is provided to students in the form of steps, tasks, materials, and personal support during initial learning that reduces the task complexity by structuring it into manageable chunks to increase successful task completion. The degree of scaffolding changes with the abilities of the learner, the goals of instruction, and the complexities of the task. Gradual and planful removal of the scaffolds occurs as the learner becomes more successful and independent at task completion. Thus, the purpose of scaffolding is to allow all students to become successful in independent activities. There are at least two distinct methods to scaffold instruction: teacher assistance and design of the examples used in teaching (Kameenui & Carnine, 1998)

Modeling	"A short demonstration in which the new material or skill is presented to the group" (Rosenshine & Stevens, 1984)
Pairing	Pairing was defined as a grouping format in which students work together in pairs and in which they may take on one of four different roles: tutor, tutee, reciprocal tutor-tutee, or cooperative partner (Elbaum, Vaughn, Hughes, & Moody, 1999; Vaughn et al., 2000)
Partners	"Students working for sustained periods of time, in pairs and take different roles including alternating being the tutor and tutee, and cooperative partnerships" (Elbaum et al., 1999)
Phonic Skills	Student uses sound/symbol correspondences or relationships to identify words (Lenz & Hughes, 1990)
Purpose setting	Telling students why they were learning or doing something (Gelzheiser & Meyers, 1991)
Reading Comprehension	Student is engaged in activities that promote understanding of reading passages (i.e., directed toward the meaning of a passage or toward comprehension strategies) (Durkin, 1993)
Scaffolding	Teacher prompts student to use/learn skill or strategy through modeling, questioning, shaping, correcting, guiding student response to task and gradually gives responsibility for use to the student (Lenz & Hughes, 1990)
Think Aloud	The teacher models: shows how one should feel, think, or act within a given situation including *think-aloud* (making thinking visible) or demonstrating the thought processes underlying successive steps in a task; *talk-aloud* modeling in which the teacher showed the learners how to act by talking through the steps of the task; *performance modeling* in which the learners were shown how to

	carry out a task with no think-alouds or talk-alouds about the performance or the progress toward completing the performance (Hogan & Pressley, 1997).
Small Group	Two or more groups with three or more students in a group (Vaughn et al., 2000) sizes of 3-10
Strategy	"Techniques, principles, or rules that will facilitate the acquisition, manipulation, integration, storage, and retrieval of information across situations and settings" (Lenz & Hughes, 1990). The teacher or student uses an approach to making decisions about the procedures to be used in a particular situation to facilitate learning (Lenz & Hughes, 1990)
Structural Analysis	Student analyses word units such as prefixes, suffixes, roots, and syllables to identify and pronounce words (Gelzheiser & Meyers, 1991)
Teacher-Directed Instruction	Teachers select and direct classroom activities (Rosenshine & Stevens, 1984)
Visible strategies	The teacher makes strategy steps overt in order for a student to see how and when a strategy may be used (Carnine et al., 1997)
Whole Class	Entire class involved in same activity (Elbaum et al., 1999)

CHAPTER I

Introduction

Secondary students (12-17 years old) are the fastest growing segment of the population served by special education (Lyon, 2002; Mastropieri et al., 2001), and reading difficulty is a defining characteristic for many of these students (Lyon, 1995; U.S. Department of Education Office of Special Education and Rehabilitative Services [OSERS], 2002). Moreover, a significant number of adolescents with high-incidence disabilities (i.e., learning disabilities, mild mental retardation, and behavioral disorders) have failed to develop the basic reading skills that are critical to compete in middle and high school, and in the adult world (Archer, Gleason, & Vachon, 2003; D. P. Bryant et al., 2000; Stanovich & Siegel, 1994). For example, 68% of eighth-grade students with disabilities who participated in the most recent National Assessment of Educational Progress (NAEP) failed to reach even the *basic* (i.e., partial mastery) level of reading (Donahue, Daane, & Grigg, 2003). Although these statistics showed that many adolescents across the nation struggled with reading (e.g., 23% of eighth-grade students without disabilities also scored below the basic level in reading on the NAEP), the results are clear that the vast majority of eighth-grade students with disabilities are unable to read and comprehend grade level material. Unfortunately, the middle school years may be the "last chance" for many older students to catch up on basic reading skills they will need to pass statewide assessments and to succeed in the adult world (Bryant, Linan-Thompson, Ugel, Hamff, & Hougen, 2001). Further, there remains a group of students with reading disabilities who require more intensive instruction with effective instructional components and evidence based reading interventions provided in special

education resource rooms to help them become more successful readers (e.g., D. P. Bryant et al., 2000; Mastropieri et al., 2001). Although prevention and early intervention for students who struggle with reading in kindergarten through third grade has been the focus of educational research (e.g., National Reading Panel, 2000; Snow, Burns, & Griffin, 1998) and recent nationwide policy (e.g., "No Child Left Behind," 2001), analyses of intervention research have confirmed the positive outcomes of instructional components and reading interventions for adolescents who struggle with reading (Swanson, 1999; Swanson, 2001; Swanson & Deshler, 2003; Swanson & Hoskyn, 2001; Swanson et al., 1999). To counteract the reading failure of middle school students with high-incidence disabilities, special education resource room teachers (SERTs) who provide reading instruction need to implement effective reading interventions that target the characteristic learning and curricular difficulties encountered by middle school struggling readers.

READING DIFFICULTIES AND MIDDLE SCHOOL

A number of factors affect the performance of middle school students with high-incidence disabilities who struggle with reading. One factor is the increased learning demands of the middle school curriculum that focuses heavily on complex content (Bryant, Ugel, Linan-Thompson, & Hamff, 1999; D. P. Bryant et al., 2000; Deshler, Ellis, & Lenz, 1996; Polsgrove, 1994; Swanson & Hoskyn, 2001). Compounding the increased learning demands are the characteristics of struggling readers such as inefficient use of strategies to learn new vocabulary and comprehend and recall complex content. Further, inadequate decoding skills and insufficient reading fluency may create a gap between a student's grade level and reading level that prevents access to the curriculum (Archer et al., 2003; D. P. Bryant, Goodwin, Bryant, & Higgins, 2003; Deshler et al., 1996; Jones, Torgesen, & Sexton, 1987; Peterson, Caverly, Nicholson,

O'Neal, & Cusenbary, 2000). Thus, the middle school curriculum may place demands on students who have high-incidence disabilities and struggle with reading that significantly intensifies their reading problems.

Reading Demands of Middle School

As they move into middle school, students with high-incidence disabilities who struggle with reading face significant academic demands (Bryant et al., 2001; Bryant et al., 2000; Swanson, 2001). The purpose of reading instruction shifts from reading development to learning and remembering content in the late elementary grades, which becomes the primary focus in middle school content-area instruction. Learning and remembering content is made more difficult as expository rather than narrative texts are used for instruction. Unlike narrative or story form texts, expository texts have a variety of structures (Meyer & Rice, 1984). Textbooks are the basis of most content area instruction (Ciborowski, 1992) and use primarily expository text. Evaluations of middle school textbooks have found many are poorly written (e.g., Jitendra et al., 2001). Poorly written or *inconsiderate* expository texts that use imprecise language, fail to make explicit the relationships between ideas and concepts, or utilize multiple structures within one chapter or unit make comprehension more difficult (Dickson, Simmons, & Kameenui, 1995; Mastropieri, Scruggs, & Graetz, 2003). In addition to text difficulties, the amount of reading required of middle school students increases (Bryant et al., 2003; Mastropieri et al., 2003). The increased volume demands breadth rather than depth of coverage resulting in fast paced instruction (Deshler et al., 1996). Moreover, comprehending increasingly difficult content-area materials necessitates students understand new, content-specific vocabulary, use summarizing skills, and integrate ideas across texts (Readance, Bean, & Baldwin, 1998). Thus, the shift of instructional focus to understanding and remembering texts, which may be poorly organized, cover large

amounts of material, and use new content-specific vocabulary creates increased curricular demands on middle school students. The interaction of increased curricular demands with learning characteristics of students with high-incidence disabilities interferes with the student's ability to acquire the content of middle school instruction (Bryant et al., 2003; Deshler et al., 1996; Mastropieri et al., 2003).

Characteristics of Struggling Readers in Middle School

The curricular demands of middle school require that students have mastered most of the basic reading skills and are able to focus on learning content and developing problem solving skills such as identifying themes in prose (Bryant et al., 2000; Gersten, Fuchs, Williams, & Baker, 2001; Swanson, 2001; Williams, Brown, Silverstein, & deCani, 1994). Competent readers can identify words accurately and automatically (decoding), read with sufficient speed to be able to focus on gaining meaning from what they read (reading fluency), and figure out unfamiliar vocabulary from context by using well-developed background knowledge (vocabulary development) (Pressley & Afflerbach, 1995). However, many students with high-incidence disabilities who struggle with reading have not mastered these basic skills by the time they complete elementary school (Archer et al., 2003; Bryant et al., 2000; Freebody & Byrne, 1988; McCray, 2001; McCray, Vaughn, & Neal, 2001; Shankweiler, 1989, 1999; Shankweiler et al., 1995; Shankweiler, Lundquist, Dreyer, & Dickinson, 1996). Consequently, students may experience a gap of as much as five years between grade level and reading level (Jones et al., 1987), which has an obviously negative impact on mastering the information in content-area texts (Lenz & Hughes, 1990). The poor decoding skills that are considered the source of most reading problems (Adams, 1990; Archer et al., 2003) result in reading that is slow and inaccurate (Archer et al., 2003). Laborious, inaccurate reading becomes difficult and frustrating and leads to avoidance of reading in and out of school

(Cunningham & Stanovich, 1997). Research shows that much of the background knowledge that is necessary for comprehending text is gained from wide reading and that extensive reading facilitates vocabulary development (Baker, Simmons, & Kameenui, 1995b). Moreover, a sense of the structure of text is developed as students read more narrative and expository texts (Gersten et al., 2001). Therefore, students with high-incidence disabilities who avoid reading due to lack of basic skills have fewer opportunities to develop broad knowledge of a variety of subjects, do not develop a critical sensitivity to text structure, and have reduced exposures to vocabulary that would help them comprehend complex content-area texts (Stanovich, 1986).

Beyond mastery of the basic skills of decoding, reading fluency, and vocabulary development, competent adolescent readers develop efficiency in higher-order processing skills (Swanson, 2001). This means that they are active readers who use cognitive comprehension strategies to help them identify the main ideas in text and summarize as they read. In addition to knowing and using strategies to aid understanding and memory for text, skilled readers monitor their comprehension of text (metacognitive awareness and strategies) and use repair strategies such as rereading when they have a breakdown in understanding (Pressley & Afflerbach, 1995). Although many students with high-incidence disabilities have the cognitive abilities to use the strategies of skilled readers (Chan & Cole, 1986; Gersten et al., 2001), poor readers frequently do not know when to use strategies or how to use strategies effectively and efficiently (Deshler et al., 1996; Gersten et al., 2001; Kavale, 1980; Torgesen, 1977). The lack of or inefficient use of strategies to comprehend text or to repair problems in understanding hinders reading comprehension and lessens retention of the material that is read (Gersten et al., 2001; Torgesen, 1977).

Middle school students with high-incidence disabilities who struggle with reading experience problems related to insufficient mastery of basic reading skills as well as inefficient use of higher-order processing skills required for comprehending text. Their difficulties are further compounded by the demands placed on them by middle school curriculum. Therefore, struggling middle school readers require two kinds of help from their teachers. First, they need intensive instruction in the basic skills of fluency, word analysis, and vocabulary development. Additionally, they need instruction that develops the efficient use of cognitive and metacognitive strategies for comprehending text and remembering content. Research indicates that intensive evidence based reading interventions coupled with effective instructional components are necessary for many middle school students who have high-incidence disabilities and struggle with reading (Bryant et al., 2000).

EVIDENCE BASED READING RESEARCH

Reading interventions have produced positive outcomes for adolescents who struggle with decoding, fluency, vocabulary development, and reading comprehension (Archer et al., 2003; Bryant et al., 2003; Gersten et al., 2001; Peterson et al., 2000; Swanson, 1999; Swanson, 2001; Swanson & Deshler, 2003; Therrien, 2004). Decoding interventions that utilized a direct instruction approach and targeted phonologically based decoding skills (i.e., letter-sound correspondences) (Lovett, Steinbach, & Frijters, 2000) and structural analysis (word parts) (Lenz & Hughes, 1990) have proven effective with for older students who have high-incidence disabilities. Repeated reading interventions have been found to be effective for improving reading fluency (Archer et al., 2003; Therrien, 2004), and interactive (Bos & Anders, 1990) and memory interventions (Condus, Marshall, & Miller, 1986; Mastropieri, Scruggs, & Fulk, 1990) have helped develop vocabulary. Additionally, effective reading comprehension interventions used a

combined direct instruction and strategy instruction approach (Englert & Mariage, 1991; Swanson, 2001). In addition to evidence based interventions, specific instructional components of effective interventions such as the use of explicit practice and advance organizers were found to improve the long-term benefits of interventions for students with high-incidence disabilities (Swanson, 2001). Therefore, because effective interventions and instructional components are linked to student reading gains, special education resource room teachers who teach reading to students who have high-incidence disabilities need to know evidence based interventions for decoding, fluency, vocabulary, and reading comprehension and be able to use interventions in ways that have been shown to improve learning.

Evidence Based Reading Interventions

Important among the findings of analyses of intervention research was the effectiveness of a direct instruction approach in decoding interventions (Lenz & Hughes, 1990; Lovett, Steinbach et al., 2000; Swanson, 2001). In direct instruction interventions, the content is introduced in a highly structured sequence of steps with cumulative review and practice to a mastery criterion (Gersten, 1985). Interventions that utilized a direct instruction approach to teaching letter-sound and letter-cluster-sound correspondences (e.g., Lovett, Steinbach et al., 2000) and analysis of word structure (syllables, affixes, roots, and stems) (e.g., Lenz & Hughes, 1990) have been found to be effective for teaching struggling middle school readers how to decode the long, multisyllable words found in their content-area texts (Archer et al., 2003; Swanson et al., 1999).

Repeated reading interventions (Samuels, 1979) in which sight words and connected text are read repeatedly have been shown to improve reading fluency of older and of younger struggling readers (Archer et al., 2003; D. P. Bryant et al., 2000; Chard, Vaughn, & Tyler, 2002; Daly & Martens, 1994; Mastropieri, Leinart, & Scruggs, 1999;

Mercer, Campbell, Miller, Mercer, & Lane, 2000; M. S. Meyer & Felton, 1999; Rose, 1984; Therrien, 2004). Effective interventions included those in which students read to their teachers and to other students and in which students listened to models (teacher, students, or taped passages).

Interactive vocabulary interventions such as semantic mapping and semantic feature analysis and memory interventions such as keyword mnemonic strategies have proven effective in developing vocabulary for middle school students with high-incidence disabilities. Interactive vocabulary interventions focused on activating prior knowledge to develop semantic relationships and conceptual meanings of words through discussion. Further, the use of concept maps provided learn-term learning and transfer to reading comprehension for middle school students (Bos & Anders, 1990). Keyword methods focused on retrieval of concrete or abstract terms by associating a similarly sounding a word or words (stimuli) with a visual stimulus or picture of the word that is engaged in an example of the definition. Keyword methods have proven beneficial for production recall tasks and reading comprehension tasks in which students matched vocabulary to definitions (Condus et al., 1986; Mastropieri et al., 1990).

Effective reading comprehension interventions for middle school students used a combination of the direct instruction approach that had been shown to be beneficial with decoding interventions (e.g., Lenz & Hughes, 1990; Lovett, Steinbach et al., 2000) and instruction in strategies such as the interactive discussion of relationships and meaning utilized in effective vocabulary interventions (e.g., Bos & Anders, 1990). Strategies have been defined as "approaches to making decisions regarding which procedures should be implemented and modified" (Lenz & Hughes, 1990, p. 150) as one is attempting to learn and remember. Middle school students have been taught decision-making processes to be used before, during, and after reading to enhance comprehension and memory of text

they are reading. For example, student-led discussion of predictions, text structure, and summary development within interactive small groups produced improvements in understanding and recall of expository text for sixth-grade students who struggled with reading comprehension (Englert & Mariage, 1991).

Middle school students with high-incidence disabilities who struggled with reading have benefited from reading interventions that focused on their difficulties in decoding, reading fluency, vocabulary development, and reading comprehension. The nature of the activities varied across interventions. For example, Swanson and Hoskyn (2001) found 45 different activities in their analysis of 93 intervention studies whose participants were adolescents. Interestingly, in their analysis of these intervention studies, the researchers found several common instructional components (also termed *critical features* of instruction) that predicted the greatest effects of treatment regardless of the content of the intervention.

Effective Instructional Components

Swanson and Hoskyn (2001) identified eight factors or instructional components that contributed to positive outcomes across all of the studies that included adolescent participants. Several components strongly influenced student learning, including: (a) reducing task complexity by breaking down skills and teaching them in a sequence and (b) teaching in small interactive groups of three to six students. However, one component that included advance organizers and explicit practice contributed independently to the variance in positive outcomes for students with high-incidence disabilities. In other words, studies that included advance organizers and explicit practice in the treatment activities had consistently enhanced intervention outcomes.

Overall, therefore, converging evidence from several decades of intervention research supported the use of interventions targeting basic reading skills for adolescents

with high-incidence disabilities in reading. Further, the greatest treatment effects were seen in interventions that were taught in small interactive groups, utilized advance organizers, provided extended practice opportunities, and focused on strategic processing with assistance from teacher modeling, guidance, reduction of task difficulty, and use of specific corrective feedback.

STATEMENT OF THE PROBLEM

Significant numbers of students with high-incidence disabilities in reading continue to struggle with reading as they reach their adolescent years (Donahue et al., 2003). Evidence based reading interventions provided by knowledgeable teachers, however, have provided beneficial effects for struggling adolescent readers (Gersten et al., 1998; Swanson, 2001). A recent emphasis on dissemination and utilization of reading research (e.g., National Reading Panel, 2000; Snow et al., 1998; Swanson et al., 1999) has produced promising results in inclusive general education classrooms (e.g., D. P. Bryant et al., 2000). However, a significant number of students with high-incidence disabilities require more intensive instruction with evidence based reading interventions utilizing effective instruction components in special education settings (D. P. Bryant et al., 2000; Mastropieri et al., 2001). To counteract the reading failure of many adolescents with high-incidence disabilities, therefore, it is critical that middle school special education resource room teachers who provide reading instruction for students with high-incidence disabilities are implementing effective reading interventions in ways known to produce the greatest benefits to their students who have high-incidence disabilities.

The research on resource room reading instruction for elementary students with high-incidence disabilities has yielded consistent findings about the lack of utilization of evidence based reading instructional practices (Bentum & Aaron, 2003; Gelzheiser & Meyers, 1991; Levy, 2000; McCutchen et al., 2002; Moody, Vaughn, Hughes, & Fischer,

2000; Vaughn, Levy, Coleman, & Bos, 2002; Vaughn, Moody, & Schumm, 1998). Further, interviews with teachers have shown a low level of knowledge of effective practices for students who are struggling with reading (Vaughn et al., 1998). However, the picture of resource room reading instruction for middle school students with high-incidence disabilities is less clear. For example, self-report survey data indicated that K-12 special education resource room teachers frequently utilized learning strategies and direct skills instruction and that middle school special education teachers utilized repeated readings (for fluency building) only occasionally (Arthaud, Vasa, & Steckelberg, 2000). Further, surveyed secondary special education teachers rated the effectiveness of instructional methods such as learning strategies and academic remediation lower than functional living skills and transition instruction although resource room teachers rated learning strategies higher than did self-contained special education teachers (Conderman & Katsiyannis, 2002). Yet, little direct observation data exists to support and elaborate on this self-report data by middle school resource room teachers.

Previous observational studies that included adolescents have provided little direct evidence of middle school resource room reading instructional activities due to several factors: (a) elementary and secondary student data were not disaggregated (Allington & McGill-Franzen, 1989; Haynes & Jenkins, 1986), (b) reading was not the focus of the study (McIntosh, Vaughn, Schumm, Haager, & Lee, 1993), or (c) resource room instruction was not the focus of the study (Howard-Rose & Rose, 1994; McIntosh et al., 1993; O'Connor & Jenkins, 1996; Olinger, 1987). The few studies that have provided direct evidence of reading instructional activities in secondary resource rooms have targeted high school students and have been conducted prior to the era of

nationwide education reforms focusing on the use of evidence based reading research (Meents, 1990; Rieth, Lewis, Okolo, Bahr, & Eckert, 1987).

Although previous research has examined reading instruction in elementary and in high school resource rooms, similar evidence on middle school resource rooms is lacking. Middle school resource rooms may provide the last chance for students with high-incidence disabilities who have reading goals and objectives on their IEPs to acquire the basic reading skills they need for high school and adulthood. Therefore, a study that utilized direct observation to describe middle school resource room reading instruction was warranted (Conderman & Katsiyannis, 2002). Further, a study that provides direct observation data will provide a first step in understanding how to improve resource room reading instruction for middle school students with high-incidence disabilities who struggle with reading.

PURPOSE OF THE RESEARCH

The purpose of this study was to investigate through direct observation and teacher interviews the extent to which reading research has influenced the instructional practices of middle school special education resource room teachers. Specifically, the study documented the teachers' implementation of reading interventions (i.e., reading comprehension, fluency, vocabulary, and decoding interventions) and their utilization of effective instructional components (i.e., advance organization, practice, control of task complexity, feedback, and small interactive groups).

RESEARCH QUESTIONS

The following research question guided the study:

1. What does special education resource room reading instruction consist of for middle school students with high-incidence disabilities who have

reading goals and objectives on their Individualized Education Programs (IEPs)?

a. What decoding, fluency, vocabulary, and reading comprehension interventions do special education resource teachers implement for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs?
b. During reading instruction, to what extent do special education resource teachers use instructional components that have been demonstrated to be effective for students with high-incidence disabilities who have reading goals and objectives on their IEPs? Specifically, to what extent do special education resource teachers use advance organization, practice, control of task complexity, feedback, and small-interactive groups?

CHAPTER II

Review of Literature

Students with high-incidence disabilities who struggle with reading in elementary school frequently continue to struggle when they enter high school (Lyon, 1995). By 10th grade, the gap between their reading level and grade level may be five years or more (Jones et al., 1987) indicating that these students have not gained mastery over basic reading skills (Archer et al., 2003; D. P. Bryant et al., 2003; Gersten et al., 2001; Mastropieri et al., 2003). Instruction in basic reading skills that may be necessary for these older struggling readers is not often included in high school curricula (L. S. Fuchs, Fuchs, & Kazdan, 1999; Rieth et al., 1987). Thus, middle school may be the last opportunity for older struggling readers to "catch up" (D. P. Bryant et al., 2000). Fortunately, a body of literature exists that attests to effective interventions and instructional components of for adolescents who struggle with reading (Archer et al., 2003; D. P. Bryant et al., 2003; Gersten et al., 2001; Mastropieri et al., 2003; Swanson, 2001; Swanson & Deshler, 2003; Swanson & Hoskyn, 2001; Swanson et al., 1999).

Many students with high-incidence disabilities receive reading instruction in inclusive general education classrooms (U.S. Department of Education, 2002). However, providing intensive, small-interactive group instruction utilizing evidence based reading interventions to students with a wide variety of abilities in inclusive classrooms has proven difficult and ineffective for some students (D. P. Bryant et al., 2001; D. P. Bryant et al., 2000). Further, over half of students with high-incidence disabilities are served for at least part of the day outside of the general education inclusion classroom (e.g., in special education resource rooms) (U.S. Department of Education, 2002). An analysis of

the observational studies of reading instruction for students in elementary special education resource rooms has shown little evidence of the influence of what are known to be effective reading interventions for students with high-incidence disabilities who have reading goals and objectives on their Individualized Education Programs (IEPs) (Moody et al., 2000; Vaughn et al., 1998). However, a similar convergence of evidence regarding the utilization of reading research in middle school resource rooms is lacking. In light of these findings, the purpose of this study was to investigate through direct observation and documentation of intervention content and instructional components the extent to which evidence based reading research has influenced the reading intervention practices of middle school special education resource teachers. To this end, this chapter examines two bodies of literature to inform and provide a framework for the study: (a) literature on the evidence based reading interventions and instructional components that have been shown to be effective for adolescents, and (b) observational literature on reading instruction in special education resource rooms.

EVIDENCE BASED READING RESEARCH

Analyses of reading research have demonstrated the positive effects of using evidence based reading interventions with adolescents who struggle with reading (Archer et al., 2003; D. P. Bryant et al., 2003; Gersten et al., 2001; Mastropieri et al., 2003; Swanson, 1999; Swanson, 2001; Swanson et al., 1999). Both the content (the *what*) of reading interventions (i.e., decoding, reading fluency, vocabulary development, reading comprehension) and the instructional components (the *how* of effective instruction) of effective interventions (i.e., practice with feedback, advance organization, small-interactive groups, teacher control of task complexity/difficulty) for adolescent struggling readers have recently been examined.

Evidence Based Reading Interventions

Much has been learned about the content of interventions for adolescent students who continue to struggle with reading (Archer et al., 2003; D. P. Bryant et al., 2003; Deshler et al., 1996; Mastropieri et al., 2003). Critical content includes four areas: (a) decoding of long, multisyllable words that are found frequently in content-area texts (Archer et al., 2003), (b) building reading fluency or sufficiently fast and accurate reading that allows attention to be focused on understanding (Archer et al., 2003; LaBerge & Samuels, 1974), (c) vocabulary development that helps students recall terms (Condus et al., 1986; Mastropieri et al., 1990) and provides interaction with students' prior knowledge by exploring semantic and syntactic relationships of words (Bos & Anders, 1990; D. P. Bryant et al., 2003), and (d) reading comprehension instruction that focuses on teaching students how to think when they are reading (Gersten et al., 2001; Mastropieri et al., 2003).

Decoding

Accurate and automatic identification of multisyllabic words is critical to comprehension of middle school content-area texts (Deshler et al., 2001; Gersten et al., 2001; Lenz & Hughes, 1990; Peterson et al., 2000) and distinguishes good and poor readers (Perfetti, 1986). Good readers use word components or parts such as prefixes, suffixes, roots, and syllables to identify long, multisyllable words (Lenz & Hughes, 1990; Perfetti, 1986). Structural analysis is the systematic use of strategies to identify word parts. Decoding interventions that taught structural analysis utilizing instructional methods reflecting the components of direct instruction have been found to produce the greatest effect on students with high-incidence disabilities (Swanson, 1999). Components of direct instruction include (a) breaking down and teaching a task in small steps, (b) administering intermittent learning checks/tests, (c) using specific corrective feedback,

(d) providing a graphic organizer or pictorial representation, (e) individualizing the pace of instruction and providing multiple guided and independent practice opportunities, (f) teacher control of task complexity/difficulty through breaking instruction into phases, (g) utilizing small interactive group instruction, (h) teacher modeling or demonstrating a skill, (i) rapid pace of instruction, (j) providing one-on-one instruction, (k) asking questions, and (l) teacher presenting new materials (Swanson, 2001; Swanson et al., 1999).

A number of studies have provided clear evidence that older struggling readers can be taught to use decoding strategies to improve word identification (Lenz & Hughes, 1990; Lovett, Lacerenza et al., 2000; Polloway, Epstein, Polloway, Patton, & Ball, 1986). For example, the Corrective Reading Program (Engelmann et al., 2002) has a long history of efficacy with adolescents who struggle with decoding (Grossen, 2004). Corrective Reading systematically teaches sound-symbol relationships to a level of mastery utilizing the Direct Instruction model and has been shown to be effective for adolescents with high-incidence disabilities (Polloway, Epstein et al., 1986). The authors emphasized that teacher training and consistent use of the program were critical to the program's effectiveness.

In another example of the use of a direct instruction orientation, Lenz and Hughes (1990) examined the effects of a problem-solving model for word recognition with seventh, eighth, and ninth-grade students with learning disabilities. Teachers were trained to use eight procedures to promote student acquisition and generalization of a multi-component strategy (DISSECT, Word Identification Strategy, Lenz, Schumaker, Deshler, & Beals, 1984) to recognize multisyllable words in their content-area science texts. Utilizing a multiple baseline across subjects experimental design, Lenz and Hughes demonstrated the effectiveness of the intervention in reducing word reading errors.

However, results of comprehension measures were inconsistent, indicating some students might require further specific comprehension strategy instruction. The authors concluded that the problem-solving nature of the strategy and student mastery of steps of the procedures were important elements in the intervention's effectiveness. Similar to Corrective Reading, extensive teacher training in effective use of the strategy was a critical element in the success of the intervention.

Lovett and her colleagues (2000) combined phonological skill training with strategy instruction to address questions of transfer and generalization from nonword decoding to reading measures including passage comprehension for severely reading disabled 7 to 13 year old children. The phonological skill program included introduction of letter-sound correspondences and was taught with a direct instruction approach. The word identification strategy program included four metacognitive decoding strategies that helped students use what they already knew to decode unfamiliar words. The researchers used a sequential crossover design to investigate the efficacy of combined treatments versus single treatments using one of the programs in isolation. Students received 70 hours of instruction in one of five groups: (a) phonological skills training (35 hours) followed by strategy training (35 hours), (b) strategy training (35 hours) followed by phonological skills training (35 hours), (c) phonological skills training (70 hours), (d) strategy training (70 hours), or (e) math training control group (70 hours). Outcome measures included training measures and transfer-of-learning measures including uninstructed multisyllable words, nonword reading, and standardized measures of phonological analysis, reading, and spelling achievement. Overall, the students in the combined treatments outperformed students in the single treatment and math control groups on training measures and transfer measures, which indicates the importance of explicit subsyllabic segmentation training. Students in all four of the reading treatments

improved significantly in comparison to the math control group on standardized reading measures (passage comprehension), indicating generalization of word attack skills to other areas of reading acquisition. Students in the phonological skills training followed by strategy training held a slight advantage on nonword spelling on multisyllable word identification measures. The authors suggested it was the multidimensional approach with training in the flexible use of decoding strategies plus self-monitoring that promoted the greatest improvements in reading skill.

In summary, these studies demonstrate the effectiveness of emphasizing direct instruction and strategy training to improve decoding skills of students with high-incidence disabilities who struggle with reading. Sound-symbol correspondences have been taught with structured reading programs. Interventions utilizing direct instruction of strategies to decode multisyllable words have proven effective. Combinations of phonological skill training interventions and strategy interventions have also proven effective. In addition to accurate decoding of long, multisyllable words, however, comprehending and remembering the volume of reading encountered by students in middle school requires consolidation of skills to the point of fluency (Archer et al., 2003; Lovett, Steinbach et al., 2000).

Reading Fluency

Accurate decoding and reading speed are considered the measurable components of oral reading fluency (Archer et al., 2003; Samuels, 1979). The rationale for building reading fluency is explained by the information processing theory in which cognitive attention spent on decoding is drawn away from attention that could be focused on comprehending (LaBerge & Samuels, 1974). Thus, fluent reading requires less of the finite amount of cognitive attention that can then be utilized in gaining meaning from text reading. Although the nature of the link between fluent reading and reading

comprehension is not completely understood (Gersten et al., 2001), there is a clear consensus that fluency is critical to skilled reading (National Reading Panel, 2000; Samuels, 1997; Snow et al., 1998). Further, poor reading fluency has been shown to be amenable to remediation (Archer et al., 2003; Chard et al., 2002). As the content-area reading volume demands increase in middle school, the need for fluent reading is evident (B. R. Bryant & Rivera, 1997).

Most of the recently reviewed intervention studies targeting oral reading fluency for struggling readers have been conducted with elementary age children (Swanson et al., 1999). Further, the primary focus of fluency building has been on developmental reading instruction (National Reading Panel, 2000; Snow et al., 1998). However, a comprehensive review of fluency intervention studies by Chard and his colleagues (2002) revealed a number studies that provided consistent evidence of the effectiveness of intervention for older struggling readers. Most promising were interventions that included repeated reading with a model plus error correction and feedback utilizing increasingly difficult texts (Chard et al., 2002). For example, Rose (1984) demonstrated that teacher modeling and providing corrective feedback produced faster reading rates than silent reading practice for students ages 9-1/2 to 13. Similarly, a study by Daly and Martens (1994), in which a treatment that emphasized listening to an audiotaped model of passages (tape-assisted reading), drill/practice on sight words, and training to mastery level criterion produced the greatest performance gains for a group of 8 to 11 year old students.

More recently, Bryant and her colleagues (D. P. Bryant et al., 2000) used repeated reading with a model (Partner Reading, Delquadri, Greenwood, Whorton, Carta, & Hall, 1986) as part of a multicomponent reading intervention with middle school students with high-incidence disabilities. The Partner Reading intervention utilized peer pairs made up

of a stronger and weaker reader in which the stronger reader provided the model of fluent reading for the weaker reader. Teacher modeling of the strategy and student practice with corrective feedback were important components of implementation. Further, the Partner Reading strategy itself emphasized repeated reading (i.e., practice) with feedback provided by the stronger reader. Results showed statistically significant gains in reading fluency by readers in average achiever, low-achiever, and reading disabled groups.

Finally, in a meta-analysis of in studies that utilized repeated reading, Therrien (2004) identified critical instructional components linked to fluency and comprehension gains. Effect sizes (ES) in studies measuring transfer of fluency and comprehension gains to non-practiced passages were greatest when students read to an adult (i.e., three times greater than for peer-mediated instruction). Additionally, studies in which adults provided corrective feedback produced large gains (ES=1.37). Further, the author advised caution in the use of peer tutors because the "qualities, characteristics, and training they need to become competent tutors have yet to be determined" (p. 258).

In sum, interventions such as repeated reading have proven effect at building reading fluency of adolescents who have high-incidence disabilities with reading goals and objectives on their IEPs. Effective interventions have included Partner Reading and reading with an audiotaped model and repeated reading with a adult who provides corrective feedback. Fluency interventions can lead to practice of reading with a wider variety of texts. Exposure to greater amounts of text can similarly lead to improvements in vocabulary and reading comprehension (Archer et al., 2003; Stanovich, 1986). However, students with high-incidence disabilities require effective vocabulary interventions to help them develop the specific vocabulary needed to understanding complex middle school texts.

Vocabulary Development

A reciprocal relationship exists between vocabulary knowledge and reading comprehension (Baumann & Kameenui, 1991; Bos & Anders, 1990; Gersten et al., 2001; Stanovich, 1986). In other words, knowledge of word meanings aids understanding of text and broad reading of a variety of texts increases knowledge of vocabulary (Bos & Anders, 1990; Gersten et al., 2001). A study by Simmons and Kameenui (1990), indicated that this relationship gets stronger as students move beyond the elementary school years. The authors suggested that middle school students who struggled with reading would benefit from interventions that provided indepth instruction of vocabulary.

Several findings from a synthesis of research on vocabulary acquisition (Baker et al., 1995b) have instructional implications for students with high-incidence disabilities. For example, students with learning disabilities have been found to differ from their typically achieving peers in their ability to induce rules. Thus, explicit instruction in critical vocabulary terms rather than reliance on determining word meaning from context (i.e., context clues) is an important aspect of instruction (Baker et al., 1995b). Further, students who have poor vocabularies such as middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs may not learn new vocabulary words as rapidly as typically achieving students. Therefore, students need more opportunities to use new words (i.e., practice) (Baker et al., 1995b). Another important finding is that students with learning disabilities do not group words semantically to aid recall as well as students who do not have learning disabilities. However, word-learning abilities of students with learning disabilities have been shown to improve when semantic information was provided (Bos & Anders, 1990). Therefore, helping students make connections to existing knowledge and providing knowledge of

relationships to other words helps students with high-incidence disabilities remember new vocabulary (Baker et al., 1995b).

Bryant and her colleagues (2003) recently reviewed the research on vocabulary interventions for adolescents. Two types of vocabulary interventions were found to be effective for producing the depth of vocabulary understanding that transferred to reading comprehension of middle school students with high-incidence disabilities. Effective interventions used mnemonic strategy instruction and concept enhancement instruction. Similar to the findings of Baker and his colleagues, the authors concluded that interventions, which were interactive in nature and focused on developing conceptual understanding through activation of prior knowledge and exploration of semantic relationships were most effective for transfer of word knowledge to reading comprehension.

Studies have validated the effectiveness of the keyword mnemonic strategy for maintenance and generalization of acquired vocabulary terms (Condus et al., 1986; Mastropieri et al., 1990; Mastropieri, Scruggs, Levin, Gaffney, & McLoone, 1985). In the keyword method unfamiliar vocabulary terms are transformed (recoded) into similarly sounding stimuli that are associated with (related) a picture/visual stimulus to facilitate recall (retrieval). In studies that use the keyword method, students are presented with a card that pictures the keyword interacting with the definition (concrete terms) or an example of the definition (abstract terms). When students see the word, they are taught to think of the related word and what the word was doing in the picture. Studies have shown the keyword method to be effective for use with concrete (Mastropieri et al., 1985) and with abstract vocabulary (Mastropieri et al., 1990). Students in the keyword conditions outperformed students in direct instruction conditions (Mastropieri et al., 1990), context clue conditions, and those who were provided illustrations without keywords (Condus et

al., 1986) on production recall tasks and on comprehension tasks (multiple choice and matching). Interestingly, Mastropieri and her colleagues (1990) indicated that a benefit of the keyword mnemonic method was that it did not place "excessive demands" on the limited prior knowledge of older students who have high-incidence disabilities.

Unlike the mnemonic strategies, vocabulary interventions using concept enhancement strategies have shown that comprehension of students with high-incidence disabilities can be improved when prior knowledge is developed and activated. Bos and Anders (1990) investigated the effectiveness of two vocabulary interventions on vocabulary knowledge and passage comprehension of 61 junior high school students with identified learning disabilities. Students participated in one of four conditions, a definition instruction condition and three interactive conditions. The definition instruction condition (DI) utilized a direct instruction orientation to teaching vocabulary terms in which students recited terms orally, practiced pronunciation, and memorized definitions. Practice of the definitions included both massed intensive initial practice and distributed (i.e., spaced, Dempster, 1987) practice. Three interactive conditions included semantic mapping (SM), semantic feature analysis (SFA), and semantic/syntactic feature analysis (SSFA). The interactive conditions focused on development/activation of prior knowledge through discussions about the topic prior to reading a practice passage, predicting relationships among vocabulary and underlying concepts, and reading to confirm predictions. In addition to multiple exposures to the vocabulary words, students developed a hierarchical relationship map (SM group) or relationship matrices (SSFA group) as part of the discussion process. Relationship map and matrices were used to study for the posttest. Results of the posttest and follow-up test showed the interactive conditions more effective than the DI condition on vocabulary knowledge and comprehension. Although there were no significant differences between SM, SFA, and

SSFA conditions at posttest on a test of written recall, the three interactive conditions were more effective than the DI condition at the follow-up test. In other words, long-term learning occurred when students discussed conceptual relationships, utilized prior knowledge to make predictions, shared knowledge with others, created graphic representations of relationships, and confirmed predictions by reading.

In summary, vocabulary interventions have been shown to improve understanding and recall and at the word level that has led to improved passage comprehension for adolescents with high-incidence disabilities. Interventions that produced maintenance and generalization of acquired vocabulary terms have included mnemonic strategies and concept enhancement instruction. In addition to the benefits of effective vocabulary interventions, students with high-incidence disabilities who struggle with reading also profit from evidence based interventions to help them understand and remember information that is found in complex middle school texts.

Reading Comprehension

Many adolescents with high-incidence disabilities experience difficulty with reading comprehension (Brownell, Mellard, & Deshler, 1993). Lack of or inefficient use of strategies (i.e., higher-order cognitive processing) and failure to recognize a loss of understanding or to utilize effective repair strategies (i.e., metacognition awareness and self-monitoring/self-questioning strategies) characterize the current view of reading comprehension difficulties (Deshler et al., 1996; Gersten et al., 2001; Palincsar & Brown, 1987). Thus, reading comprehension interventions have focused on teaching students how to think about what they are reading (Gersten et al., 2001; Mastropieri et al., 2003).

In analyzing the past 20 years of research on reading comprehension interventions, Gersten and his colleagues (2001) concluded that comprehension performance on both narrative and expository text as well as comprehension monitoring

could be improved by helping students with high-incidence disabilities to interact actively with the text. For example, focusing on story grammar (characters, setting, problem, and resolution) as an organizational framework was an effective means of improving comprehension of narrative text (Gurney, Gersten, Dimino, & Carnine, 1990; Idol & Croll, 1987). Supporting the findings of a comprehensive meta-analysis of interventions for students with learning disabilities (Swanson et al., 1999), Gersten et al. found strategy instruction that used multicomponent strategies and combined both direct instruction and strategy instruction produced the most consistent results with expository text and provided the "promise of transfer" to generalized reading measures that were not found in studies utilizing single strategies.

In studies that utilized single strategies, questioning (e.g., main idea, self-monitoring) (Chan, 1991; Malone & Mastropieri, 1992; Wong & Jones, 1982), graphic organizers (Boyle, 1996), and summarizing strategies (Gajria & Salvia, 1992; Nelson, Smith, & Dodd, 1992) were effective with expository text. Skilled readers monitor their comprehension of text through self-questioning as they read (Pressley & Afflerbach, 1995). Directed response questioning activities in which the teacher and student engaged in dialogue back and forth or the teacher or the student asked questions during reading of text are intended to help students develop the metacognitive skill of self-monitoring (e.g., Brophy & Good, 1986b; Rosenshine, 1995). Studies have demonstrated that students with high-incidence disabilities can be taught to ask and answer summarization questions such as who or what is the paragraph about and what is the most important thing happening to the who or what and then produce a short summary statement (Malone & Mastropieri, 1992). Further, students who were taught to use this summarization strategy with the addition of a self-monitoring strategy that consisted of a simple checklist to indicate use of strategy steps outperformed students taught only the summarization strategy and a

control group of students who received traditional comprehension instruction on a test of far-transfer (to grade-level social studies text) (Malone & Mastropieri, 1992).

Studies by Chan (1991) and by Wong and Jones (1982 used a direct instruction approach to teaching students with reading disabilities to use self-questioning to identify the main idea in expository passages. Chan focused on generalization of strategy use by fifth and sixth grade students with reading disabilities by directing the locus of control to the student and away from the teacher. She provided explicit generalization instruction that included teacher modeling and gradually moved from external guidance through overt, faded, and finally covert self-guidance phases. Students were trained with standard instruction (control group) and induction-generalization (explicit generalization training) and were tested under cued-generalization (students were prompted to use the strategy) and uncued-generalization conditions. Although students with reading disabilities learned to identify the main idea and used the strategy to identify main idea on novel passages (i.e., generalization of strategy use), their strategy use did not generalize to a test of reading comprehension. Chan surmised that increasing the duration of the intervention might have been required for generalization to the reading comprehension measure, a suggestion that is in accord with findings from Swanson et al's. meta-analysis of intervention research (1999).

Wong and Jones (1982) also targeted self-questioning training with as a means to improve reading comprehension of eighth and ninth-grade students, proposing that insufficient metacomprehension was a cause of poor comprehension for students with reading disabilities. In addition to identifying and underlining the main idea in passages, one group of students in the study were directed to develop and answer questions about the main ideas. After reaching criterion on identifying main ideas, students in strategy trained and untrained groups were further divided into groups that either made

predictions (an element of metacognition, Brown, 1980) about questions that might be on a reading comprehension test to follow or read the passage and judged the quality of the writing. Similar to Chan's study, trainers adopted a direct instruction approach that included modeling, feedback, and teacher-guided and independent practice. Unlike the students in Chan's study, the students who made predictions about questions from the passages they read outperformed both the students who were trained in the self-questioning strategy but judged writing quality and the students who were not trained in the self-questioning strategy on a measure of reading comprehension. However, neither of the groups of students with reading disabilities performed as well on a written recall test as the comparison group made up of typically achieving students.

In a study in which middle school students (grades six through eight) were taught a cognitive mapping strategy, Boyle (1996) also addressed the problem of maintenance and transfer to comprehension tests. Although the use of cognitive maps had proven successful in making the relationships between important concepts explicit, studies utilizing this strategy had featured teacher made maps. Following training using the direct instruction approach, students in Boyle's study were successful in developing cognitive strategy maps on their own. Further, on a researcher-developed curriculum-based measure of literal and inferential comprehension, trained students outperformed untrained students on below-grade level and on-grade level passages. However, gain scores on a standardized reading comprehension test showed little change from pre- to posttest indicating the failure to transfer the skills. Notably, no specific training for transfer was included in the study's procedures.

Two studies used a direct instruction approach to teach students with high-incidence disabilities a summarization strategy based on Brown and Day's (1983) five summarization rules for deleting nonessential information and identifying explicit and

implicit main ideas. Both Gajria and Salvia (1992) and Nelson and his colleagues (1992) examined the effects summarization skills on reading comprehension with maintenance and transfer. Sixth through ninth-grade students in Gajria and Salvia's study were explicitly taught to use self-monitoring and gradually took responsibility for use of the strategy. On a delayed posttest approximately one month after the treatment, students trained in strategy use demonstrated maintenance of comprehension skills on researcher-developed passages and made significant gains from pretest scores on a standardized comprehension test. These results were similar to those found by Nelson and his colleagues in a study with fourth through eighth-grade students. However, in the Nelson study students used materials from their science textbooks and demonstrated maintenance but not generalization of the use of the strategy. The authors concluded that specific training in generalization and longer duration of treatment was warranted.

Significantly, all of the single strategy interventions utilized common instructional components. Explicit instruction that included teacher modeling, guidance of student responses with feedback, review, and multiple opportunities to practice until a criterion was reached was critical for gaining active involvement of students and improving comprehension (Chan, 1991; Gajria & Salvia, 1992; Nelson et al., 1992). Although students in all studies were successful in using the strategies for their intended purpose, transfer and generalization of skills were indicated only in studies in which students were provided specific training that focused on transferring locus of control to the student and discussion of how the strategies might be used in other situations (Wong & Jones, 1982). Further, all authors concluded that students with high-incidence disabilities required interventions of extended duration. Noteworthy, however, was only one study utilized unadapted content area materials (Nelson et al., 1992).

An early and a more recent study utilizing multicomponent strategies and emphasizing direct strategy instruction also used unadapted content area materials (Jitendra, Hoppes, & Xin, 2000; Schumaker, Deshler, Alley, Warner, & Denton, 1982). Schumaker and her colleagues employed the MULTIPASS strategy that included three substrategies in which students read a chapter multiple times for specific purposes. In the initial pass, students previewed the chapter. Previewing was followed by examining textual clues (e.g., headings, subtitles, bolded print), turning them into questions, and answering the questions by skimming surrounding text. This Size-Up Pass ended with students paraphrasing all of the information they could remember. In a final pass, Sort-Out, students answered end-of-chapter questions using previously gathered information. Students were tested on strategy use and on novel chapters in their grade-level textbooks. A multiple-baseline design across substrategies demonstrated the effectiveness of the strategy training for students with high-incidence disabilities in both ability level and grade level materials. Of practical significance, these students improved their grades on classroom tests over textbook content from failing grades to passing. Critical to the success of the students was individualized instruction and extensive practice with each substrategy until it was mastered.

Jitendra and her colleagues (2000) also utilized multicomponent strategies and unadapted texts when they taught middle school students with high-incidence disabilities a main idea comprehension strategy plus a self-monitoring strategy in which teacher support was faded similar to Chan's (1991) earlier study. Training materials included narrative and expository text and were developed by the researchers. Unlike the materials used by Chan, however, content-area texts were used to assess near (similar to training materials), far transfer (different from training materials), and maintenance (at six-weeks). Teachers conducted instruction that utilized strategy modeling (both main idea

comprehension and self-monitoring), monitoring (allowing for specific corrective feedback), and practice in small groups (six to eight students). Students were taught to use strategy cue cards, which were available to the students during testing. Results showed improved performance and maintenance of improvement by the trained students over the untrained control group. Transfer was measured on two types of responses, a selection response in which students picked the best answer (main idea) and a production response in which students generated an answer (main idea). Students in the trained group improved in their ability on selection responses only. Neither group improved on production responses. However, the authors proposed that written language production difficulties could have impacted the generation (production responses) of main ideas. Results of the study supported the effectiveness of generalizable strategies and small group instruction, both improving feasibility of classroom use of this type of instruction.

In addition to teacher led instruction, peer mediated instruction (pairs and small interactive groups) was also found to be effective with adolescents. In a study that demonstrated greater ecological validity (i.e., usefulness in actually classroom situation instead of individual instruction by a researcher) by Englert and Mariage (1991), fourth through sixth grade students learned how to use a multicomponent reading comprehension strategy. Students were taught to use a strategy that included self-monitoring and integrated visual representations of text structures and relationship mapping within a reading lesson in an instructional format consisting of student-led small groups. Unlike earlier studies in which the complexity of multicomponent strategies was reduced by breaking them into phases to be taught in isolation (e.g., Schumaker et al., 1982), Englert and Mariage examined the effectiveness of combining and integrating instruction of the multicomponent POSSE strategy with a reciprocal teaching format in which students assume the role of the teacher and share leadership of discussions of the

text. POSSE employed five reading strategies: (a) predicting, (b) organizing predictions based on text structure, (c) searching for the text structure, (d) summarizing the main ideas, and (e) evaluating comprehension. Teachers initiated pre-reading activities in which students made predictions about the text followed by interactive during-reading and after-reading discussion that was facilitated by the teacher but led by the students themselves. Teachers acted as scribes and filled in semantic maps that served as visual representations of the text structure as students provided and discussed information. Measures included written free recall of ideas in test passages and a test of strategy knowledge and application to short passages. Students in the experimental group outperformed control group students on recall of main ideas, total number of ideas recalled, and organization of writing. Although the focus was on reciprocal teaching in which students gradually assumed the teacher's role and led a small group discussion of a passage, the students in the study learned to use summarization and how to ask each other questions about unfamiliar vocabulary or to clarify areas of misunderstanding. The gains in comprehension made by the students in the treatment groups over those made by students in traditional comprehension instruction control groups validated effectiveness of classroom use of questioning strategies for students with high-incidence disabilities. The authors concluded that three factors needed to be present for successful teaching of multicomponent comprehension strategies: (a) teacher and student interaction in which students take the role of the teacher as discussion leaders, (b) comprehension strategies that are effective, and (c) making the process of comprehension visible through the use of strategy guides and relationship maps. The use of prereading strategies to activate background knowledge and the use of other advance organizers (e.g., utilizing mnemonic devices for strategy cueing) further facilitated positive comprehension outcomes.

Notably, development of strategy knowledge appeared to be linked to the amount of control the teachers gave to students during reading.

For example, in one classroom the teacher retained control over instruction while the other teacher encouraged internalization and independent use of the strategies by her students. However, the authors noted that the most important finding of this study was the clear demonstration that students with high-incidence disabilities could learn multiple components of a comprehension strategy that were taught simultaneously rather than broken into parts and taught in isolation as had many previous comprehension interventions (e.g., Chan, 1991; Gajria & Salvia, 1992; Jitendra et al., 2000; Nelson et al., 1992; Schumaker et al., 1982).

To summarize, effective reading comprehension interventions have focused on helping students with high-incidence disabilities to become strategic readers by teaching them how to think while they are reading. Interventions have included single strategies such as finding the main idea and self-monitoring (i.e., interventions in which the teacher instructed students to ask themselves questions during reading/directed response questioning) and multicomponent strategies that targeted before, during, and after reading substrategies. Students were taught to use a checklist indicating completion of strategy steps and to ask each other questions when they failed to grasp meaning. Further, students gained independence in self-monitoring of comprehension when teachers scaffolded student use of strategies to reduce complexity of tasks. Additionally, multicomponent strategies that were taught individually or integrated into a combined strategy have proven effective.

Summary of Effective Reading Interventions

These studies provided clear evidence that middle school students with high-incidence disabilities improved decoding skills (Archer et al., 2003; Lenz & Hughes,

1990), increased reading fluency (Archer et al., 2003), learned new vocabulary (Bos & Anders, 1990), and improved comprehension of expository text (Chan, 1991; Englert & Mariage, 1991; Gajria & Salvia, 1992; Jitendra et al., 2000; Nelson et al., 1992; Schumaker et al., 1982). However, long-term learning and transfer effects occurred primarily in studies which utilized the common instructional components of practice and advance organization (Bos & Anders, 1990; Englert & Mariage, 1991) and interactive small groups (Englert & Mariage, 1991). Table 2.1 lists the reading content areas and studies that became the focus of observations.

Table 2.1. Evidence Based Reading Interventions

Reading Content Area	Supporting Studies
Decoding	Lenz & Hughes, 1990; Lovett, Lacerenza, et al., 2000; Polloway, Epstein, et al., 1986
Fluency	Archer et al., 2003; D. P, Bryant et al., 2000; Daly & Martens, 1994; Rose, 1984.
Vocabulary	Bos & Anders, 1990; D. P. Bryant et al., 2003; Condus et al., 1986; Mastropieri et al., 1990; Mastropieri et al., 1985
Reading Comprehension	Boyle, 1996; Chan, 1991; Englert & Mariage, 1991; Gajria & Salvia, 1992; Gurney et al., 1990; Idol & Croll, 1987; Jitendra et al., 2000); Malone & Mastropieri, 1992; Nelson et al., 1992; Schumaker et al., 1982; Wong & Jones, 1982

Effective Instructional Components

In a comprehensive meta-analysis of intervention outcomes in the domains of reading, expressive writing, and mathematics for students with learning disabilities, Swanson and his colleagues analyzed instructional components across all of the investigated programs to determine those that were common to the studies and that produced the strongest student outcomes. A number of instructional components were found to be important, including: (a) advance organization and practice with feedback, (b) small, interactive group instruction, and (c) teacher control of task difficulty (Swanson, 2001; Swanson et al., 1999; Vaughn et al., 2000). Noteworthy among the instructional components that proved effective in improving reading comprehension were instruction in small interactive groups and teacher control (through guidance and feedback) of task difficulty (Gersten et al., 2001; Swanson & Hoskyn, 1998; Vaughn et al., 2000). However, when studies using adolescent participants were reanalyzed, the only instructional component that was found to contribute independently to the variance in effect sizes was one that included advance organization and practice (Swanson, 2001; Swanson & Hoskyn, 2001).

Advance Organization

Learning is viewed as a process in which new knowledge is constructed from existing knowledge (Bransford, Brown, & Cocking, 2000). Teachers have facilitated their students' learning by helping them make connections to the knowledge they already possess. Research has shown that advance organizers were beneficial in tapping the existing knowledge of students who struggled with comprehension (Darch & Gersten, 1986). Although producing a specific operational definition of advance organizers has proven difficult due in part to variability in both the material to be learned and needs of the learner (Tierney & Cunningham, 1984), the intent of advance organizers was bridging "the gap between what the reader already knows and what the reader needs to know before he/she can meaningfully learn the task at hand" (Ausubel, 1968, p. 148). Studies that purported to use advance organization have included activities such as (a) teachers prompting students to review or look over materials before instruction began, (b) teachers directing students to focus on particular portions of materials that are being presented, (c) teachers providing information to students before engaging in discussion, and (d) teachers stating the objectives or importance of the lesson (Swanson & Hoskyn, 2001). Because students with high-incidence disabilities experience difficulties making connections to what they already know independently (Deshler et al., 1996; Wong & Jones, 1982), the use of organizational structures such as advance organizers provided students with a "well connected network" (Rosenshine, 1995) or "mental scaffolding" (Swanson, 1999) on which to build new knowledge. For example, in a study which compared two types of direction-setting activities (i.e., time prior to reading when a lesson is introduced for the purpose of preparing for construction of new knowledge, Darch & Gersten, 1986), a group of high school students with high-incidence disabilities learned to use an advance organizer consisting of an outline/overview of a passage to be read. The outline/overview

provided relevant concepts and a visual representation of the relationships of the concepts to the content of the passage. During the direction-setting activity, the teacher utilized a direct instruction approach that focused on engagement of students with the advance organizer, teacher modeling, and giving specific corrective feedback during guided practice in use of the passage outline/overview. A comparison group of students with high-incidence disabilities were provided a direction-setting activity using a method typical of basal readers that utilized lecture instead of the advance organizer and discussion in place of practice. The purpose of the lecture/discussion was to motivate and activate pre-existing knowledge by relating the passage they were to read to any experiences they had previously. After the direction-setting activities, both groups of students read the passages and studied the material. Students in the advance organizer group outperformed students in the lecture/discussion group on comprehension tests after each three-day unit and at the conclusion of the study. The purpose of this study was to compare a direct and an indirect approach for activating existing knowledge of students with high-incidence disabilities. The authors attributed the stronger performance of the advance organizer group to the specific training procedures and practice with feedback that were common to the direct instruction approach and suggested the advance organizer helped students form a network of relationships that provided a meaningful framework for organizing new knowledge.

To sum, advance organization provides links from students' existing knowledge to the knowledge that is to be learned. Advance organization can include teachers prompting students to review or focus on specific materials or providing information before discussion. Additionally, advance organizer outlines that provide an overview of materials to be read have proven effective. The use of advance organization in which students practice using advance organizers and are provided corrective feedback has been

shown to improve the comprehension of students who have high-incidence disabilities and struggle with reading.

Practice

Practice of correct responses reliably correlates with gains in student achievement (Anderson, Evertson, & Brophy, 1979). Studies have shown that increasing the amount of time students spent in guided practice in which teachers provided specific corrective feedback as students practiced new skills led to higher achievement (Anderson, Evertson, & Brophy, 1979; Rosenshine & Stevens, 1984). Further, independent practice of skills to the level of mastery in which teachers continued to monitor provided an added benefit to learning (Rosenshine & Stevens, 1984). Two conditions of practice have been discussed in the literature: (a) massed practice, in which a task is practiced continuously, and (b) spaced or distributed practice, in which there are intervals of various lengths of time between practice sessions (Donovan & Radosevich, 1999). In a meta-analysis of massed versus spaced practice studies, Donovan and Radosevich found a moderate (but educationally significant) overall effect size favoring spaced practice (.46). However, the type of task involved moderated the results. For example, tasks that were low in complexity (number of skills involved) and mental requirements (degree to which cognitive skills were required to perform the task) and high in physical or motor requirements produced higher effect sizes during spaced practice than those with higher task complexity. In other words, the effects of spaced practice were limited to simpler tasks. Additionally, for more complex tasks, longer time between practice sessions appeared to be more effective. Therefore, reducing complexity of tasks and providing spaced practice were recommended for greater learning to occur. Studies of educational interventions support the conclusions of these authors. For example, spelling instruction that included limiting the number of spelling words (i.e., reducing task complexity) and

emphasized spaced practice (over three weeks) and review (cumulative practice) (Gettinger, Bryant, & Fayne, 1982), produced significant gains for an experimental group of students in both accuracy of spelling taught words and transfer of spelling learned patterns to words that were not taught. Instruction for the control group of students included large groups of words introduced simultaneously with little practice or cumulative review.

The effects of explicit practice that included spaced or distributed review, repeated practice, sequenced reviews, daily feedback, and weekly or monthly review were further supported in the analyses of intervention research that were conducted by Swanson and his colleagues (Swanson, 2001; Swanson & Deshler, 2003; Swanson & Hoskyn, 2001; Swanson et al., 1999). Explicit practice was shown to increase the effect of all interventions in which it was included in the treatment description. For example, explicit practice was included as an instruction component in effective interventions that utilized a direct instruction approach such as in decoding interventions (e.g., Lenz & Hughes, 1990) or combined a direct instruction approach with strategy instruction (e.g., Chan, 1991; Gajria & Salvia, 1992; Heubusch & Lloyd, 1998; Lysakowski & Walberg, 1982; Nelson et al., 1992).

To summarize, studies have demonstrated the power of explicit practice for students with high-incidence disabilities. Provision of explicit practice in which students were guided with corrective feedback to make correct responses has been shown to lead to achievement gains. However, practice of correct responses requires teachers to respond to student errors and provide effective corrective feedback.

Feedback

The effectiveness of teacher response to student errors has clear validation in the literature (McCoy & Pany, 1986; Pany & McCoy, 1988; Rosenshine & Stevens, 1986).

Critical to providing feedback is diagnosis of the cause of a student's error (Carnine et al., 1997; McCoy & Pany, 1986; Pany & McCoy, 1988). Knowledge of the cause of an error makes possible feedback that is specifically targeted at correction (i.e., *specific corrective feedback*). Effect feedback that is used in small group skill instruction (e.g., oral reading) can consists of a number of steps, including (a) praising another student's correct response, (b) modeling the correct response, (c) leading/guiding the student as they repeat the correct response, (d) probing/testing to see if the student can make the correct response on his own, (d) firming up or providing multiple opportunities for the student to practice making the correct response, and (e) giving a delayed test to check the student's response at a later point during the same lesson (Carnine et al., 1997). For more complex instruction, such as reading comprehension and problem solving, teachers also guide students with feedback that consists of a series of questions that lead the student through previously taught materials until the student produces the correct response. This is followed by the probing/testing procedure and a delayed test (Carnine et al., 1997).

Explicit practice that included the utilization of specific corrective feedback has been shown to effect treatment outcomes of reading interventions (Swanson et al., 1999). Specific corrective feedback provided either by the teacher or peers has been included in the descriptions of practice activities in effective interventions involving strategies for decoding (e.g., Lenz & Hughes, 1990), oral reading fluency development (e.g., Rose, 1984), and reading comprehension (e.g., Gajria & Salvia, 1992) for adolescents.

In sum, corrective feedback in which teachers diagnosed student errors and modeled the correct response followed by probing to ensure understanding has proven beneficial to students who have high-incidence disabilities and struggle with decoding, fluency, and comprehension. Further, opportunities to practice and receive corrective feedback were increased when instruction was provided in alternative grouping formats.

Grouping

The grouping format or the number of students working together during instruction and the role played by the student with high-incidence disabilities in the group has been shown to affect outcomes of reading interventions (Elbaum et al., 1999). Results of a meta analysis of the variation in effect size of reading outcomes (for students in first through sixth grade) that was associated with grouping formats (pairing, small groups, and multiple grouping formats) (Gersten et al., 2000) indicated that the use of these *alternative grouping formats* were more effective than instruction in a whole group format. Findings were strong for small-group instruction and for student pairs. However, tutoring that took place in cross-age pairs in which the students with disabilities acted as tutor produced greater effects than peer pairs where the struggling reader was tutee only. Although this type of grouping format (cross-age pairs) would be difficult in a general education setting, Elbaum and her colleagues proposed that it would be feasible in a special education resource room in which there are multiple grade levels of students. Interestingly, in the studies that compared reading outcomes for varying sizes of groups was the finding that one-to-one instruction was comparable to small group instruction (three to four students) (Swanson, 1999; Swanson & Hoskyn, 2001; Swanson et al., 1999).

The finding that small group instruction, including working in pairs, was more effective for students with high-incidence disabilities was further supported by the analyses of interventions by Swanson and his colleagues (Swanson & Hoskyn, 2001; Swanson et al., 1999). Results of these analyses indicated that small interactive groups were especially effective for reading comprehension instruction. For example, students with high-incidence disabilities working in small groups (five students) to negotiate meanings of passages (Englert & Mariage, 1991) outperformed students in control

classrooms who experienced traditional whole class instruction utilizing discussion on a measure of reading comprehension (free-recall). Although grouping format was not the focus of the intervention, the authors suggested that strategy use in small-interactive groups produced stronger comprehension effects for the students with high-incidence disabilities than whole class discussion.

To summarize, the use of small groups and student pairs has proven more effective than whole class instruction for students with high-incidence disabilities who struggle with reading. Importantly, students benefited from cross-age pairs in which they took the role of tutor (teacher). Similarly, small groups of students who shared responsibilities by interacting in student-led small groups to discuss passages outperformed students who were instructed in whole class groups. Thus, alternative grouping formats (pairs and small interactive groups) are an effective component of instruction for students with high-incidence disabilities.

Reduction of Task Complexity

Teachers have provided support or *scaffolding* to students during learning tasks by reducing or controlling the complexity of the task and then fading provision of support as the student gained independence in use of the skill, strategy, or concept (Carnine et al., 1997). Teachers controlled task complexity by sequencing examples and problems from easy to more difficult, using step-by-step directions, conducting probes or intermittent tests to check for understanding and mastery, and individualizing the difficulty based on student need. Studies that utilized instruction in which complexity was controlled included both those with a direct instruction strategy approach such as the decoding study of Lenz and Hughes (1990) and comprehension studies such as those of Chan (1991), Wong and Jones (1982) and Englert and Mariage (1991). Teachers in these studies were

effective at modeling instruction and then gradually releasing the responsibility for using strategies to the students.

To summarize, students with high-incidence disabilities benefit from instruction in which teachers control task complexity. Teachers controlled task complexity by the use of examples, explicit directions, understanding checks, and modeling until students were able to complete tasks independently.

Summary of Instructional Components

The findings that advance organization and practice with feedback, small, interactive group instruction, and teacher control of task difficulty were important instructional components of effective interventions is consistent with earlier literature on effective instruction for typically achieving students in general education classrooms (Brophy & Good, 1986a; Rosenshine, 1995; Rosenshine & Stevens, 1986). For example, Rosenshine and Stevens (1986) and Brophy and Good (1986a) identified teaching functions (teacher behaviors) including the use of advance organization, practice, feedback, small-group instruction, and teaching in small steps (i.e., control of task difficulty) that were correlated with students who made academic gains. The evidence that these components were equally effective for students who struggled with reading has implications for how reading instruction is provided in special education resource rooms. Table 2.2 lists the components of instruction and studies that became the focus of observations.

Table 2.2 Effective Components of Instruction

Instructional Component	Supporting Studies
Advance Organization	Darch & Gersten, 1986;
Practice	Anderson, Evertson, & Brophy, 1979; Chan, 1991; Gajria & Salvia, 1992; Gettinger, Bryant, & Fayne, 1982; Lenz & Hughes, 1990; Nelson et al., 1992; Rosenshine & Stevens, 1984
Feedback	Gajria & Salvia, 1992; Lenz & Hughes, 1990; McCoy & Pany, 1986; Pany & McCoy, 1988; Rose, 1984; Rosenshine & Stevens, 1986;
Small group instruction	Elbaum et al., 1999; Englert & Mariage, 1991; Gersten, Schiller, & Vaughn, 2000;
Scaffolding/Teacher control of task difficulty	Chan, 1991; Englert & Mariage, 1991; Lenz & Hughes, 1990; Wong & Jones, 1982;

READING INSTRUCTION IN SPECIAL EDUCATION RESOURCE ROOMS

The effectiveness of special education resource room instruction as an intervention for students with high-incidence disabilities in reading has been studied extensively (e.g., Bentum & Aaron, 2003; Gelzheiser & Meyers, 1991; Haynes & Jenkins, 1986; McGill-Franzen & Allington, 1990; Moody et al., 2000; Vaughn et al., 2002; Wiederholt & Chamberlain, 1989). Evidence from recent analyses of reading instruction in resource room settings has shown that many elementary students with high-incidence disabilities have received reading instruction that is indistinguishable from the instruction of typically achieving students in general education classrooms. Studies of secondary resource room reading instruction have provided similarly disappointing findings.

Reading Instruction in Elementary Resource Rooms

In their synthesis of observational studies of reading instruction in elementary resource rooms, Vaughn et al. (2002) found that undifferentiated (i.e., same tasks, materials, curriculum for all students rather than instruction based on individual student

needs) whole group (i.e., all students instructed in the same task at the same time) instruction similar to general education classrooms prevailed. Further, students spent the majority of their time in both resource rooms and general education classrooms completing worksheets at their seats (Allington & McGill-Franzen, 1989; Haynes & Jenkins, 1986; Vaughn et al., 2002; Vaughn et al., 1998).

Noteworthy across the studies analyzed by Vaughn and her colleagues was the failure of resource room instruction to provide more time for students who were struggling with reading. For example, in a number of studies which specifically investigated time spent in various activities (e.g., reading out loud, reading silently, using worksheets) and on teacher behaviors (e.g., actively instructing, monitoring) and student behaviors (e.g., listening, reading, off-task behavior) (O'Sullivan, Ysseldyke, Christenson, & Thurlow, 1990; Ysseldyke, Christenson, Thurlow, & Bakewell, 1989; Ysseldyke, Thurlow, Christenson, & Weiss, 1987) students with high-incidence disabilities received similar amounts of time for reading instruction as students without disabilities. Ysseldyke and his colleagues (1987), found resource room reading supplanted rather than supplemented reading instruction across high-incidence disability categories. In other words, students with high-incidence disabilities who received reading instruction in resource rooms received the same total of number of minutes across the settings (general education/resource room) as did typically achieving peers who only received reading instruction in general education classrooms. These authors questioned practices that provided equal instruction but did not give extra time to students who needed to "catch up." Further, because they found significant variation of time spent in reading instruction across students, Haynes and Jenkins (1986) examined the relationship of time spent in resource room reading instruction to student need (i.e., reading below grade level). The authors calculated the correlation of pretest standardized reading

achievement scores and time scheduled for reading instruction. Student need, disability label, socioeconomic status, IQ, and grade level were not significant predictors of reading instructional time leading the investigators to conclude that teachers did not determine instructional time based on individual student characteristics (i.e., reading achievement level).

Quality of instruction was addressed in many of the elementary resource room studies as *active teaching* in which the teacher actively directed reading instruction. Low amounts of active teaching predominated (Allington & McGill-Franzen, 1989; Haynes & Jenkins, 1986). For example, only 22% of reading instructional minutes were spent in active teaching (i.e., demonstrations, feedback, question asking, directing students to read, or listening to students read) in a study in which students had the greatest amount of time spent on individual or small group instruction (Haynes & Jenkins, 1986). This was similar to the amount of teacher directed reading instruction in general education classrooms. Again, students who were struggling with reading were getting instructional quality that was equal to their typically achieving peers rather than more intensified "specially designed instruction" intended to close the gap between their reading achievement level and their grade level as specified by the Individuals with Disabilities Education Act (20 U.S.C. 1400 et seg.).

Very few of the components (i.e., advance organization and explicit practice with feedback, small interactive group instruction, and teacher control of task difficulty) or content (i.e., decoding, fluency, vocabulary development, and reading comprehension) found common to effective interventions by Swanson and his colleagues (Swanson, 2001; Swanson & Deshler, 2003; Swanson & Hoskyn, 2001; Swanson et al., 1999) were addressed in the elementary studies of reading instructional practices in resource rooms for students with high-incidence disabilities. Four studies addressed content of instruction

(Gelzheiser & Meyers, 1991; Moody et al., 2000; Vaughn et al., 1998; Zigmond & Baker, 1994). Gelzheiser and Meyers examined percentage of time spent in *proactive* teacher behaviors (i.e., purpose setting, demonstration, and explanation) and content (i.e., comprehension, oral reading, decoding, and vocabulary) of classroom, remedial, and resource room teachers during reading instruction. No significant differences in proactive behaviors or time spent in different content areas were found across instructional settings. Teachers in this study spent the greatest percentage of minutes allocated to reading instruction in management and in gaining student participation.

In a case study comparing results of a year of resource room reading instruction and the year following when the student was fully included in a general education classroom, Zigmond and Baker (1994) found the focus of resource room reading instruction was individualized instruction using reading level materials. The general education classroom, on the other hand, utilized the same grade-level basal readers and tests for all students including those with learning disabilities who were reading at first grade level. Field notes from the general education reading instruction indicated the use of review of previously introduced vocabulary that was linked to literature to be read. The special education teacher joined the class for approximately two hours per week to work with a small group of students that included the target student. She provided review and practice activities to help students complete assignments given to the whole class in addition to structured comprehension activities (e.g., sequencing sentences related to previously read stories). In spite of the individualized reading level instruction received in the resource room and the focused small group instruction that the student received in the general education classroom, the student made little progress over the course of the two years. He was still reading at first-grade level at the end of fifth grade. The authors

concluded that his education in both settings was not "special" and not sufficiently intensive to close the gap between his grade level and his reading level.

Vaughn and her colleagues (1998) conducted a study of resource room reading instruction, and Moody and her colleagues (Moody et al., 2000) conducted a two-year follow-up study of the same teachers. The researchers targeted the nature of reading instruction and grouping practices for students with high-incidence disabilities. The majority of the teachers used a whole language approach to teach reading, citing contextualizing of skills instruction, motivation, and reduction of stigma as explanations for their instructional approach. Although three teachers taught phonics, primarily utilizing worksheets, the other teachers expressed doubt about the utility of teaching phonics. Comprehension instruction targeted the factual aspects of text with literal questions asked after round-robin reading or teacher read aloud. Strategy instruction was observed on only one occasion (out of 41 observations). Although the teachers in the follow-up study revealed more interest in the use of phonics and decoding instruction, no greater use was observed. Little comprehension strategy instruction was found with teachers continuing to emphasize literal questions.

Summary of Elementary Resource Room Reading Instruction

Overall, these observational studies demonstrated that elementary students were provided reading instruction in resource room settings that failed to include the content or components of instruction that have been shown to be effective with students who have high-incidence disabilities. Teachers utilized undifferentiated materials and relied on worksheets for instruction that supplanted rather than supplemented the reading instruction provided in general education classrooms. Classroom management rather than active teaching was the predominant teacher behavior. Further, few teachers taught

decoding, and comprehension assessment outweighed comprehension strategy instruction.

Importantly, the studies which also measured student achievement (Moody et al., 2000; Vaughn et al., 1998; Zigmond & Baker, 1994), provided no evidence of significant reading gains or reduction in the reading level-grade level gap that the students experienced. Research has validated the lack of improvement in reading for students who receive undifferentiated reading instruction in elementary resource rooms. Bentum and Aaron compared reading achievement outcomes for over 300 elementary students with reading disabilities who spent between three and 15 hours per week in resource room reading instruction over a period of up to six years. Their findings showed no gains in reading comprehension or decoding and significant losses in spelling. The authors indicated that most of the special education resource room teachers in the study (82%) used "poorly defined instructional methods" (i.e., "eclectic" or "learning styles" methods) and failed to individualize or use consistent progress monitoring to make instructional decisions.

The primary focus of the previously reviewed studies were students of elementary age who received some or all of their reading instruction in the special education resource room. Although two of the elementary observational studies included middle school students (Allington & McGill-Franzen, 1989; Haynes & Jenkins, 1986), neither study disaggregated data for the older students. Therefore, in order to understand the nature of reading instruction in middle school special education resource rooms as it relates to middle school curricular demands, the observational literature that targeted secondary resource rooms was reviewed.

Reading Instruction in Secondary Resource Rooms

Two studies provide observational data on resource room reading instruction for adolescents (Meents, 1990; Rieth et al., 1987). Rieth and his colleagues conducted 381 50-minute observations (three to eight per classroom) of 52 high school (grade 9-12) resource rooms. The focus of the study was classroom ecology. The researchers observed five variables: (a) curricular content, (b) curricular format (i.e., grouping), (c) student behavior, (d) teacher behavior, and (d) focus of the teacher behavior (i.e., target or other student, group). Results showed that students in these resource rooms spent approximately equal amounts of time engaged in teacher-led (active teaching) instruction and independent seatwork (paper and pencil tasks). Although teachers provided instruction across various content areas including reading, language arts, math, science, and social studies, students received reading practice only 14% of the time. Whole group instruction predominated, but teachers engaged in individual instruction (focusing on one student) 45% of the time. Small group instruction involving from two to five students occurred only 14% of the time. Teachers provided academic feedback to students a very small percentage of instructional time (2%). Overall, the researchers observed low rates of "educational procedures" (i.e., *instructional components* of small-group instruction, specific corrective feedback, direct instruction approach) associated with high achievement. Their findings reflect results similar to the studies of elementary special education resource rooms. In other words, there was little evidence of the influence of evidence based reading research on the instructional practices of these teachers.

Observations of 26 high school resource room teachers (Meents, 1990) provided further support to the conclusions drawn by Rieth and his colleagues and those from the analysis of elementary resource room reading instruction. For instance, the focus of instruction was on regular classroom assignments (helping with homework, preparing for

state-mandated tests) across a variety of content areas. Meents conducted interviews with campus administrators and general education teachers on their views of the role of the resource room teacher. Administrators and other teachers stated they thought the primary responsibility of the resource room teacher was to provide support for the general education curriculum. Similar to the Rieth study, Meents observed little direct instruction in basic skills or emphasis on integrating information (making inferences) across texts or content areas. Grade level materials were the primary source of instruction including student content area texts and published test study guides to prepare for state-mandated tests. No strategy instruction was observed, and teachers read texts orally to students rather than provide skills instruction that might encourage independent reading. Again, this study of high school resource room reading instruction provided little evidence of the impact of evidence based reading research.

Summary of Secondary Resource Room Reading Instruction

High school students with high-incidence disabilities who struggle with reading received little differentiated instruction in which teachers implemented reading interventions or utilized effective instructional components. Student instructional time was divided between independent worksheet activities and whole group instruction with little corrective feedback or direct instruction in basic skills. In contrast, instruction focused on supporting students in completing content area assignments and preparing for standardized tests.

Summary of Resource Room Reading Instruction

In summary of the review of literature, Table 2.3 lists studies that support the findings from observations of reading instruction conducted in special education resource rooms. Overall, the findings show that teachers in elementary resource rooms failed to

implement evidence based interventions targeting basic skill acquisition in ways known to improve learning for students who struggle with reading. Secondary studies showed that the emphasis of instruction had shifted from basic skill instruction to supporting students in completing their content area assignments.

Table 2.3 Reading Instruction in Special Education Resource Rooms

Resource Room	Supporting Studies
Elementary Resource Rooms	Allington & McGill-Franzen, 1989; Gelzheiser & Meyers, 1991; Haynes & Jenkins, 1986; Moody et al., 2000; O'Sullivan, Ysseldyke, Christenson, & Thurlow, 1990; Vaughn et al., 2000; Vaughn et al., 1998; Ysseldyke, Christenson, Thurlow, & Bakewell, 1989; Ysseldyke, Thurlow, Christenson, & Weiss, 1987; Zigmond & Baker, 1994
Secondary Resource Rooms	Meents, 1990; Rieth et al., 1987

SUMMARY OF THE REVIEW OF LITERATURE

Analyses of research on reading interventions and instructional components have confirmed positive outcomes for adolescents with high-incidence disabilities who struggle with reading. Specifically, middle school students have been taught to decode long, multisyllable words, read with sufficient speed and accuracy to improve comprehension, learn new vocabulary, and understand and recall narrative and expository passages. Effective interventions included the use of advance organization and practice with feedback, small, interactive group instruction, and teacher control of task difficulty.

Disappointingly, observational studies of special education resource room reading instruction have found low utilization of evidence based reading interventions and effective instructional components. Studies have examined elementary resource rooms and high-school resource rooms. Overall, elementary and secondary resource room teachers provided undifferentiated, whole class instruction that lacked the intensity necessary for students reading two or more years below grade level to catch up.

Elementary resource room teachers provided little decoding instruction and did not teach comprehension strategies. As is evidenced by the studies of high school resource room reading instruction, the focus of instruction has shifted from basic skill remediation to supporting students in content area assignments.

These findings supports the critical need for middle school special education resource room teachers to have the knowledge and skills to implement evidence based reading interventions in ways known to produce the greatest learning effects (i.e., utilization of effective instructional components) that will target reducing the gap between a student's grade level and reading level before the student enters high school. However, no previous studies have directly observed the reading instruction that middle school special education resource room provide to students with high-incidence disabilities in order to draw conclusions about the influence of evidence based reading interventions and instructional components on instruction. Therefore, the present study of middle school resource room reading instruction is warranted.

CHAPTER III

Method

Recent national educational reform policy has focused on state-level accountability for teaching “every student” to read by utilizing evidence based reading practices ("No Child Left Behind," 2001). Evidence from observational studies of elementary resource rooms undertaken in the era of nationwide education reforms has shown only minimal impact of evidence based practices on reading instruction for students with high-incidence disabilities (Moody et al., 2000; Vaughn et al., 2002). Less is known, however, about the effects of reading research on middle school resource room reading instruction. Middle school resource rooms may be the “last best hope” for students with high-incidence disabilities to focus on building critical reading skills. Therefore, the purpose of this descriptive study was to investigate through direct observation and interviews the extent to which reading research has influenced the instructional practices of middle school special education resource room teachers. Specifically, the study documented the teachers’ implementation of reading interventions (i.e., reading comprehension, fluency, vocabulary, and decoding interventions) and their utilization of effective instructional components (i.e., advance organization, practice, feedback, control of task complexity, and small interactive groups). This chapter describes the methodology for the study including: (a) research design, (b) participants, (c) instrumentation (d) data collection procedures, (e) data analysis procedures, (f) credibility of the research, (g) reliability of the research, (h) generalizability of the research, and (i) role of the researcher.

RESEARCH DESIGN

A multiple case replication design using qualitative data collection and analysis procedures was utilized in this study (Miles & Huberman, 1994). A case study is an investigation of a phenomenon such as special education teachers' implementation of reading interventions and use of effective instructional components that "occurs in a bounded context" (i.e., a phenomenon that cannot be understood outside of the context in which it takes place) (Yin, 1994, p. 14) such as the special education resource room. Yin (1994) further defined the case study as a comprehensive research strategy encompassing both data collection and data analysis approaches that was logically linked to the research questions being investigated. When the study of interest is intertwined with its context (i.e., bounded), a case study, qualitative or quantitative, is a suitable method of inquiry (Merriam, 1998).

In a multiple case replication design, cases are selected in an attempt to "duplicate the exact conditions" of the original case. In the present study, cases consisted of special education teachers providing reading instruction to middle school students with high-incidence disabilities in the resource room setting. Replications of the initial or original case have the same purpose as replications of scientific experiments in that the researcher examines the same phenomenon "under different conditions" (Yin, 1994). The advantage of multiple case replication design is that conclusions of each single case in multiple case studies may be examined across cases (Herriott & Firestone, 1983) to provide evidence that is "compelling and robust" (Miles & Huberman, 1994; Patton, 2002). Thus, the study of special education teachers providing reading instruction in the context of their resource rooms was appropriately investigated using a multiple case replication design.

PARTICIPANTS

The participants in this study were middle school special education resource room teachers (SERTs) who taught students with high-incidence disabilities who had reading goals and objectives on their Individualized Education Programs (IEPs). This section describes the setting for the study and the selection criteria and demographics of the teachers.

Setting

The setting for this study includes the district and middle schools where the study was conducted and the teachers I observed in the schools. The district selected for its similar demographic characteristics to the state as a whole. Similarly, schools were selected based on demographic characteristics that approximated those of the district. Teachers were selected using criteria based on educational background, teaching setting, and language of instruction.

District

The district from which participating students and teachers were selected was a major urban district in Central Texas. Major urban districts are defined as those that have the greatest number of students in counties with populations over 650,000 and who have 35% or more economically disadvantaged students (Public Education Information Management System [PEIMS]/Texas Education Agency [TEA], 2004). Over 75,000 students attend 111 schools including 17 middle schools across the district. Half of those students in the district are Hispanic, 33% are White, and 15% are African American. Fifty-percent of the student population comes from economically disadvantaged households as measured by eligibility for free and reduced lunch under the National School Lunch and Child Nutrition Program or other public assistance (PEIMS/TEA,

2004). Students in the District take the Texas Assessment of Knowledge and Skills (TAKS), the statewide assessment in reading and math. Table 3.1 shows demographics for the urban district in which the study occurred and for the state.

Table 3.1 District/State Demographics

Demographic		District	State
Total Enrollment		78,679	4,239,911
Minority (Percent)			
	African American	10,710 (13.6%)	606,141 (14.3%)
	Hispanic	41,877 (53.2%)	1,811,882 (42.7%)
	White	23,743 (30.2%)	1,686,534 (39.8%)
	Asian	2,152 (2.7%)	135,354 (3.2%)
Economically Disadvantaged		50.1%	51.9%

Teachers

Teachers for the study were selected using a replication logic (Yin, 1994) in which comparable "information-rich" cases were selected with *a priori* criteria before data collection began. To select the cases, I developed two sets of criteria: campus selection criteria and teacher selection criteria. In order to have cases with similar demographics, I used the following campus selection criteria: (a) campuses that approximate the demographic characteristics of the district as a whole (i.e., high percentage of economic disadvantage, high percent minority population), (b) campuses that utilized a resource room service delivery model for reading instruction of students with high-incidence disabilities, and (c) campuses in which reading failure was prevalent as demonstrated by failure of 20% or more students on the TAKS/Reading/2004. Ten campuses met the criteria. Following district research policy guidelines, I contacted five campus administrators and described my study. Of the first five administrators, four declined to participate in the study. I contacted five additional principals, and four agreed to participate. Table 3.2 shows demographic information for each school.

Table 3.2 Middle School Demographics

School	% ED[1]	Hispanic	African American	White	TAKS[2] Reading % Pass/2004
Andrea's School	80%	53%	44%	4%	50%
Sallie's School	70%	68%	9%	21%	60%
Martin's School	79%	62%	20%	15%	59%
Mary's School	55%	61%	12%	26%	71%

[1]ED: Economically Disadvantaged
[2]TAKS: Texas Assessment of Knowledge and Skills

I asked each of the five principals to recommend a special education teacher on his or her campus that met the following criteria: (a) special education certification (e.g., a teacher who had passed the K-12 Generic Special Education Texas certification), (b) minimum of two years teaching experience in special education at the middle school level (i.e., not a beginning teacher or first year at middle school level), (c) provided reading instruction in resource rooms, and (d) provided instruction in English. I contacted each teacher, described the study, and asked the teachers for a brief description of their instructional programs. All five teachers agreed to participate. Three stated that they used the same structured reading program, and two stated that they used a variety of different programs. I selected two teachers who used the structured program (one sixth-grade and one seventh and eighth-grade combined classroom) and two that used varied programs (one sixth-grade and one seventh and eighth-grade combined classroom). Table 3.3 shows demographic information for each teacher. In their initial interviews, the teachers described the preparation for teaching reading to students who have high-incidence disabilities and struggle with reading. Three of the teachers were certified through university programs and one was alternatively certified through an education service

center. Most of the teachers had district provided professional development and training in reading programs that focused on decoding, fluency, and reading comprehension. Table 3.4 shows each teacher's professional preparation for teaching.

Table 3.3. Teacher Demographics

Teacher	Gender	Age	Ethnicity	Teaching		Highest Degree	Class Size[1]	Student Grade Level	Student Reading Levels[2]
				Total	MS				
Andrea	F	51	White	12	9	B.S.	8	6	0.8-5.0
Sallie	F		White	16		M.Ed.	8	6	1.0-4.0
Martin	M		White	9	6	B.A.	11	7-8	3.0-4.5
Mary	F		White	19	5	B.A.	11	7-8	2.5-4.0

[1]Class size = the number of students in group during target observations
[2]Reading Levels = the range of reading levels of students during target observations

Table 3.4 Teacher Educational/Professional Development Background

Teacher	Education/Certifications	Professional Development
Andrea	▪ B.A./Business Administration ▪ K-12: Generic Special Education [Alternative Route] ▪ K-8: Elementary Classroom ▪ Secondary Reading ▪ ESL (English as a Second Language) Endorsement ▪ 18 Graduate Hours in Reading Education	▪ SRA/Corrective Reading ▪ Examplary Center for Reading Instruction/ECRI ▪ Feuerstein's Instrumental Enrichment ▪ Project Read/Report Form, Story Form, Written Expression ▪ Read Naturally ▪ Lexia SOS ▪ Struggling Reader Institute/Texas Center for Reading and Language Arts
Sallie	▪ B.A./Education-Special Education ▪ M.Ed./Education ▪ Dual Certification: General and Special Education	▪ SRA/Corrective Reading ▪ Capital City Writes/New Jersey Writing ▪ Lexia SOS ▪ Read Naturally
Martin	▪ B.A./Education ▪ K-12: Generic Special Education ▪ Physical Education Certification	▪ SRA/Corrective Reading ▪ Read Naturally ▪ Great Leaps ▪ Lexia SOS ▪ Project Read/Report Form ▪ REWARDS
Mary	▪ B.A./English ▪ K-12: Generic Special Education ▪ K-8: Elementary Classroom	▪ SRA Corrective Reading ▪ Project Read ▪ Lexia SOS ▪ Wisesoft.com ▪ Kidbiz 3000 ▪ Inspiration 6 ▪ Great Leaps

Consent and Confidentiality

Approval to conduct the present study was secured from The University of Texas at Austin and the District Institutional Review Boards. Consent to participate was also secured from each teacher. Audiotapes, field notes, and transcripts were kept in a locked drawer in the office of the author and have been accessible only to the researcher, teacher participants, peer debriefers, and supervising professor from The University of Texas. Teachers selected pseudonyms to maintain anonymity.

INSTRUMENTATION

This descriptive study utilized direct observation of events that occurred in middle school special education resource rooms, teacher interviews, and review of documents. In this section, I will describe the types of data that were collected. In the next section, I will describe the procedures for data collection.

Direct Observation

Direct observation is a method of collecting data that occurs in naturalistic settings when the researcher is interested in people's behaviors as they naturally occur (Mertens, 1998). The purpose of direct observation of a phenomenon is to provide a description that is more complete and accurate with less potential bias than that which can be gathered from self-reports such as interviews or surveys (Gall, Borg, & Gall, 1996). The present study used direct observation to explore and describe how special education teachers provided reading instruction (i.e., behaviors) to middle school students in the resource room setting (i.e., naturalistic setting).

Interviews

Interviews are oral questions to which participants respond (Gall et al., 1996) that enable researchers to report the interpretation of events "through the eyes" of the interviewees (Yin, 1994). The purpose of interviews is to gather information directly from participants (Yin, 1994). The present study employed a standardized open-ended interview approach (Gall et al., 1996). Open-ended interviews consist of a predetermined set of questions with probes for additional information (Kvale, 1996). The standardized open-ended interview approach utilizes a predetermined sequence and wording of questions with each of the participants in order to minimize possible bias (e.g., the

interviewer influences individual participants to answer in certain ways) (Gall et al., 1996).

Topics for interview questions focused on the variables of interest in the research questions (i.e., reading interventions and instructional components) (Gall et al., 1996). Questions were developed from a review of the literature on effective reading interventions and instructional components, a review of documents containing certification standards for educators in the state of Texas, and from reviews of observational studies of reading instruction in resource rooms. After relevant issues were determined, and interview questions were constructed, an interview guide (Gall et al., 1996) was developed. The interview guide consisted of the interview questions, the sequence in which they were to be asked, and directions to be read to or asked of the participant before the interview. For example, each teacher was asked to read a scripted statement of agreement for the interview to be audiotaped before the first question was asked. After developing the interview guide, members of the researcher's dissertation committee and her peer debriefing group reviewed the wording of interview questions for "clarity, freedom from ambiguity, and potential bias" (Bogdan & Biklen, 1982).

Interview questions covered the following topics: (a) teacher background and preparation for teaching reading to students with high-incidence disabilities in reading and (b) teachers' descriptions of the content of reading instruction in their classrooms for students with high-incidence disabilities who have reading goals and objectives on their IEPs. The Interview Guide for interviewing teachers is included in Appendix A.

Documents

I reviewed the teacher's lesson plans to document their planning for teaching the reading goals and objectives on the students' IEPS. Information from these records provided a framework for the observations. In addition to the teachers' lesson plans, I

reviewed worksheets teachers used for instructional activities. The documents were used to triangulate with observation and interview data to corroborate findings.

DATA COLLECTION PROCEDURES

Three types of data were collected to provide a description of reading instruction in four special education resource rooms for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs: (a) observation, (b) interview, and (c) document review. In this section, I will describe the procedures used to conduct observations and interviews and to review documents. Description of the procedures will include when the data was collected and how data collection was conducted.

Observations

Direct observation was used to document the day-to-day reading instruction (Gall et al., 1996), which was implemented by the teachers. I observed each of the resource rooms during the same reading/language arts instructional period during October and November 2004. Observations of individual classrooms continued until a point of saturation (i.e., "no new information seems to emerge during coding," Strauss & Corbin, 1998, p. 136) was reached. Therefore, the number of visits varied across classrooms. I observed in each classroom for an average of seven days. Each observation lasted from 50 to 90 minutes. I spent an average of 400 minutes observing each teacher.

Scheduling of observations was based on my research questions and on individual teacher agendas (e.g., computer lab days, testing days). Because I wanted to have the opportunity to see the teachers' use of practice over time (distributed practice), I visited each classroom on alternating days across three to four weeks. However, based on the

teacher's daily agenda, I also visited classrooms on consecutive days to document day-to-day instructional activities.

Prior to beginning observations, each teacher and I talked about the classes he or she taught. Together we determined which classes I should observe. Decisions were based on the teacher's schedule and characteristics of students enrolled in the particular class (e.g., grade level, number of students in the class, and disability category). To the greatest extent possible, I allowed teachers to select the classes they wanted me to observe. Observation days and times followed each teacher's schedule. For example, one teacher's students went to the computer lab every Monday. Thus, observations for this class included only Tuesday through Friday sessions. For another teacher, Fridays involved irregular scheduling that also included games that were used as reinforcement for good behavior during the rest of the week. For this teacher observations were conducted only Monday through Thursday. Table 3.4 shows the observation schedule of the four teachers.

Table 3.4. Teacher Observation Schedule.

Week	Monday	Tuesday	Wednesday	Thursday	Friday
10/18	MB		MB	AJ, MB	
10/25	AJ	MC, ST, MB	AJ, MC, ST	MB	
11/1	MB	ST, MB	AJ, ST, MB	AJ	AJ
11/8	AJ	AJ, ST	AJ, ST		ST
11/15			MC		MC, ST
12/13		MC		MC	

MB = Martin Bass; AJ = Andrea Jones; MC = Mary Carter; ST = Sallie Turner

Field notes are the written account or raw data from observations (Merriam, 1998). For each observation, I recorded field notes into a laptop computer using a researcher developed Field Note Template. I entered each classroom during the short break between classes ("passing time") and set my computer up on a desk or table in a back corner of the room. Field notes included (a) description of the classroom, students, teacher, and activities, (b) direct quotations of the teacher regarding reading instruction, (c) observer comments (Merriam, 1998), and (d) time. I began each observation by noting the date and time of the observation and activities of students prior to start of class. Throughout each observation, I inserted the time at approximately 10-minute intervals or when the activities of the lesson changed. This allowed calculation of approximate percent of time spent on various activities in each classroom. Percent of instructional time was calculated by dividing the total number of minutes for an activity by the total minutes observed. For example, if decoding instruction consisted of a 10-minute activity

on 8 days (i.e., 8 x 10 = 80 minutes) and the total observational minutes were 400, the percent of time spent on decoding for that lesson was 20%. Occasionally, the teachers and I had a brief conversation during the passing time before or after class. I included notes of the content of conversations in the day's field notes. Appendix B shows an example of the Field Note Template I used to record observations.

Interviews

Interviews enabled the teachers to provide their own interpretation of reading instruction in their classroom. This study began and ended with standardized open-ended interviews of each participating teacher using the interview guide developed for this study. Initial interviews were conducted prior to beginning observations, and follow-up interviews were conducted after the completion of observations.

The teachers were told the general nature of the study prior to the interviews. They were told the study concerned middle school resource room reading instruction. However, they were not provided the research questions (i.e., to what extent do teachers implement evidence based reading interventions or utilize of effective instructional components). Each teacher was interviewed individually. Interviews were conducted in the individual teacher's classroom and lasted approximately one hour.

After securing the teacher's permission, I audiotaped each interview. I began by asking the teacher to describe the struggling readers in his or her class and the instructional issues they felt were most important for their students. Next, I asked teachers to describe their reading instruction and how they perceived the instruction helped their struggling readers. Further probing questions were based on their responses. After the completion of all observations, I conducted one individual interview with each teacher using the remainder of the questions in the interview guide as well as issues that

emerged from analysis across teachers. All interviews were transcribed by the researcher for later data analysis.

Documents

I asked each of the teachers to provide me with lesson plans prior to observing their classes. One teacher had access to a copier in an adjacent classroom and provided me with a copy of her lesson plan. Because their schools would not allow copying for non-instructional purposes, three teachers allowed me to examine their plan books. In addition to lesson plans, I asked the teachers to provide copies of student worksheets. When possible, documents were reviewed prior to observation of each teacher.

A summary form was completed for each document. Included on the summary is: (a) context of the document (e.g., Sallie's Lesson plan for 10/10/04, (b) significance or importance of the document (c) brief summary of the contents of the document, and (d) reflective commentary (both at the time of data collection and upon further consideration). See Appendix C for example of the Document Summary Form. Information from lesson plans and worksheets was summarized for each teacher.

DATA ANALYSIS PROCEDURES

Qualitative data, including observations, interviews, and document reviews were collected on four special education resource room teachers who taught students who have high-incidence disabilities with reading goals and objectives on their IEPs. The data were analyzed using cross-case analysis (Miles & Huberman, 1994; Strauss & Corbin, 1998; Yin, 1994) to examine variables that are related to evidence based reading interventions and effective instructional components. Analysis of qualitative data consists of examining, categorizing, conceptualizing, and integrating data with existing theories or forming new theories (Anfara & Brown, 2002; Strauss & Corbin, 1998). The goal of

analysis is a "viable interpretation" of the data that has been collected. Miles and Huberman (1994) described the process of analysis as interactive and cyclical flows of activity that begin early in the development of the study and continue through the reporting stage, including: (a) data reduction, (b) data display, and (c) conclusion drawing and verification. Analysis of qualitative data for this study was based on the task conceptualization of Strauss and Corbin and followed three flows of analysis described by Miles and Huberman. This section describes the methods that were used to analyze the data.

First flow: Data reduction

The first flow of analysis, data reduction, included coding of initial data from observations, interviews, and documents and took place continuously throughout the study. The process of identifying concepts in the data is called conceptualizing (Strauss & Corbin, 1998). Concepts are the abstract labels or names given to discrete ideas, events, and happenings that emerged as significant in the data. The process of conceptualizing involved breaking down the data into these discrete ideas and giving each a name or code. The purpose of giving these labels, or codes, is then to be able discover the relationships between the specific concepts (B. G. Glaser & Strauss, 1967).

I started by identifying and naming concepts as soon as data collection began. An *a priori* start-list of codes was developed from the research questions and fell into two broad areas: (a) evidence based reading interventions and (b) effective instructional components. Data was further broken down into sub-categories. In addition to research questions, names for concepts and sub-categories came from my participants (i.e., taken directly from the transcribed data). These are called *in vivo* codes (Miles & Huberman, 1994). Other codes came from the images I developed myself as I analyzed the data

(Strauss & Corbin, 1998). Summaries of individual teachers resulted from the initial phase or flow of analysis. Appendix D shows research questions and start-list of codes.

Second flow: Data display

The second flow of analysis involved development of an organized visual display of the information (i.e., a matrix). By examining the matrix, I saw what was happening in the data and drew conclusions (Miles & Huberman, 1994). A conceptually clustered matrix was used because the analysis was based on *a priori* ideas that were derived from theory (Miles & Huberman, 1994) such as those in the present study relating to evidence based reading interventions and effective instructional components for students with high-incidence disabilities who have reading goals and objectives on their IEPs. The purpose of this initial matrix was to note patterns and themes within the cases of individual teachers and across the cases of all teachers.

The components of the matrix (rows and columns) were taken from the overall constructs that I examined in the study's initial research questions (i.e., evidence based reading interventions, effective instructional components). The columns contained headings relating directly to the variables about reading interventions and components of instruction, while the rows were the individual teachers. Reading across the rows provided a profile for each teacher. Reading down the columns allowed comparisons between teachers on specific variables. As themes or patterns began to appear, I reconfigured the matrix around a particular theme and drew further conclusions. For example, research sub-question A relates to reading interventions (i.e., decoding, fluency, vocabulary, and reading comprehension interventions). Qualitative data from the observation field notes as well as interview data and document summaries (e.g., lesson plan description for the day) that pertained to research sub-question A were examined for each individual teacher. A summary was derived from the comparison of these sources of

data. After individual teacher summaries were developed, the teachers as a group (i.e., across-teacher analysis) were examined on to see what patterns and themes might be discovered.

Third flow: Conclusion Drawing and Verification

When themes have developed through the process of analysis, conclusions must be verified or tested for believability (Miles & Huberman, 1994; Strauss & Corbin, 1998). In the third flow of analysis, for example, meanings of the data emerged from patterns, themes, relationships between variables, and regularities in the data. I examined early conclusions with skepticism, (Strauss & Corbin, 1998) and confirmed conclusions as the process of analysis continued throughout the study. The method of verification or confirmation of conclusions I used was to return to the original data, the transcriptions of interviews and field notes from observations, to review and confirm the theories that were developing. Patterns, regularities, and explanations derived from the second flow of analysis thus became "increasingly explicit and grounded" (McIntosh et al., 1993) as analysis continued through the third flow. As a further means of verification, I validated conclusions through the process of peer debriefing, described in the next section.

CREDIBILITY OF THE RESEARCH

Validity in qualitative studies is defined as how accurately the researcher's account of findings (i.e., the inferences they draw from the data) represent the reality of the participants and are believable to them (Creswell & Miller, 2000). Creswell and Miller outlined procedures to establish validity or trustworthiness of qualitative research that included: (a) triangulation, (b) member checking, (c) prolonged engagement in the field, (d) provision of an audit trail or chain of evidence, and (e) peer debriefing. This section describes the tactics used in the present study to address each of the tests.

Triangulation

Triangulation is the process of checking and comparing information from several sources, methods, investigators, or theories (Yin, 1994). This procedure adds validity to the study because the researcher relies on multiple rather than a single source of evidence. For this study, I triangulated three sources of data ("modes of data collection," Lincoln & Guba, 1985, p. 307) to provide more convincing and accurate conclusions (Patton, 2002) and to help me understand inconsistencies in findings from the different sources as well as check for accuracy in the data (Denzin, 1978): (a) direct observation, (b) interviews, and (c) documents. One example of the use of triangulation of the various sources of data was to compare and contrast evidence that was directly observed with evidence from the planned lesson and the words of the teacher that were supplied in his/her interview. In examining these three pieces of data that are related to a particular research sub question, for example, I asked myself, "What is going on here? Is the information from the observation of reading instruction consistent with the information gathered from interviews and documents or are there contradictions?"

Member Checking

Member checking is a process of testing the data, analysis, and interpretations against the respondents own conceptualizations (Guba & Lincoln, 1989). After the teachers were interviewed, I provided them with interviews transcripts. After a predetermined amount of time, I contacted the teachers and asked if they would like to make corrections, additions, or expand on any of their responses. One teacher provided additional information to expand on previously provided information from his post-interview.

Prolonged Engagement in the Field

Prolonged engagement in the field meant staying in the site for an extended time and observing repeatedly. Staying in the site for an extended time ensured the opportunity to establish rapport and trust with each of the teachers and facilitated immersion in the context I was studying so that I could discover salient issues (Guba & Lincoln, 1989). I observed each teacher's reading instruction until new information was no longer emerging (i.e., saturation). For most of the teachers this meant I was seeing repeating patterns from one week of observations to the next.

Audit Trail/Chain of Evidence

Interpretations of the qualitative study should be supported by the data. An expert auditor or reader external to this project should be able to confirm my interpretations by tracking qualitative data to its source through a chain of evidence (Yin, 1994). The evidence in the present study is the data collected from direct observation, interviews, and examination of documents. The chain of evidence has been established by linking citations of specific pieces of evidence (i.e., direct quotes from teachers, observation field notes, and documents) back through the means by which the evidence was collected (e.g., teacher interview, direct observation) and finally to the initial study research questions. In this manner, a reader will be able to trace evidence to its source, thereby increasing the reliability of the information (Lincoln & Guba, 1985; Patton, 2002).

Peer Debriefing

Peer debriefing is a process of discussing with peers who are knowledgeable but not involved in the study the findings, working hypotheses, methodology, and problems that might occur as the study progresses (Yin, 1994). Throughout the study, I have met with a debriefing group made up of two (Mertens, 1998) colleagues from Vaughn Gross

Center for Reading and Language Arts at The University of Texas at Austin. My debriefing group has helped me monitor changes in my own perceptions that might lead to biases. This technique provides a method of checking that my developing constructions coincide with those perceptions of my respondents (Guba & Lincoln, 1989). For example, after analysis of data began, I asked my debriefing group to read a particular section of one teacher's data pertaining to a specific research question. I compared the group's suggestions of its meaning with patterns and early conclusions I have drawn about the specific pieces of data. Debriefing meetings continued throughout the three flows of the data analysis process and with meetings prior to beginning each successive flow (Mertens, 1998).

RELIABILITY OF THE RESEARCH

Reliability is the extent to which the findings of the study can be replicated and may be demonstrated by operationalizing the steps in the research process (Guba & Lincoln, 1989; Lincoln & Guba, 1985; Mertens, 1998). I have carefully outlined and documented each step in my process of collecting data (i.e., following the case study protocol) and analysis so that changes occurring in the course of the study can be *audited* or confirmed by outside experts as appropriate (Miles & Huberman, 1994).

GENERALIZABILITY OF THE RESEARCH

Erickson (1986) described generalizability as transferring what is learned in one situation to what is encountered in subsequent situations. Similarly, "user generalizability" (Merriam, 1998) means that the reader of research applies what was learned from the research to his or her own situation. By means of detailed description of the content of the study, the reader is able to compare the findings to his situation. In addition to detailed description of each case, I have relied on the use of a multisite design

that used a replication logic for selection of cases to help broaden the range of situations to which the readers can compare my findings (Herriott & Firestone, 1983). Generalizability of this study is limited to middle school special education resource rooms where teachers provide reading instruction to students who have high-incidence disabilities (learning disabilities, mild mental retardation, and emotional/behavioral disorders) with reading goals and objectives on their IEPs.

ROLE OF THE RESEARCHER

In a qualitative study, the researcher is the instrument of data collection. In light of that role, I must be sensitive to the personal biases and assumptions that I bring to the research that may influence not only the collection process but also analysis and interpretation of findings. Therefore, it is important to acknowledge and describe the perspective through which I have filtered the observations and analyses (Creswell & Miller, 2000; Merriam, 1998).

My interest in reading disabilities and the importance of effective instruction for older students developed out of my personal experiences with my youngest child as he struggled to learn to read. It was only with great effort that in late middle school he began to grasp the complexities of letter-sound correspondences. My knowledge of effective reading instruction for children with reading disabilities evolved as my own professional training was integrated with experiences working with preservice and inservice special education teachers. These experiences served as the basis of my beliefs about the importance of using evidence based reading interventions in ways that are known to effect learning. Further, my beliefs are the basis of two assumptions that informed the study's development.

The first assumption is that research should be the basis of reading instruction. Research in reading over the last thirty years has produced convincing evidence about the

characteristics of reading instruction (e.g., modeling, practice, corrective feedback, and reinforcement) as well as research-based interventions (reading fluency, decoding, and comprehension) for children who struggle with learning to read (Snow, Burns, & Griffin, 1998; National Reading Panel, 2000). By the time students who have severe reading disabilities (i.e., read three or more years below grade level) reach middle school, time for acquiring basic reading skills is limited. Thus, teachers must teach in ways that will produce the greatest effects. Students must not make only one year's progress in a single year. In contrast, students who are significantly below grade level in reading must be able to make two or three times that amount of progress in reading to catch up (Torgesen et al., 2001). Therefore, only reading instructional practices that have been proven to be effective (i.e., those that have the convincing evidence of research) should form the basis of instruction for students with severe reading disabilities.

The second assumption is that special education teachers can learn to use interventions in ways that will promote the learning of older students. The vast majority of students with high-incidence disabilities struggle with acquiring the basic reading skills. Some of these students need the intense instruction that can only be provided in small groups by specially trained teachers (D. P. Bryant et al., 2000). Importantly, the literature on professional development has provided knowledge of effective practices for disseminating the research on effective reading interventions to teachers to help them make and sustain instructional changes (Berman & McLaughlin, 1976; Fullan & Stiegelbauer, 1991; Joyce & Showers, 1995; Klingner, Vaughn, Hughes, & Arguelles, 1999; Schumm & Vaughn, 1995). This paradigm of professional development is represented by a model that is intensive (i.e., greater than one-year in length), collaborative (i.e., teachers and researchers work together as peers to create school improvement), consultative (i.e., implementation is a result of coaching and modeling),

content-oriented (i.e., empirically based instruction in specific content areas such as science, math, and reading), and outcome focused (i.e., changes result in student gains/improvements) (Fullan & Stiegelbauer, 1991; Joyce & Showers, 1995; Sparks, 1994). Studies have shown that teachers want professional development that will help them provide effective instruction for their students who struggle with reading (Moody et al., 2000; Vaughn et al., 1998). Therefore, when professional development is provided in ways known to produce results, special education teachers can develop the knowledge and skills to implement reading interventions that are effective for students with severe reading disabilities.

Middle school students who have severe reading disabilities need specialized instruction to help them acquire basic reading skills to help them catch up. Research has shown that reading interventions are effective. Therefore, special education teachers who teach reading to middle school students with high-incidence disabilities who read significantly below grade level need to have effective professional development that provides them the knowledge and skills to implement effective reading interventions.

SUMMARY OF THE METHOD

To answer the research question: What does special education resource room reading instruction consist of for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs?, this multiple case study examined the use of evidence based reading interventions (decoding, fluency, vocabulary, and reading comprehension interventions) and effective instructional components (advance organization, practice, corrective feedback, grouping, and reduction of task difficulty) in four middle school special education resource rooms. The following qualitative methods of data collection were utilized: direct observation, formal interviews, and review of

documents. Qualitative data analysis procedures were employed to obtain a description of reading instruction.

CHAPTER IV

Results

Despite nationwide efforts to improve early reading instruction over the last four decades (Adams, 1990; Chall, 1983; Flesch, 1955; National Commission on Excellence in Education, 1983; National Reading Panel, 2000; Snow et al., 1998), significant numbers of students continue to fail to become skilled readers by the time they reach adolescence (National Assessment of Educational Progress (NAEP), 2002). The middle school resource room may be the "last chance" for many struggling readers with high-incidence disabilities to learn the reading skills that are needed to succeed in high school and adulthood. Evidenced based reading interventions and instructional components have been identified for teaching reading to adolescents with high incidence disabilities (Gersten et al., 2001; Swanson, 1999; Swanson, 2001; Swanson & Deshler, 2003). However, there is little observational evidence of how the reading interventions and instructional components are being implemented in resource rooms for middle school students who have reading goals and objectives on their Individualized Education Programs (IEPs). Therefore, the purpose of this study was to investigate the extent to which evidence based reading practices were utilized by four middle school special education resource room reading teachers. A multiple case replication design was employed to study reading interventions and the components of instruction. Cross-case analysis utilizing three interactive and cyclical flows of activity was used to examine variables related to reading instruction. The three flows of analysis reduced the data from interviews, observations, and records in order to draw and verify conclusions about

emerging patterns and themes. The following research question and sub-questions guided the study:

What does special education resource room reading instruction consist of for middle school students with high-incidence disabilities who have reading goals and objectives on their Individualized Education Programs (IEPs)?

a) What decoding, fluency, vocabulary, and reading comprehension interventions do special education resource teachers implement for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs?

b) During reading instruction, to what extent do special education resource teachers use effective instructional components for students with high-incidence disabilities who have reading goals and objectives on their IEPs? Specifically, to what extent do special education resource teachers use advance organization, practice, control of task complexity, feedback, and small-interactive groups while teaching reading?

In the first section, I will introduce the four teachers (teacher names are pseudonyms), explain the observation schedule, and describe the classrooms and students. Next, I will describe the reading instruction that I observed. This description will be organized by reading content area (i.e., decoding, fluency, vocabulary, and reading comprehension). Each reading content area is further subdivided into two sections: (a) interventions and (b) instructional components.

PARTICIPANTS

I observed an average of seven days (M = 400 minutes) in the classrooms of four middle school special education resource reading room teachers. The following is a description of each teacher's school, his or her background and preparation for teaching reading, and the teachers' descriptions of their students including reading difficulties.

Andrea Jones

> Low skills means what? High skills means what? You better be getting your skills, because skills pays the. . . bills! Right, you are in school for you to make more money for you. You are here to learn so you can make more money" [AJ/D3: 19][1].

Andrea taught in a high minority public middle school. Most of the families of the students in her school were economically disadvantaged as evidenced by the high number who qualified for free and reduced lunch. Reading was a significant problem for all of the students in her school. Only 50% of the students in the entire school population of sixth through eighth grade passed the reading portion of the state mandated reading assessment, the Texas Assessment of Knowledge and Skills, during the 2003-2004 school year. Fifty-nine percent of sixth graders at Andrea's school passed 2004 TAKS/reading compared to the 86% pass rate across the state of Texas. Although a Title I school, the State Department of Education did not identify Andrea's school as needing improvement.

Andrea linked skilled reading to the economic realities for her students. She viewed her classroom as the last chance for many of her students to break into the general education population and her reading instruction as a means to break "bad habits" [AJ/I-2: 84] through sufficient reading practice under her watchful eye. Andrea's comment shows the "reading environment" she created in the classroom to help her students break old habits:

> So, I thought, OK, we'll give him some time to show what he has, and I have kept a close eye on him. And sure enough by having him read in the classroom and encouraging him to volunteer to read in order to get practice, he has climbed. He has climbed up to where he can now read the 3rd grade SDAA[2] test that we are

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[1] Data citations may be read as in the following examples. For [AJ/D3: 19], AJ=Andrea Jones; D3=Observation Day 3; 19=line 19 of transcription. For [AJ/I-2: 84], AJ=Andrea Jones; I-2=second interview; 84=line 84 of transcription. Also, see Appendix E.

[2] SDAA=State Developed Alternative Assessment. SDAA is designed to measure the academic progress of students who receive special education services and are receiving instruction in the Texas Essential

> practicing with. So his reading level has climbed through the year. And so what I've done mainly with him is encourage reading practice and keeping a close eye, monitoring his ability to break down words and giving him, reminding him of those strategies. And he's come very well.

I characterized Andrea's teaching as *coaching*. She referred to her one-to-one fluency building instruction as coaching. The image of coach on the sidelines cheering on her students with pithy statements and a no-nonsense approach permeated her classroom. She held her students to a high level of personal accountability, and she provided them daily reminders that success in her classroom and in life was attributed to the controllable factors of hard work and self-responsibility.

A White woman in her early fifties, Andrea has twelve years of experience as a special education teacher with certifications in generic special education and secondary reading and an endorsement in English as a Second language. She became certified through an "alternative route" with training courses offered by a large district in north Texas where she began her teaching career. She has graduate hours in reading education. Although the last nine years of teaching have been at the middle school level, her early teaching experience was in early elementary (Kindergarten through Grade 3). Andrea stated that her early reading training (i.e., Exemplary Center for Reading Instruction /ECRI) continued to influence the strategies she used for her middle school students.

Andrea taught resource reading in a spacious classroom. The front wall was lined with computers. Over the course of my observations, her computers appeared and disappeared. She explained that they were not working at the beginning of the year and were removed for servicing. After a brief return, they were again removed to have new software installed. Bookshelves were on a sidewall. The bookshelves contained dictionaries. I saw no classroom sets of literature books or other trade books. The boards

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Knowledge and Skills (TEKS) curriculum but for whom Texas Assessment of Knowledge and Skills (TAKS) is deemed to be inappropriate.

in her room were sparsely decorated. She had one corner covered with bright paper that she used as a Word Wall. The first day I visited her room, there were no words. After the second week, a few word cards appeared. The wall was covered with words (approximately 25) by the end of my observation period. On the chalkboard, Andrea wrote the daily Agenda. Throughout the observations, the chalkboard also contained a hand drawn chart of vowel sounds. Near her desk on the back wall, Andrea placed a large chart titled SPLIT Word Rules. Andrea had a large cart on rollers on which she had organized Read Naturally materials. Notable among her posted classroom rules was a rule that exemplified her attitude toward her students: "Rule #2: No Crybabies!"

I observed nine reading classes over four weeks in October and November in Andrea's classroom. Each class period lasted 50 minutes for a total of approximately 450 minutes of observation. During my first visit to her classroom (i.e., the day I conducted her initial interview), Andrea and I discussed her classes. She suggested I observe her third period class of sixth-graders; I visited that class later in the morning. Afterwards, Andrea and I determined a tentative observation schedule. I wanted to see what instruction looked like Monday through Friday if possible, but due to various scheduling considerations (e.g., my work schedule and other teacher observations), we agreed that I would alternate days. However, after the first two weeks, I asked if I could observe on consecutive days.

Eight special education students were on Andrea's sixth-grade class roll although all eight students were present only twice during my observations. Typically, during my observations, the number of students present was either five or six. The class consisted of two females and six males who ranged in age from 10 to 13. One student was Hispanic and seven were African-American. According to Andrea, learning disabilities was primary disability category of most of her students. She stated that one student had mild

mental retardation and one student was classified as "other-health-impaired." Andrea stated that all students were reading two or more years below grade level and had reading comprehension and decoding goals and objectives on their IEPs.

Andrea described her students as having difficulty with comprehending written text that was exacerbated by their low vocabulary knowledge. Additionally, her students had difficulties with decoding of multisyllable words and with written expression. In general, she described her students as intimidated or "freaked out" by text, especially when confronted by the complex expository and narrative texts found on state mandated tests. In addition to their reading problems, Andrea characterized her students as impulsive and exhibiting difficulties in getting to class, writing papers, and bringing their homework papers to class. Problems such as transience and absenteeism further contributed to their problems in school. Andrea stated that her goal was to move each student up one full year on the state mandated test.

Sallie Turner

> I always tell the kids before we begin every lesson this is *your* lesson. Make it a good one. Come out smarter than you went in. This is your reading time. Make a choice today [I-1: 245].

Sallie taught at a middle school where many students struggled with academics and poverty. Most of the families of the students in her school were economically disadvantaged as evidenced by the high number who qualified for free and reduced lunch (i.e., 70%). Reading was a significant problem for many of the students in her school. Only 60% of the students in the entire school population of sixth through eighth grade passed the reading portion of the state mandated reading assessment, the Texas Assessment of Knowledge and Skills, during the 2003-2004 school year. Sixty-four percent of sixth graders at Sallie's school passed 2004 TAKS/reading compared to the

86% pass rate across the state of Texas. Sallie's school was identified as a school that was "in need of improvement" by the State Department of Education because it failed to meet Adequate Yearly Progress (i.e., all students reach proficiency in reading and math on state assessments) goals for two consecutive years.

Sallie Turner challenged the students in her class. She fed their intellectual needs with grade level literature selections and encouraged them to make the most of their time together in the reading class so that they could reach their goals and her goals for them. Sallie's goal statement exemplifies her concern that students not stay in resource but exit to the general education inclusion classroom:

> My goal would be, and that's what I tell them at the beginning of the year, too, you're goal is not to stay in resource. I said we have another resource over here, that's not your goal. I tell them also about high school. So at the beginning of the year, I kind of set the precedent, we might get along really great, I love you being here, but your goal is to be out [I-1: 229].

Sallie motivated the students in her class to read and enjoy grade level literature. She pushed and pulled her students, punctuating her staccato-like delivery of instruction with imaginative "visuals" to help fill what might seem an insurmountable information "gap" between what students knew when they entered her room and what they needed to know to exit to the general education setting. Sallie sighed when she saw even faint glimmers, "ah, there's hope."

Sallie is a thirty-seven years old White woman who has taught middle school resource room reading for 12 of her 15 years as an educator. She holds dual certification in general and special education and a master's degree in education with a specialization in learning disabilities. She described her previous experiences as an inclusion teacher as "very, very interesting. That was a really good feel for what's expected in a regular class." Although Sallie described numerous reading and writing workshops she had

attended, she explained that "working with kids" exerted the greatest influence on her teaching.

The walls in Sallie's classroom were filled with charts she used to remind students of vowel sounds and vocabulary words, genres of literature, author's purpose and figures of speech, classroom rules, and comprehension questions to ask of themselves (who, what, where, when, why). Although she had several computers clustered against a sidewall, I only saw one student use them. In a back corner, Sallie arranged bookshelves to form a reading corner with beanbag chairs and pillows. Sallie's Word Wall was filled with vocabulary words. On her chalkboard, similar to Andrea, Sallie wrote the daily agenda. Similar, too, was her hand drawn vowel chart. However, this chart was erased after I had visited the class several times.

I observed Sallie's sixth-grade resource room reading class eight times for a total of approximately 480 minutes across three weeks in October and November. On the day I interviewed Sallie, we discussed her students and selected her last class of the afternoon for my observations. This was her Reading Lab. Sallie requested that I not observe on Mondays. The Lab class lasted approximately 90 minutes. However, on Fridays, a group of students from the general education population came into Sallie's room for the last 30 minutes of class to work with Sallie on skills they needed to pass the state mandated reading test. Therefore, on Friday afternoons I observed until the other students arrived.

Sallie described the primary disability of the eight special education students in her class as having a learning disability. Two students in her class had mild mental retardation and one was classified "other-health-impaired." Reading at or below third-grade level (i.e., three or more years below grade level) was a stipulation for being in her Reading Lab. Six of her students were Hispanic. One student was African American and one student was White. Their ages ranged from 11 to 13 years old.

Sallie confirmed reading comprehension and decoding as the principal reading goals and objectives on her students' IEPs. Dysfluent reading that led to reading comprehension difficulties was her biggest concern for her students. She stated that frustration resulting from years of reading failure led to low self-esteem and low self-confidence in her students. Additionally, Sallie described her students as having poor vocabulary and limited general knowledge, which contributed to their lack of persistence and "being overwhelmed" when they received longer passages such as those on "daunting" state mandated tests. Sallie stated that her goal was to move each student up one full year on the state mandated test.

Martin Bass

> Because different students learn at different rates and different students learn in different ways, . . . my philosophy has been that the more ways that you use for students, the more likely you are going to reach them in one form or another. . We have to work with the programs that we think are best going to suit the needs of the individual at that particular time. . .my concern at this point as far as the program is concerned. . . I don't want to work quick enough to the extent that I am leaving my kids behind. . . I'm very meticulous about what I do, and I want to make sure it's right. And I don't like wrong, so I hang with it [I-1: 323; I-2:16; I-1:378].

Similar to the schools where Sallie and Andrea taught, Martin taught in a high minority public middle school. Most of the families of the students in his school were economically disadvantaged as evidenced by the high number who qualified for free and reduced lunch (i.e., 79%). Reading was a significant problem for many of the students in Martin's school. Only 59% of the students in the entire school population of sixth through eighth grade passed the reading portion of the state mandated reading assessment, the Texas Assessment of Knowledge and Skills, during the 2003-2004 school year. Martin's school was a Title I school that had appealed and had reversed an earlier classification of failure to meet Adequate Yearly Progress.

Martin Bass's classroom was not all business. He and his students "shot baskets" with wadded paper balls as the seconds ticked down before the bell. However, Martin realized the seriousness of his mission to move the students toward his goal for them of fluent decoding and reading, and he used fast pacing and repetition with mastery learning to keep students engaged until "everybody gets it right." "Until we have a mastery. And if it's not, if it doesn't meet that mastery standard, because I want everybody, we don't miss anybody. I have [eleven] individuals, we're not missing people. We are going through till everybody gets it right" [I-1:283].

Martin is a 48 year-old White man who has spent nine years as a middle school special education teacher, the last six of which were in his present classroom. In addition to generic special education certification, he holds certification in physical education. Martin has been trained in and used a number of reading programs, including SRA Corrective Reading (Engelmann et al., 2002), Read Naturally (Hasbrouck, Ihnot, & Rogers, 1999), Rewards (Archer, Gleason, & Vachon, 2000), Great Leaps (Great Leaps, 2001), Lexia SOS (Lexia SOS, 1997-2005), and Project Read (Enfield & Greene, 2002). He has explored ("I have learned how to use the program") several other computer-based programs that he has made available to his students in a computer lab at the back of his classroom. SRA/Corrective Reading (B2/Decoding) is the reading program that he uses with his class. Although his students have shown improvement with each of the previous programs, he is trying Corrective Reading because his school adopted it for special education after the general education teachers on his campus have found it successful. Further, he stated that his campus reading specialists had been trying to "mend" some of the "differentiation between regular education and special education" [MB/I-1: 336] by having both classrooms use the same programs for reading.

Martin's large and well-lighted classroom is a combination of desks, tables, and a set of computers against the back walls. The eight computer stations run across the back wall and around the corner under a bank of windows. Martin's desk is centered in the front of the room beside a carrel that is marked off with bookshelves and a screen. Shelves at the back of his classroom have a variety of trade books and a collection of student dictionaries.

I observed eight reading lessons in Martin's classroom over a three-week period in October and November. Each class lasted 50 minutes for a total of approximately 400 minutes of observation. Martin and I discussed the various classes he taught during a pre-interview phone conversation and again when I came to his classroom for the initial interview. His seventh and eighth grade classes were split between reading and language arts. He described the primary focus of the language arts classes as writing. I decided to observe in his fifth period reading class where the focus was decoding and comprehension. Martin stated in an informal interview after I began observing his class that he frequently used Friday's to reward hard work and good behavior with game-like activities. I observed reading instruction on Monday through Thursday in his classroom.

Eleven seventh and eighth grade students ranging in age from 13 to 14 were registered for this multi-grade classroom. The typical number of students present was 10. The students consisted of four females and seven males. Six were Hispanic and five were African American. According to Martin, most of his students had learning disabilities and were reading two or more years below grade level. He confirmed that his students had decoding, fluency, and reading comprehension goals and objectives on their IEPs.

He described his students as having difficulty with reading comprehension and listening comprehension, vocabulary, reading fluency, and multisyllable word decoding. Martin attributed his students' reading comprehension problems to their difficulties in

decoding and to slow, inaccurate oral reading. He explained their listening comprehension difficulties as due to poor vocabulary and lack of literacy experiences at home. He stated that his students had problems "applying information" they have learned in class, such as adding endings to words and spelling plurals. "The students had difficulty catching that concept. When we talked about it, they began to catch on verbally as to what we were doing. But when we made the transition to apply the information to the workbook, what was being said was one thing, and what was being put down was something else" [MB/I-1: 120]. He explained that the students required many repetitions of the same lesson "going through it step-by-step before they begin to understand" [MB/I-1: 139]. Martin stated that his goal was to move each student up one to two full years on the state mandated test.

Mary Carter

> I am going to sound like a blamer now. I feel like, first of all, people have to talk about what they know, and I feel like when parents read to their kids early on, put them to bed with a story, and they talk about it and they add expression to it, or they ask questions, or they say, "tell me about the picture," anything at all having to do with language and reading, it only helps the situation and gets them ready for the symbols, which some of them are still struggling with, but at least they understand if they hear the word [MC/I-1: 314].

Mary also taught in a public middle school where most of the families of students in her school were economically disadvantaged. Fifty-five percent of families qualified for free and reduced lunch. Also similar to the other teachers, reading was a significant problem for many of the students in her school. Only 71% of the students in the entire school population of sixth through eighth grade passed the reading portion of the state mandated reading assessment, the Texas Assessment of Knowledge and Skills, during the 2003-2004 school year. Seventy-eight percent of sixth graders at Mary's school passed

2004 TAKS/reading compared to the 86% pass rate across the state of Texas. Mary's school was not a Title I school. Therefore, no school improvement data was reported.

With a quiet but firm voice, Mary Carter worked with her small groups of students on visualizing the passages they read, being able to "tell me what they read about, visualizing it and then expressing it so that someone else can understand it" [I-1: 266]. Working one-on-one or in groups of three or four provided Mary with the opportunity to meet her students' individual needs, to nurture students who had not had the types of experiences that yielded the rich vocabulary that led to skilled comprehension. In this comment, Mary explained that she based instructional groupings on assessments:

> I really take a pretty close look at the IEPs and the testing that I've done. . . [MC/I-1: 87] . . . I did a sound test with each of them and I listened to them read to me and I would underline things that were wrong. The things that kept coming up over and over is what I started on. . . I go with what they don't succeed on, what their errors are [MC/I-2: 270]

I characterized Mary's instruction as scaffolding. She worked to meet her students at points where they struggled and provided support to help them become independent readers. Mary found out what the individual needs of her students were through assessments provided by her district and assessments that she developed. She also listened to her students to discover where they were struggling. Her planning and grouping for instruction was then based on those "errors."

Mary is a 45 year-old White woman who has taught in special education classrooms for over 19 years. She has generic special education and elementary classroom certification and has taught middle school resource room reading and language arts for five and one-half years. Prior to coming to middle school, she taught nine years in an early childhood classroom (three year olds) and five years in a classroom of children with "more severe handicaps, non-readers." After listing more than eight reading

programs that included Project Read, SRA/Corrective Reading, Lexia SOS, and Great Leaps for which she has been trained she stopped and said there were too many others to remember. Mary stated that the Project Read training, which was provided by her district, and was the most effective with her students had influenced her instruction more than the other programs. "I guess I always go back to Project Read, the phonics based program" [MC/I-1: 78].

The back of Mary's classroom had a row of computers. Around the sides of the room, carrels were available for students to work quietly and independently. The walls in Mary's room had hand drawn charts with classroom rules and computer information such as lists of student groups, instructions for software use, and a Word Wall. Mary called the Word Wall her "Clue Word Wall" because it contained keyword and sound combinations. Mary wrote her daily Agenda on the chalkboard at the front of the classroom. In the class I observed, Mary had a paraprofessional who had a table near the back of the room. The paraprofessional answered student questions, listened to students read aloud, and collected homework papers. Mary described in her initial interview her plans for the paraprofessional to lead small groups of students while she worked with another group or provided individualized instruction (i.e., monitoring seatwork and providing support).

I observed Mary's reading instruction on six occasions over seven weeks between October and December. Mary had several sixth-grade classes and two seventh and eighth mixed-grade level classes. To balance my observations between sixth grade classes and the mixed seventh and eighth grade classes, I decided to pick one of Mary's older groups of students. Because Mary took her class to the Computer Lab on Monday's, I observed her class on Tuesday through Thursday. I began observing her class in late October, but due to scheduling conflicts, after the first week of observations, I asked Mary to let me

come back to her class in mid-November. I stayed in her class through the first week of December. Each class lasted 50 minutes. I observed approximately 300 minutes in Mary's class.

Mary had 11 students, seven male and five female, although eight or nine students were present most of the days I observed. Nine students in her class were Hispanic. One student was African American and one student was White. Mary taught in a multi-grade classroom of seventh- and eighth-grade students who ranged in age from 12 to 15 years old. She confirmed that her students were identified as having learning disabilities and had IEP reading goals and objectives. According to her assessment, most students were performing on 3rd and 4th grade reading levels.

Reading comprehension and vocabulary were Mary's biggest concerns for her students. She attributed these problems to students' lack of early reading experiences at home and other experiences, which help children develop world knowledge. "Visualizing is another personal goal of mine. And that goes along with vocabulary. They can't describe what they read to you very easily" [MC/I-1: 283]. Additionally, she stated that her students had problems with decoding. Consistent with the other teachers, Mary's students struggled with state mandated reading tests. "They don't perform as high as you think they ought to on their tests as they do" [MC/I-1: 38]. Mary stated that her goal was to move each student up one full year on the state mandated test.

Summary of the Participants

In summary, I observed four middle school special education teachers who taught reading in the resource room setting. All four teachers were White and three were female. All were experienced special education teachers who had taught between nine and 19 years. The teachers stated that they had attended numerous training sessions on specific reading programs. Most of their students were Hispanic or African American. The

teachers confirmed that their students had learning disabilities and had reading goals and objectives on their IEPs. Most of the students read an average of two years below grade level. Reading comprehension, fluency, and decoding were the teachers greatest concerns for their students. Additionally, the teachers described their students as having poor vocabulary and gaps in general knowledge. Two teachers stated that many students had low self-esteem and insufficient confidence in their reading. The teachers' primary goals were to have students progress a minimum of one year on the state mandated assessment. Further, teachers wanted their students to gain sufficient reading and study skills to be able to exit the resource room and to succeed in the general education classroom. Table 4.1 summarizes the teachers' descriptions of their students. The following sections describe the reading practices of the teachers.

Table 4.1 Teacher Descriptions of Students

Teacher	N	Age Range	Gender		Ethnicity			Disability Category		
			M	F	AA	H	W	LD	MMR	OHI[1]
Andrea	8	10-13	6	2	7	1		6	1	1
Sallie	8	11-13	5	3	1	6	1	6	2	1
Martin	11	13-14	7	4	5	6		11		
Mary	11	12-15	7	5	1	9	1	11		

[1]OHI=Other Health Impaired

READING INSTRUCTION

This section presents findings to describe special education resource room reading instruction for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs. Findings were derived from observations of four resource room teachers. Observations occurred over a six-week period during October

through December of 2004, and included an average of seven visits to each classroom with a mean of 400 minutes of observation of each teacher.

Data are presented to answer Research Sub-Question A, which focused on the reading interventions used by the teachers for reading instruction and Research Sub-Question B, which focused on the components of instruction. Findings across teachers are organized by reading content area (i.e., decoding, fluency, vocabulary, and reading comprehension). Each reading content area includes two major sections: (a) interventions and (b) instructional components. Major sections will be further divided. Interventions will include the following sections: (a) definitions, (b) teacher implementation of reading interventions (i.e., number of teachers who do/do not provide instruction and approximate percent of time spent in instruction), and (c) description of the interventions (i.e., treatments and routines specifically designed to improve reading outcomes) and other instructional activities (i.e., general skill instruction but not a specific intervention). Instructional components will include the following sections: (a) grouping formats, (b) use of advance organization, (c) explicit practice, (d) corrective feedback, and (e) control of task complexity.

To answer Research Sub-Question A, I will describe educational interventions that were used by the teachers. However, the teachers utilized additional activities for instruction such as worksheets and homework. Therefore, in order to provide a complete description of resource room reading instruction, I will also describe additional activities that were used by the teachers. For the purpose of the present study the terms intervention and instructional activities are defined as follows: (a) interventions are treatments that have been designed to enhance reading performance of adolescents who struggle with reading such as those described in Chapter II (e.g., (Bos & Anders, 1990; D. P. Bryant et al., 2000; Englert & Mariage, 1991; Lenz & Hughes, 1990) and (b)

instructional activities are general teaching procedures or routines that are used for reading instruction (e.g., worksheets, homework). Table 4.1 provides an overview of interventions and activities observed in each classroom.

Table 4.1 Observed Interventions and Activities

	DECODING		FLUENCY		VOCABULARY		READING COMPREHENSION	
	IV[1]	**Activity**	**IV**	**Activity**	**IV**	**Activity**	**IV**	**Activity**
AJ	SPLIT	Wkshts. Hmwrk.	Repeated Reading: Sight Words Connected Text		VAR[2]	Wrksht.		Wrksht. Teacher questions
ST	SRA/C Corrective Reading/ Dec.B	Wkshts.	Repeated Reading: Sight Words Connected Text	Hmwrk.	VAR	Wrksht.	Summarize Graphic Organizer: Informatio n Web	Wrksht. Teacher questions
MB	SRA/C Corrective Reading/ Dec.B	Wrkshts. Hmwrk.	Repeated Reading: Sight Words Connected Text		VAR	Wrksht.		Wrksht. Teacher question
MC		Wrkshts. Hmwrk.	Repeated Reading: Sight Words			Wrksht.		Wrksht.

AJ=Andrea Jones; ST=Sallie Turner; MB=Martin Bass; MC=Mary Carter
[1]IV=Intervention
[2]VAR=Verbal Associational Level Routines

Decoding: Interventions

Accurate and automatic identification (decoding) of multisyllabic words is a critical skill used by good readers for understanding middle school content-area texts. Studies have provided evidence that middle school students can be taught to decode multisyllable words using phonic and structural analysis skills. Interventions that have

proved successful in reducing word reading errors used components of direct instruction such as breaking down and teaching skills in small steps, providing explicit practice with corrective feedback, and controlling or reducing the complexity of the task (Lenz & Hughes, 1990).

Definitions

Decoding is defined as the ability to attack and identify words and includes skills in *phonic* (i.e., emphasis on sound-symbol relationships) and *structural analysis* (i.e., analysis of word units such as affixes, root words and syllables) (Lenz & Hughes, 1990). In the present study, decoding interventions were defined as those in which teachers used evidence based instruction in phonic or structural analysis to help students improve decoding skills including decoding of multisyllable words.

Implementation

All four of the teachers provided instruction in decoding. Time spent in teacher-directed (i.e., the teacher presented new material) decoding instruction and decoding practice ranged from approximately 10% to 25% of class time. Sallie, Martin, and Andrea utilized reading interventions specifically designed to promote accurate decoding of words. Additionally, Mary used explicit instruction for decoding skill development.

Description of Interventions and Activities

Decoding interventions and instructional activities targeted phonic analysis (i.e., decoding at the phoneme or sound level) and structural analysis (i.e., decoding at the word part level). Martin and Sallie used the Corrective Reading program (Engelmann et al., 2002) for decoding instruction (Decoding/B2). Corrective Reading Decoding is a highly structured and scripted instructional program for students in fourth through twelfth grade who are reading below grade level and require specific instruction in decoding.

Decoding instruction included explicit instruction in sound-symbol correspondences and in word parts (e.g., suffixes, prefixes, and syllables). I obtained a copy of the Corrective Reading materials so that I could follow along during my observations of their instruction. Although Martin and Sallie used the same materials, I observed differences in their instruction.

Martin carefully followed the instructions and script in the teacher manual as he presented lessons. Decoding lessons began with a short (seven to ten minutes on average) lesson on a targeted sound-symbol correspondence. The lesson was presented using principles of direct instruction: teacher-led rapid-paced presentation of new material in small steps with teacher modeling of the skill followed by practice with specific corrective feedback and probes to check for understanding and mastery. For example, on my second visit to Martin's class, I observed a lesson on irregular words (e.g., *studied* and *botany*). Closely following the script, Martin modeled the correct pronunciation and instructed students to echo and spell each word. He used a handheld clicking device as is recommended in the teacher materials to keep a steady pace as students repeated and then spelled the words. Further, he provided specific corrective feedback. Martin described the technique or probes to check for understanding as a means to work for mastery:

> I call on them, and I have them go through and verbally go through [the words], and I give them a check for understanding. . . As an example, let's say that as a group, we repeated a certain word. I went through and I pointed to certain words, and we all sounded out the individual words as a group. And I will go back through and individually I may point to this person and they will go through the words, and the next one they go through the words. . . and we go through it till we get it right. . . until we have a mastery [MB/I-1:255].

In his initial interview, Martin described his use of the program and explained that he was utilizing Corrective Reading this year for the first time. He indicated that he liked "the repetition," but felt that he was not able to move fast enough through the program

due to his inexperience with it or perhaps because "the kids aren't understanding it quick enough." However, as he comments show, he did not want to leave any of his students behind:

> So, like I say, my concern at this point as far as the program is concerned, I personally would like to move quicker. But I don't feel, I don't want to work quick enough to the extent that I am leaving my kids behind. I don't want to do that. That's probably, I'm very meticulous about what I do, and I want to make sure it's right. And I don't like wrong, so I hang with it" [MB/I-1: 373].

Martin's description matched my observation of his class. Of the eight classes I observed over a four-week period, I saw specific decoding instruction on four days. Martin stated that the Corrective Reading guidelines specified completing one lesson per day (i.e., decoding instruction, reading sight words, guided oral reading [Story Reading] with comprehension questions, and workbook exercises). Martin completed approximately three lessons during my observations. He stated that he was not covering as much of the material every day as he would have liked. However, Martin described his presentation of the materials as "meticulous." My observations substantiated his careful attention to the scripted lessons.

Sallie also used Corrective Reading Decoding (Decoding/B2) with her students. Of my six visits to Sallie's classroom, I observed three decoding lessons. Sallie explained that she regularly used the Corrective Reading program four days a week, Monday through Thursday. "The kids tire of that quickly. Four days is about the limit. I don't do it a fifth day during the week. I know it's supposed to be every day, but they are pretty good about that. . . it's a very structured, highly structured program, but they seem to, they seem to enjoy that they can do it relatively successfully" [ST/I-1:28].

This was Sallie's third year to use Corrective Reading. Similar to Martin, Sallie followed the script and provided fast-paced lessons, utilizing corrective feedback, probes, and practice to mastery. However, unlike Martin's adherence to the script, Sallie made

two adaptations to the routine. She added probing questions to activate her students prior knowledge. Further, she integrated vocabulary instruction. For example, Sallie introduced the lesson on the sound that is made by the letter <a> when it follows the letter <w> (/a/ in *watch*). The teacher's manual instructed the teacher to write the words with the common (short) sound of the letter <a> (/a/ in *pant*) on the board and have the students read using the signal, "What word?" The teacher is instructed to tell the students that changing the first letter of the words to <w> changes the sound of the <a>. The teacher is then instructed to change the initial letter in each of the words to <w> [*pant* to *want*, *match* to *watch*, *later* to *water*, *gander* to *wander*] to model the new pronunciation for <a> and to proceed with the typical "What sound? What word?" routine. However, Sallie began the instruction by asking her students to "tell me the sound of a short <a> word." The students provided examples, and Sallie put the words from the lesson on the board (as directed in the manual). Next, she asked the students to "tell me why the <a> in *later* says it name. She continued with questions soliciting student explanations of past instruction such as the use of "silent-e" to signal the change in the short sound of <a> to the sound of the letter's name in the word *later* and the tactic of looking at words to "find a little word" to help decode (e.g., *an* in *gander*).

In addition to the adaptation Sallie used to activate prior knowledge, she further adapted the lesson by integrating vocabulary instruction (verbal association level routines) as the students read through the list of words. For example, she provided concrete illustrations of some of the words such as *crouch* in which she bent down to give the students a "visual" example. For other words, Sallie gave verbal examples such as using the word in a sentence. Further, she solicited student examples and explanations. "When I say that word [*slashed*], what do you think of?" [ST/D1: 229]. Sallie commented

that she integrated vocabulary because of the students' low general knowledge and poor vocabulary.

> And even in Corrective Reading, there [are] many vocabulary words that they are not familiar with. *Bridal*, we did *bridal* yesterday. And from the Integrated Reading was *expedition*, and in Corrective Reading it was *exhibition*. So we had a major lesson about what the difference was . . . So I put the two words up there and I showed the different parts. And I again made the visuals and we did the clarification between them [ST/I-1: 104].

Like Martin, Sallie's description of her use of Corrective Reading matched my observations. Sallie used a highly structured intervention because it promoted her students' success, but she adapted the lesson to meet her students' needs for decoding and for vocabulary.

In contrast to the structured decoding program that Martin and Sallie used, Andrea employed a cognitive strategy, SPLIT, for decoding multisyllable words. Similar to Sallie, Andrea commented that she adapted to meet the specific reading needs of her students. "Well, I use a strategy I got from Dr. B----." The word rules - I believe she called it SPLIT. She has DISSECT, but DISSECT is too hard for our kids. This is SPLIT. It is like the dumbed-down version. I've used this for many years. And it works. It's wonderful, the SPLIT word rules" [AJ/I-1: 124]. Despite an average reading level that she described as two or more years below their grade level, Andrea focused instruction on multisyllable decoding because her students "seem to have their phonics down" [AJ/I-1: 23].

The SPLIT strategy consisted of five rules for breaking multisyllable words into parts. The rules covered: (a) compound words b) double consonants, (c) consonant-le pattern words, (d) vowel-consonant-silent-e patterns, and (d) affixes. Andrea described how teaching students that <tion> is pronounced /shun/ during initial instruction of the strategy achieved "buy-in" and boosted the reading confidence of her students:

> "The first thing I teach them is t-i-o-n is /shun/. That is the biggest thing. You get buy-in when you teach them that t-i-o-n and s-i-o-n is /shun/. And give them those big words. And all of a sudden, they can just, they can read them. They never knew it wasn't /tie/-/on/ or /tee/-/on. Ah, that's when you get buy-in. Then you go into everything else" [I-1:124].

After the initial teaching of "*tion* /is pronounced /shun," Andrea explained that she began with compound words (SPLIT Rule #1) because "every kid, no matter what level they're on, knows what a compound word is. . . and so their eyes are trained to see those" [D1:139]. In the fist two weeks of visits to Andrea's class, I observed two lessons in which Andrea provided specific instruction in the use of the SPLIT strategy. Using teacher-made lists of sight words, Andrea utilized a direct instruction approach with explicit instruction consisting of teacher modeling of the strategy followed by carefully guided practice with corrective feedback. Further, she broke instruction of the rules into phases, teaching and practicing three rules over the course of two weeks. For example, on my first visit, I observed Andrea teach SPLIT for compound words and words with the consonant-le syllable pattern. The next week, she taught the rule for prefixes and suffixes.

The lesson on compound words began with a review of definitions. Andrea directed the student's attention to the SPLIT Word Rules wall chart, asking: "What rule number has to do with compound words? Rule #1: SPLIT the compound word. What does split mean? Cut it apart. So what does compound mean?" [D1: 58] Andrea and her students responded together, "two small words that go together to make one." She placed a word list on the overhead projector and stood in front of the whole class. Each student was called upon to split the word, read the two parts, and then read the entire word. Andrea worked through approximately one-half of the list with her students. The lesson pace was brisk and engaging as Andrea exhorted the students to split up the words. "Do you see two sounds trying to run off with one another? You are the divorce lawyer, what are you going to do? Separate them" [D3: 56]. Like Sallie, Andrea integrated vocabulary

instruction into decoding because "vocabulary is a huge issue for our population" [AJ/I-1: 79]). She stopped after almost every word and alerted the students to focus on word meaning: "Ding, ding, ding, time out for vocabulary" [AJ/D2: 47]. Her comments provide an example of the importance she placed on linking decoding to comprehension and vocabulary development.

> We write the words and we split them as a class. and we talk about them as a class, because, like cellar, c-e-l-l-a-r. there's not a kid in this town that knows what a cellar is. So while we are learning to split it, we also talk about it. It's a piece of vocabulary for them. . . I have lists of words, and we go through them as a class. We learn to split the word and we talk about the word. . . And they just start getting it, so that when we are reading text, I can say, you need to use your double consonant rule on this, they can't read a word. And they can do it then. I tell them you got to split up, 'be like a chops, a reading chops.' [AJ/I-1: 141].

Like Martin and Sallie's instruction, my observations of Andrea's use of her adapted version of the SPLIT strategy matched the description she provided in her interview. She provided explicit instruction in decoding long and multisyllable words but integrated vocabulary throughout the lesson to meet the needs of her students.

In contrast to the use of interventions that I saw in three teachers' rooms, I did not observe the use of a reading intervention for teaching decoding in Mary's classroom. Instead, Mary used worksheets to conduct reading instruction on each of the six days I visited her classroom. Worksheets primarily consisted of a list of vocabulary words to be defined and a reading passage with comprehension questions. However, worksheets provided practice in the use of target sound-symbol correspondences such as <ow>, vowels that make the *schwa* sound, and affixes. In her initial interview, Mary described several types of worksheets she used including those that contained stories in which a sound-symbol correspondence was targeted. "There are stories that focus on certain vowel sounds. And so lots of the words within there have these certain vowel sounds that they are working on. . . and there are lots of activities for just one sound. There's puzzles,

there are fill-in-the-blanks, there's definitions, there's match as far as vocabulary stuff" [MC/I-1: 169]. On two occasions, I observed Mary employ elements of a direct instruction approach to teach decoding to prepare students to read the passages.

In the first lesson, Mary taught her students to use a self-questioning strategy to confirm pronunciation of unfamiliar words. The lesson consisted of modeling using think-aloud procedures in which Mary described her thinking as she worked through pronunciations of the words and then asked confirming questions. For example, she wrote the word *routine* on the board. "I remember that the <e> at the end of the word makes the vowel say its name." She uncovered a sentence that had the word *routine* in it and asked a student to read the sentence with the word pronounced incorrectly as she had tried it (i.e., with <i> having the name of the vowel as it would following the Vowel Consonant-silent e rule she described in the think-aloud). Next, she asked the questions: (a) Does it sound right? (b) Is it a word that you have heard? (c) Does it make sense in the sentence? The students agreed that her pronunciation was incorrect and tried different vowel sounds to correct it. Mary advised her students to use these tactics (i.e., self-questioning to confirm and try different vowel sounds) when they read their worksheet passages.

In a second instance of explicit instruction in decoding, Mary used a "Clue Board" that consisted of a wall chart or Word Wall on which she had placed a picture of a key word that was associated with a particular sound. Mary described the need for her students to associate a picture with a word. "[That] is something that I feel like these kids need terribly because they don't necessarily know that <ough> can say a couple of different things. So they need examples that are familiar, because they don't have the symbol to read it out" [MC/I-1: 102]. At the time of my observations, a picture of a tree with digraph <ee> was the only keyword and sound combination on the board. During instruction, Mary reviewed the "tree-/ee/" keyword and sound prior to introducing "<ow>

says /o/ as in <crow>" [MC/D5: 9]. Next, she directed students to read the list of words containing the <ow> phonogram. Following explicit introduction, Mary provided guided practice with corrective feedback as students looked up dictionary definitions for their list of "clue words" and then read a passage containing the words.

Consistent with her description of decoding instruction, I observed extensive (100% of the days observed) use of worksheets by students in Mary's class. Additionally, Mary used a "Clue Board" wall chart with keyword and sound combinations to remind students of the varying sounds that groups of letters such as <ow> can make.

In summary, I observed three teachers using interventions for decoding instruction at the individual phonemes (phonic analysis) level and the word parts (structural analysis) level. One intervention consisted of a structured and scripted program that used a direct instruction approach. A second intervention was comprised of a cognitive strategy for decoding multisyllable words. Finally, I observed the use of instructional activities that consisted of worksheets. In the next sections, I describe the components of instruction. Definitions for those instructional components can be found in Chapter II, Review of Literature.

Decoding: Instructional Components

The following section will describe instructional components that teachers utilized during decoding instruction. Components include grouping, advance organization, practice, feedback, and control of task complexity. Table 4.2 provides an overview of observed use of effective components of instruction.

Table 4.2 Observed Effective Components of Instruction

	Advance Organization		Grouping		Practice		Feedback		Scaffolding/ Complexity Reduction	
AJ	Purpose setting Wall chart	D	WC	D, V	Guided massed practice	D/ Words, Text	Word supply	D	D	R, M, Q, P, E, PR
	Purpose setting Fluency goals	F	ISW	D, F, V, RC	Indep. practice	D, F, V, RC	Word supply Drill and practice	F	F	M, E, P Materials
	Purpose setting	V	1-on-1	F					V	M, E, Materials
			Pairs	F					RC	Materials
ST	Purpose setting	D	WC	D, RC	Guided massed practice	D/ Words, Text	Word supply	D, F	D	S, R, M, Q,
	Purpose setting Fluency goals	F	ISW	D, RC	Indep. practice	D, F, RC	Word supply Drill and practice	D, F	F	M, E, P Materials
	Preview	RC	1-on-1	F					RC	R, M, P, E
			Pairs	F, RC						
MB	Purpose setting	D,	WC	D	Guided massed practice	D/ Words, Text	Word supply	D	D	S, R, M, Q,
	Purpose setting Fluency goals	F	ISW	D, V, RC	Indep. practice	D/Text	Word supply	D		
MC	Purpose Setting Clue Board Wall Chart	D	WC	D	Guided massed practice	D/Text	Word Supply	D	D	S, R, M, Q, E Materials
			ISW	D, V, RC	Indep. practice	D/Text Lexia SOS			V	Materials
			SGI	D, V, RC					RC	Materials

AJ=Andrea; ST=Sallie; MB=Martin; MC=Mary
WC=Whole Class; ISW=Independent Seat Work; SGI=Small Group Instruction
D=Decoding; F=Fluency; V=Vocabulary; RC=Reading Comprehension
S=Break into Steps; M=Modeling; P=Prompts; Q=Questions; E=Examples; R=Reviews; PR=Probes

Grouping

Teachers observed in this study used three grouping formats for decoding instruction: (a) whole class and (b) small homogeneous (same ability) groups, and (c)

one-on-one instruction. Whole class instruction consisted of the teacher delivering instruction using the same materials to the entire class at the same time (Elbaum et al., 1999). For example, Sallie and Martin presented decoding instruction using Corrective Reading to the whole class at the same time. Likewise, Andrea presented instruction on use of the SPLIT strategy for decoding multisyllable words and Mary presented instruction on the use of self-questions for confirming pronunciation in whole class formats.

However, Mary used small groups and one-on-one instruction for worksheet activities. The small group format consisted of groups of three to five students formed on the basis of their independent reading level. Students in these groups worked on the same materials and participated in teacher-led discussion of their work. Additionally, I observed Mary working with two of her students individually.

To summarize, grouping for instruction in decoding was primarily whole class. However, it should be noted that the teachers in this study who used whole class exclusively for decoding instruction had groups of eight and eleven students. Further, the number of students in these classes varied from day to day with as few as five on day four in Sallie's class. Only one teacher used small group or one-on-one instruction for students grouped according to reading levels.

Advance Organization

The concept of advance organization has been linked primarily to facilitating students' understanding and recall of text they will read by introducing relevant concepts in advance of learning and providing "ideational scaffolding." However, I observed the teachers helping their students make connections to their existing knowledge of decoding. For example, Andrea regularly provided organizing statements prior to the introduction of new material that included informing the students of the purpose of the lesson, stating

the objectives of the lesson, and motivating the students to work. Additionally, Andrea and Mary directed their students attention to wall charts (SPLIT Word Rules Chart and Clue Board) prior to beginning instruction.

Before beginning the day's lesson, Andrea presented an organizer/chart on four of the eight days I visited her class. The organizer consisted of a motivational formula written on a large flip chart that she and the students read and chanted. For example, the chart used for decoding follows:

> What are we doing? We are learning to read and understand big middle school words.
>
> How are we doing it? We study letter patterns to see where we can split the word into small sounds.
>
> Why are we doing it? We want to be able to read hard words, so we can do harder work to have more skills. Low skills = low pay, high skills = higher pay. We are here to help you have high skills.
>
> How do we feel when doing it? Most kids like to learn new skills and show what they know [AJ/D1: 15].

Following the presentation of this organizing chart, Andrea told students the focus of the lesson, "We are going to *relearn* our compound words" [AJ/D1: 58]. Then, she proceeded with questions that reviewed previous lessons on compound words. "What rule number has to do with compound words? Rule #1: SPLIT the compound words. What does split mean? Cut it apart. So what does compound mean?" [AJ/D1: 58].

Andrea and Mary used wall charts to help students focus attention on materials to be presented. Mary used the Clue Board to remind students of a previously introduced sound-symbol correspondence (<ee> = /e/ as in *tree*) prior to teaching a new clue, <ow> = /o/ as in *crow*. Andrea used a similar tactic. On the day following instruction in compound words, she began her review by asking students to look at the SPLIT Word Rules Chart because this would be a review lesson.

In summary, I observed two teachers using advance organization to prepare their students for lessons in decoding. Andrea used an organizing chart for purpose setting and motivating students to learn. Mary and Andrea also used informational wall charts to review previously introduced concepts leading to instruction.

Explicit Practice

Decoding practice took several forms. The teachers provided guided practice in which they supplied corrective feedback so that the students' initial attempts at decoding isolated words and in connected text were correct and successful. Additionally, the teachers provided independent practice, which was conducted in class (e.g., independent seatwork) and out of class (e.g., homework) and included little corrective feedback. Practice was conducted in a massed condition in which the students practiced continuously (i.e., without breaks) and in a distributed review or practice condition in which practice was spaced over time. I observed decoding practice of isolated words and of connected text in the following forms: (a) guided massed and distributed practice in decoding isolated words in lists and on flashcards, (b) independent practice in decoding isolated words, (c) guided distributed practice in decoding during connected text reading, (d) independent distributed practice in decoding during connected text reading, (e) guided massed and distributed practice in use of the SPLIT strategy, (f) independent distributed practice in the use of the SPLIT strategy, and (g) independent practice using computers.

Guided practice of isolated words. Sallie and Martin, using Corrective Reading, provided guided massed and distributed practice of sight words to a high percent of mastery as is recommended in the Corrective Reading teacher manual. Students in their classes read sight words in their texts chorally and individually multiple times on the days in which Corrective Reading was used. Further, words from the individual lists were repeated across lists, providing practice of individual words containing specific letter

patterns that was distributed over time. In contrast to Sallie and Martin, over the seven days I observed, I saw only one instance in which Mary provided guided massed decoding practice of a list of words. Individual students were instructed to practice reading through a list of words that targeted the <ow> pattern two times in succession.

Andrea and Sallie used teacher-made flashcards to provide guided massed and distributed practice of high frequency words and words they introduced in decoding lessons. Sallie used flash cards to review compound words such as *crossroad*, *butterfly*, *birthday*, and *beehive* at the end of one lesson. During the warm-up portion of her lesson, students in Andrea's class practiced using flashcards with single syllable high frequency words (e.g., *run*, *that*, *they*) and longer words (e.g., *hollow*) that Andrea identified from reading passages. I observed Andrea's use of flashcard practice with the same list of words across three lessons (i.e., distributed practice).

Independent practice of isolated words. Andrea provided the only example I observed of independent practice of word list decoding. On three occasions, Andrea assigned lists of words for homework to be decoded using the SPLIT strategy. It is impossible to determine if students used a massed (continuous) condition for independent practice sessions outside of class.

Guided and independent practice of connected text. Three of the teachers provided guided distributed practice of decoding during connected text reading. Sallie, Martin, and Mary conducted guided oral reading lessons. Guided oral reading consisted of individual students reading one or two sentences (i.e., round-robin fashion) and the teacher providing immediate corrective feedback as needed. I observed guided oral reading on two of six days in Mary's class, six of seven days in Sallie's class, and six of eight days in Martin's class. All four of the teachers used worksheets and Sallie and Martin used the Corrective Reading Workbook to provide independent distributed

decoding practice during reading of connected text. Independent practice took place in class and outside of class.

Guided and independent practice of a decoding strategy. Andrea provided practice in the use of a multisyllable word decoding strategy, SPLIT. She modeled each of the SPLIT "word rules" on separate days, and guided the students as they practiced using the rule. Andrea assigned independent practice with additional words to be completed outside of class. Further, she prompted students with corrective feedback to practice using the strategy as the students engaged in reading passages during independent seatwork (independent distributed practice).

Practice using computers. I observed one final form of decoding practice. On two days out of my seven observations in her room, Mary placed students at computers in the back of her room where they used the Lexia SOS program to practice phonic and structural analysis skills. She stated that she used the Lexia SOS (Lexia SOS, 1997-2005) computer program with her "low decoders." Further, her description matched my observations of her classroom.

In summary, consistent with their interview statements, I observed decoding practice in all of the teachers' classrooms. The teachers provided guided and independent decoding practice using sight words and connected text. Word list practice was conducted in massed and distributed conditions. Practice of connected text was distributed across my observations and took the form of guided oral reading and independent silent reading of worksheet passages. I observed practice of a cognitive strategy for decoding multisyllable words and the use of computers to practice phonic and structural analysis.

Corrective Feedback

Corrective feedback was used to respond to student errors in decoding. Feedback was provided during decoding instruction and during guided practice in reading word

lists and flash cards and during independent practice when students utilized decoding skills to read connected text. The teachers consistently provided specific corrective feedback for decoding errors that included diagnosis of the error and use of two procedures that guided students to the correct response: (a) word supply and (b) word supply and probe.

Word supply. Word supply was the primary form of corrective feedback that I observed. Corrective feedback utilizing word supply consisted of the teacher provided the correct word after a student mispronounced, substituted, or hesitated during sight word reading or connected text reading. The student said the correct word and either continued reading or reread from the beginning of the sentence containing the error word. All of the teachers provided corrective feedback utilizing word supply.

Word supply and probe. The teachers also modeled correct pronunciations and prompted students to practice the correct response. During decoding instruction using Corrective Reading, for example, Sallie and Martin used the teacher manual's recommended error correction practice of word supply and probe in which the teacher tells the student the word (i.e., The word is ___.) and then asks the student to repeat the word (i.e., What word?).

To summarize, teachers identified and responded to student decoding errors that were made during instruction and during guided and independent practice of isolated sight words and in connected text. Specific corrective feedback included supplying correct responses and probing to check for understanding, and guiding students to practice the correct response.

Control of Task Complexity

Across the classrooms, the teachers described most of their students as reading on a third or fourth grade level. The teachers demonstrated a number of techniques to control

the complexity of decoding instruction for their students to help them achieve the goal of grade level independent reading. Techniques included breaking tasks into smaller pieces, teacher modeling, teachers providing examples and non-examples to help students discriminate sounds, reviewing, use of questions that guided students to correct responses, and teachers prompting students to use strategies.

Breaking tasks into pieces. The teachers reduced the complexity of the decoding tasks for their students by breaking tasks into smaller pieces. I observed all of the teachers using a technique of covering part of a long or multisyllable word to display the remaining small word that the student knew. In one instance, students in Sallie's class struggled with the word *beehive* during compound word flash card practice, Sallie put her hand over the first part of the word and then the other part as she guided the students' pronunciation of each small word leading to saying the whole word.

Teacher modeling. The teachers modeled reading behaviors and strategies using think-aloud (Kavale & Schreiner, 1979) to make their thinking process for decoding visible. In this example, Martin modeled how he would decode the word *approaching*.

> One thing I can do is to use two ways: I can look at parts of the word/break it into parts and use some rules. . . Do you see how I am attacking that? I'm breaking it down into little parts that I can read. Can I do that with any word? You can, any word that you have. . . Also, I can take any word and break it apart and I can spell it. If I have never spelled it before. I can sound that out and come up with that answer [MB/D6: 22].

Examples and non-examples. The teachers provided examples and non-examples of decoding unfamiliar words. In order to help a student discriminate digraph <ow> (as in *snow*) and diphthong <ow> (as in *cow*), Martin helped a student read the word *crowd*. He first pronounced it with a long <o> sound (*snow*). The students recognized it as the sound a bird makes (past tense) and incorrect for the meaning of the sentence. In another instance, Mary used a non-example to instruct students to confirm pronunciations by

asking three questions: “Does it sound right? Is it a word that you have heard? Does it make sense in the sentence?” Mary wrote *routine* on the board. “I remember that the <e> at the end of the word makes the vowel say its name” [MC/D1: 21]. She asked a student to read a sentence with the mispronounced word and directed him to answer the questions. The student answered the questions and changed the vowel sound to the correct one.

Reviewing. The teachers used reviews to guide students to correct responses. Andrea provided a sequential review of prerequisite concepts (e.g., vowels, consonants, syllables, prefixes, suffixes, SPLIT rule) before beginning word analysis instruction. Martin reviewed a rule for reading a vowel-consonant-silent <e> syllable with a student and helped the student correct his pronunciation of error words.

Questioning. The teachers used questions to lead students to discover answers. In a lesson on the SPLIT rule for affixes, Andrea’s student hesitated on the pronunciation of *railroad*. “Do you see a word that you know?” No response from the student. “Where do you think we will divide?” The student said, “between <l> and <r>.” Andrea pointed to *road* and asked, “What is this word?”

Teacher prompts. The teachers called attention to wall charts and provided verbal prompts to remind students to use strategies they had taught or to encourage strategy use at appropriate times. Charts included the SPLIT Word Rule wall chart in Andrea’s room and the Clue Words wall chart in Mary’s room. Additionally, the teachers provided verbal strategy cues (“try your SPLIT word rules”) to remind students that they had strategies to use to help them decode words and to prompt them to use their strategies when it was appropriate. For example, Andrea worked one-to-one with a student on oral reading fluency who hesitated on the first word (*amphibian*), Andrea asked him if he could use the word rule to split the word and break it down to read. Together they used

the rules and phonic analysis to read the word. She followed up with review of the rules he had used to successfully decode the word. “Reason you were successful is that you reviewed first, like you look in the water before you dive off into the pool, look before you leap. You used your word rules. Very nice.” [AJ/D8: 84]

To summarize, I observed the teachers control the complexity of decoding tasks. The teachers broke tasks into smaller pieces, modeled behaviors and strategies, provided examples and non-examples, reviewed, asked questions, and used strategy prompts to support their students’ successful reading and comprehending.

Summary of Decoding

All of the teachers described difficulties their students had with decoding, especially decoding of long, multisyllable words. Further, their descriptions of instruction matched my observations of the classrooms. I observed decoding interventions including explicit instruction in all of the classrooms. Two of the teachers used a scripted and structured decoding program to provide instruction in decoding sight words and connected text. Another teacher taught her students to use a cognitive strategy to break long, multisyllable words into smaller parts that they could then use the knowledge of letter-sound correspondences (phonic analysis) to decode. The fourth teacher used explicit instruction of letter-sound correspondences and affixes to help students decode unfamiliar words.

As anticipated from their descriptions, I observed the teachers deliver instruction in a primarily whole-class grouping format. However, one teacher also used small heterogeneous groups and one-on-one instruction. She based grouping on the independent reading levels of individual students. Additionally, the teachers prepared students for instruction with advance organization by setting the purpose, describing goals, or reminding students to review concepts.

In addition to using interventions and explicit instruction, all of the teachers provided many opportunities for students to practice decoding. I observed the teachers using guided practice in reading sight words and flashcards and in reading connected text. Much of the independent practice in connected text reading consisted of students completing worksheets in class and out of class. All of the teachers described training in the use of the Lexia SOS computer program. However, I observed students using the program to practice phonic analysis skills (letter-sound correspondences) and structural analysis skills (word parts) in only one classroom. During guided practice, the teachers provided corrective feedback in response to student errors that consisted of word supply, word supply with probes, or checks for understanding.

Most of the students in the classrooms I observed read two or more years below their grade levels. The teachers used various techniques to support students as they built decoding skills. I observed teachers modeling skilled decoding behaviors, providing examples and non-examples, reviewing, and using questioning to guide students to correct responses, and using reminders or prompting students to use known decoding strategies.

Fluency: Interventions

Fluent readers can focus their cognitive attention on gaining meaning from text rather than on decoding (LaBerge & Samuels, 1974). Importantly, improvements in reading fluency have been linked with improved reading comprehension (Chard et al., 2002). Interventions for improving reading fluency involve reading practice (Archer et al., 2003; Chard et al., 2002; Snow et al., 1998). Practice may target reading sub-skills (phonics, sight words, and phrases) or connected text reading (passages).

Interventions targeting sub-skills and connected text have been demonstrated to be effective in improving oral reading fluency of middle school students with high-

incidence disabilities who struggle with reading (e.g., Mercer et al., 2000). Fluency interventions at the phonics level consist of teachers providing a model of the correct pronunciation of phonemes, syllables, or nonsense sounds. Afterwards, the students read the sounds (Mercer et al., 2000). Fluency interventions at the sight word (words that students recognize instantly, Ehri, 1995) level consist of teachers providing a model and students reading individual sight words (Mercer et al., 2000) and phrases containing sight words (Mercer et al., 2000). Fluency interventions at the connected text level include choral reading and guided repeated oral reading (Archer et al., 2003) such as those in which students reread a passage with or without a model of fluent reading (e.g., Samuels, 1979) but with guidance and corrective feedback. Repeated reading interventions include those in which students read with their teachers, another student, or a tape.

Definitions

Fluency has been defined as "the rate of performance that enables skills to be applied in daily activities and remembered after a significant period of practice" (Mercer et al., 2000, p. 181). Reading fluency includes rate of reading, accuracy of decoding, and prosody or expressiveness of reading (Kuhn & Stahl, 2003). However, the measurable components of reading fluency are rate and accuracy. In the present study, reading fluency interventions were defined as instruction that targeted improved rate and accuracy in reading sub-skills such as phonics, sight words, and phrases and instruction that targeted improved rate and accuracy in reading connected text. Instruction was timed and untimed. However, untimed instruction was considered to be a fluency intervention if the purpose was building speed and accuracy.

Implementation

The teachers in this study used interventions to improve their students' automatic and accurate reading of sight words and of connected text. I observed choral reading of sight words and repeated reading of connected text involving individuals and student pairs. Although all of the teachers considered fluent reading to be an important goal for their students, time spent in fluency interventions or activities varied across teachers and activities. For example time spent in direct interventions such as repeated reading of sight words and passages ranged from less than 1% (one teacher) to approximately 36% of instructional time.

Description of Interventions or Activities

All of the teachers reported a form of repeated reading or "rereading" as the method they used to improve fluent reading of sight words and connected texts. I observed choral reading of sight words in the classrooms of Mary, Sallie, and Martin. Sallie and Andrea used flashcards to develop fluency in reading sight words. Further, Sallie and Martin utilized a Partner Reading format to build fast and accurate reading of connected text while Sallie and Andrea used independent repeated reading of connected texts followed by progress monitoring as a means to develop their students' passage reading fluency.

Sight word fluency. I observed a single instance of fluency instruction in Mary's class in which students read a word list to improve rate and accuracy. Mary asked students to reread a list of words she introduced during decoding instruction "a little faster." In contrast, I observed frequent use of word list reading in Martin's and in Sallie's classes. Students read sight words on four days in Martin's class and on three days in Sallie's class.

Sallie and Martin used repeated reading of sight words as prescribed by Corrective Reading (Decoding/B2). Word list reading consisted of the teacher modeling pronunciation followed by choral echo of each word in the list. Next, the group read the list without teacher modeling. Finally, individual students read the list. Although list reading was untimed, the focus of practice was improving rate and accuracy. Sallie and Martin used signals (Martin used a clicker and Sallie snapped her fingers) to maintain and increase pace (i.e., rate). Further, Martin used a point system described in the Corrective Reading Manual. Points were given to the students as a group when a criterion of fewer than three errors was reached (i.e., accuracy).

Sallie and Andrea described choral reading of flash cards as a method they used to improve automatic and accurate reading of sight words. "So we first of all practice reading the words [taken from passages] because many of them are larger, more difficult, unfamiliar words to them, and so index card practice, and they're there, every day, we just practice over and over and over again" [ST/I-1: 90[. I observed repeated reading of flash cards during one lesson in each teacher's class. Sight words included high-frequency words and content words taken from stories the classes had read. For example, Andrea had several boxes containing flash cards on which she had written individual sight words that the class read chorally. Flash cards included regular and irregular high-frequency words such as *old*, *what*, *play*, *is*, *run*, *help*, *and*, *for*, *your*, *ten*, *her*, *yellow*, *three*, and *funny*. Additionally, Sallie had a list of compound words that she practiced with students. Both teachers used content words from passages such as *hollow, elf,* and *exhibition.*

Connected text fluency. Andrea, Sallie, and Martin used repeated reading of connected text to improve reading fluency. Repeated reading of connected text consisted of students reading in pairs, with tapes, and outside of class with parents plus progress

monitoring. Two teachers used the *Individual Checkouts* described in Corrective Reading.

Andrea described her classroom as a "fluency classroom" in which she "coached" her students to help them become fluent readers. Similarly, Sallie stated that her biggest goal was to "improve fluency, which then leads to improved reading comprehension." Both of these teachers used a comparable format for connected text fluency building in which the students read passages repeatedly. Sallie and Andrea instructed their students to practice reading the passages. In Sallie's room this consisted of a homework assignment in which students were instructed to take the passage home and have a parent listen to the child read the passage several times. Passages were then returned to class with a parent's signature indicating the parent had listened to the child practice reading the passage. In Andrea's class practice was conducted during class and consisted of reading with a partner, silent repeated reading, or reading with a tape of the passage. After repeated practice with a passage, the teachers worked individually with students to monitor progress (i.e., graphing of one-minute timed reading).

I observed Sallie listening to each of the students in her class read passages individually while she provided error correction in three to four minute sessions that included a one-minute timed reading. Sessions took place during one class period. She stated in her interview that she tried to listen to and time each child reading for one minute once a week. However, Andrea spent five days listening to the eight students in her class. The time Andrea spent in one-to-one sessions varied considerably across students. I observed Andrea spending six to seven minutes with each of three students but nearly 20 minutes with the student she identified as the lowest reader in her class. Andrea stated that she developed the coaching model for fluency instruction after determining that fluency building activities did "not work as a class" [AJ/I-1: 16] because of the wide

variance of reading abilities across her students. Her statement concurred with my observations. Of the students I observed during the fluency coaching, there was a variance in reading level from 0.8 to 5.0 according to the Read Naturally passages chosen for fluency building instruction.

Andrea used the coaching sessions to diagnose problems and teach or re-teach decoding skills in addition to timing and graphing fluency progress. "And while I coached them, and it really was coaching, I listened to them individually, and figured out what's the next thing we need to smooth out " [AJ/I-2: 82]. Andrea allowed each student to choose a passage from a group of passages at the child's instructional reading level. Next, she and the student discussed a "good goal." Before the timed reading, Andrea asked each student to review the passage and pick out words that might present decoding difficulties. Together they worked through any problem words. Andrea reinforced the importance of "pre-reviewing" after the students read. "I like the way you reviewed first. The reason you were successful is that you reviewed first, like you look in the water before you dive off into the pool, look before you leap" [AJ/D8: 78]. If the student met the pre-established fluency goal, Andrea asked if she or he would like to try a harder passage "now or wait until the next time." Finally, she and the student graphed the number of words read correctly.

Sallie and Martin also used a repeated reading intervention for connected text fluency building that resembled Partner Reading (Delquadri et al., 1986), the *Individual Checkout* included in their Corrective Reading program. Similar to Partner Reading, in the Individual Checkout, student partners alternated reading a passage with first one and then the other partner listening for errors. After each student practiced reading the passage one or more times, the teacher set the timer and each student read for one minute. Students were asked to tell their teacher if their partner had read with fewer than three

errors during the timing. Points were given for accurate and fast reading. Although the directions included student-provided error correction, I did not observe students providing error correction in either classroom. I observed two instances in Martin's class and one instance in Sallie's class in which students were engaged in the Individual Checkout fluency intervention.

To summarize, all of the teachers provided fluency-building interventions that included a combination of sight words and connected text fluency building. Although each teacher stated that fluent reading was one of the important goals he or she had for their students, the amount of time spent in fluency building varied considerably across teachers. My observations matched the teachers' descriptions of repeated reading of isolated words and connected text as methods they used to build fluency.

Fluency: Instructional Components

The following section will describe instructional components that teachers utilized during fluency instruction. Components include grouping, advance organization, practice, feedback, and control of task complexity.

Grouping

The teachers descriptions matched my observation of grouping formats for fluency instruction: (a) whole class, (b) small heterogeneous groups, (c) pairs, (d) individuals (independent seatwork), and (e) one-to-one with the teacher. Martin used whole class instruction for sight word fluency building and pairs for connected text fluency building. Mary, whose fluency building consisted of sight words only, used small homogeneous (same reading level as determined by assessment) groups for instruction. Sallie and Andrea used whole class for sight-words and pairs, independent seatwork, and one-to-one for connected text fluency building.

In summary, the teachers used whole class instruction for fluency building at the sub-skill level of reading sight words. However, they also used other groupings such as pairs, independent seatwork, and one-to-one individualized instruction to help students build passage reading fluency.

Advance Organization

Prior to beginning the explicit fluency interventions (i.e., sight words, flash cards, Individual Checkout, Read Naturally), three of the teachers provided advance organization in the form of information about the purpose of the instruction. Sallie and Martin told students the rate and accuracy goal for the day (100 words with fewer than three errors). Sallie and Andrea also prepared students with the purpose and goal for their one-on-one sessions with students. In addition to individual preparation, Andrea used the same purpose setting and motivational chart that I observed her use with decoding to prepare her class for fluency instruction. However, as the following example demonstrates, the fluency chart was modified to target "speed and understanding."

> What are we doing? We are learning to read for speed and understanding.
>
> How are we doing it? We study vocabulary, use SPLIT word rules, and practice reading with a timer.
>
> Why are we doing it? Reading fast and accurately improves our skill for reading on grade level text.
>
> How do we feel about it? It feels good to work hard to achieve goals. We think it is fun to make progress and feel proud of new skills [AJ/D5: 31].

I did not observe any form of advance organization prior to fluency practice in Mary's class.

To summarize, I observed the teachers set the purpose for instruction as advance organization prior to fluency instruction in three classrooms. Purpose setting included

informing the students of the fluency goal that was expected for reading passages and motivating students to improve speed and accuracy of their reading.

Explicit Practice

Because interventions for building reading fluency of sight words and connected text involve practice (National Reading Panel, 2000; Snow et al., 1998), this section will provide further explanation of the activities for fluency building that were described previously. I observed two forms of reading fluency practice: (a) guided massed practiced of sight words and (b) independent distributed practice of connected text. The teachers provided guided practice in which they supplied corrective feedback so that student's attempts at developing fluent sight word reading would be successful. Additionally, the teachers provided independent distributed practice of connected text. Independent practice was conducted in class and assigned to be conducted out of class but did not include corrective feedback.

Sight word practice. Sight word practice was conducted in a massed condition in which students read lists of sight words repeatedly and in a continuous manner. For example, Sallie and Martin provided guided practice of sight words, correcting pronunciation errors as students read chorally and individually. Similarly, Andrea and Sallie guided their students as they read sight words on flash cards.

Connected text practice. Andrea and Sallie provided independent practice in oral repeated reading of passages that was distributed over time (across the days I observed). After Andrea listened to each student read, she gave him or her a packet that included a copy of the Read Naturally passage. Students were instructed to read the passage three times with a partner or with a tape of the passage. I also observed students reading the passages silently at their seats. Sallie sent passages home with her students to practice independently with a parent.

In summary, explicit fluency practice consisted of guided and independent practice of sight words and of connected text. Teachers provided guided practice and opportunities for students to practice passage reading independently in and out of class.

Corrective Feedback

The teachers provided corrective feedback during fluency instruction. Feedback primarily consisted of calling attention to errors ("what word") and word supply in which the teacher said the correct word when a student mispronounced, substituted, or hesitated during reading. Additionally, Sallie and Andrea used a drill and practice error correction procedure (Pany & McCoy, 1988) during one-on-one fluency progress monitoring sessions. The teachers wrote down error words, and after the one-minute timing instructed students to read the lists. For example, I observed Andrea writing down error words as one of her lowest students read at her desk. After reading, she told the student the error words and reminded him to be careful with those words "because they are traps for you" [AJ/D6: 79]. She listened as he reread the list and provided a copy for him to take home to practice.

In summary, the teachers primarily used two forms of corrective feedback during fluency instruction or practice of sight words. They called attention to errors or they supplied the word immediately after a student mispronounced, substituted, or hesitated on a word. Also, two teachers used drill and practice of error words with students after listening to them in one-to-one coaching sessions.

Control of Task Complexity

The teachers concurred in their descriptions of their students' need to build reading fluency. Further, I observed dysfluent reading that included slow and hesitant rate, inaccurate decoding, and word-by-word inexpressive reading. The teachers utilized

specific techniques to support development of reading fluency including differentiated materials based on student need, teacher modeling, and conducting probes to check for understanding and mastery.

Differentiated materials. Reading materials at the student's instructional reading level (i.e., no more than 10% error words, Mercer et al., 2000) are appropriate for fluency building interventions. I observed the use of materials that were at or near student reading levels in all classrooms. The words used for sight word fluency building were taken directly from reading level passages the students read. This practice was consistent across teachers and across types of passages. In other words, the sight words in Corrective Reading used by Martin and Sallie were later seen in Corrective Reading passages. Additionally, sight words on flash cards were taken from the worksheet passages used by Andrea and Sallie. Thus, the students practiced fluent reading of words they would later see in passages and had extra practice on these words when they read them in connected text.

Teacher modeling. In addition to differentiated materials, I observed one teacher who modeled fluent reading for her students. On several occasions, Sallie used grade level reading passages with her students. I observed Sallie model fluent reading in a story taken from the sixth-grade literature textbook. She commented that the material was more difficult than the stories found in Corrective Reading, but that using the sixth grade literature book motivated her students to improve their reading comprehension and build their reading fluency in order to bring them to grade level reading performance. She prepared the students for reading by telling them, "this is challenging reading material, sixth-grade" [ST/D6: 67]. At first, Sallie asked the students to track (follow along with finger or with a book mark she provided) as she read aloud. Next, students took turns reading sentences. Sallie began reading again with vivid expression on a part of the

passage that included a description that was critical to understanding the story. Although the focus of the lesson was gaining meaning from a challenging text, Sallie provided an excellent model of skilled oral reading.

Probes. Sallie, Martin, and Andrea also controlled the complexity of fluency instruction by conducting regular probes to check for progress toward fluency goals. Sallie and Martin used the Individual Checkouts from the Corrective Reading materials to provide mastery information on their students. The teacher manuals set fluency goals for the students. Sallie and Martin timed the students as they read in pairs for one minute. Students reached the goal if they read to a specified place in the passage with three or fewer errors. Andrea and Sallie used Read Naturally materials to monitor progress toward fluency goals of their students. The teachers timed each of their students individually as they read for one minute and marked errors. Afterwards, they calculated the words read correctly and the percent of words read correctly. These calculations allowed them to select passages on the student's independent reading level (i.e., 95% correct). Further, the number of words read correctly in one minute was placed on a graph to demonstrate the child's progress toward the fluency goal.

In summary, all of the teachers controlled the task complexity during fluency building by utilizing materials that were based on the individual reading levels of the students in their classrooms. Further, three of the teachers conducted regular probes to monitor progress. Finally, I observed one teacher control the complexity of tasks by modeling skilled oral reading of grade level literature passages.

Summary of Fluency

In their initial interviews, all of the teachers stated that building their students' reading fluency was one of their key concerns. However, the use of fluency building interventions varied across teachers from a significant percent of instructional time to a

very small percent of time spent. The teachers described repeated reading as the intervention they used to build reading fluency, and their descriptions matched my observations of their classrooms. I observed the teachers using repeated reading of sight words and of connected text.

Similar to their descriptions, I observed several grouping formats used for intervention and independent practice of reading fluency. Three of the teachers provided whole class instruction (i.e., repeated reading) in fluent reading of sight words, and the fourth teacher provided repeated reading (in a single instance) of sight words for students in a small group. Andrea and Sallie also provided explicit independent practice in reading worksheet passages to improve fluency, and Martin and Sallie used the Individual Checkout procedure in which student partners repeatedly read a passage. Both of the passage reading conditions (i.e., Individual Checkouts and worksheet practice) included graphing of progress.

The teachers provided advance organization in the form of purpose setting and informing students of fluency goals before they practiced reading. Further, I observed control of task complexity. All of the teachers utilized reading level materials for instruction. Three teachers used intermittent probes to monitor progress and one teacher modeled skilled and fluent reading for her students.

Vocabulary: Interventions

Knowledge of vocabulary has long been known to be a correlate of reading proficiency (Beck & Carpenter, 1986). Although many new words are learned through wide reading, teaching vocabulary has been found to be an effective means to increase word knowledge (Stahl & Fairbanks, 1986). Further, vocabulary interventions for students with high-incidence disabilities have lead to improvements in reading comprehension (Gersten et al., 2001).

Effective vocabulary interventions for students with high-incidence disabilities include instruction before, during, and after reading. Interactive cognitive strategies (e.g., semantic mapping) and strategies that focus on the association level of processing (e.g., associating a word with its definition or a synonym) have been shown to be effective at improving knowledge of words (Jitendra, Edwards, Sacks, & Jacobson, 2004). Additionally, memory devices such as mnemonics or graphic organizers help students with high-incidence disabilities learn and remember vocabulary terms (D. P. Bryant et al., 2003). A direct instruction approach in which the teacher presents new words and the students practice the definitions prior to reading has been shown to improve word knowledge and reading comprehension (Pany, Jenkins, & Schreck, 1982). Further, multiple exposures to vocabulary terms across several contexts have proven beneficial to promoting deeper understanding of words (Stahl & Fairbanks, 1986). Finally, practice has been found to be critical for vocabulary acquisition (Pany et al., 1982).

Definitions

Reading vocabulary refers to the words that we know or can figure out in print (Texas Education Agency, 2002). For the present study, vocabulary interventions were defined as treatments in which the teacher delivered explicit instruction (teacher modeling and practice opportunities) before, during, and after reading that was aimed at developing understanding and recall of target words.

Implementation

All four of the teachers described their students' vocabularies as poor and concurred that students "come in with very limited general knowledge and vocabulary." In spite of the stated need for vocabulary development, only Andrea and Sallie described explicit vocabulary instruction. However, over the course of my study, I observed only

partial implementation of the interventions described by the teachers with little explicit instruction. In contrast, students in Andrea's classroom completed dictionary-based worksheets, and Martin and Mary described and I observed their students utilizing traditional dictionary based worksheet activities.

The teachers integrated vocabulary activities with other reading content. Thus, calculating the percent of time spent in vocabulary activities was difficult for two reasons: (a) worksheets included a mix of vocabulary and comprehension activities that were completed as independent seatwork during class and outside of class (i.e., homework) and (b) teacher and student generated explanations of vocabulary terms (i.e., verbal association level routines) occurred randomly as they were needed to aid comprehension. Mary utilized worksheets on all of the six days of observation. In Martin's class, students completed worksheets containing a vocabulary matching activity on three of the eight days that I observed. Andrea's students completed worksheets on five of the eight days I observed her class.

Description of Interventions or Activities

I observed two types of activities targeting vocabulary understanding: worksheets and verbal association level routines (i.e., teacher-generated explanations and illustrations). Three teachers used worksheets extensively. Procedures for completion of worksheets were similar across classrooms. However, the worksheet components varied by teacher. In addition to worksheets, the teachers provided explanations and illustrations of vocabulary terms their students did not know.

*Worksheets***.** Teachers in three of the classrooms used worksheets that included vocabulary activities. Worksheet usage followed a similar procedure across the classes. Teachers passed out worksheets during class, and students used dictionaries (either student dictionaries or computer software with a dictionary function) to complete the

assignment. In Mary's and in Martin's class, students checked the worksheet on the following day. Checking consisted of the teacher providing correct answers (definitions) or the teacher soliciting answers from students. Students in Andrea's class returned their completed worksheets to their teacher. I did not observe group checking of responses in Andrea's class as I did in the other classes.

The components of worksheets varied across the three teachers that utilized them. In Martin's class, worksheets contained a vocabulary matching exercise, a brief paragraph (approximately 150 words), and comprehension questions. Similarly, worksheets in Mary's class contained a passage with accompanying comprehension questions but included a list of words that Mary selected from the passage for the students to define. Students in Andrea's class completed a worksheet packet that consisted of a passage and comprehension questions and a second page that Andrea called the *vocabulary form*. The form consisted of five procedures and included: (a) write and spell the word silently, (b) look up and write a dictionary definition that matches the meaning of the passage, (c) draw a picture of the word, (d) write "reminder words" such as examples of the word or examples of what the word means or how it makes you feel, and (5) write a sentence using the word.

Verbal association level routines. The teachers also provided frequent verbal explanations of terms throughout decoding and story reading lessons to scaffold their students understanding of vocabulary that would enhance comprehension. Sallie, Martin, and Andrea described the use of "visuals" or teacher generated explanations and concrete illustrations.

Sallie described her instruction as a type of scaffolding that supported vocabulary development. She commented that she solicited student-generated definitions and then provided a "more mature" teacher-generated explanation or illustration.

> I take it first of all out of context. So we are reading along, and then I go back to that word. "What do you think that means?" So we reread it in the sentence, and they make their guesses, and so then I tell them. I write the word on the board and I usually do a little visual along that goes with it and a basic definition that they gave me. And then I put on the vocabulary board all their vocabulary words. . And then I give them maybe a little bit more mature definition than they gave me. But we start with their definition and then we just move it up in maturity [ST/I-1: 83].

I observed several instances of the student-generated definition to mature teacher-generated instruction. The students in Sallie's class read a story about wolves. As they read, they came across several words that Sallie asked them to define such as *slope* and *bank*. Sallie asked, "Does anyone know what a *bank* is?" A student responded that it meant *side*. Sallie drew a picture of a river bank on the chalkboard, wrote the word *bank* on the appropriate identifying spot, and explained that it was the ground that came down to the *side* of the river. In addition to chalkboard illustrations, Sallie frequently acted out vocabulary words, *crouching* and *lurking* and *howling* to help students understand these terms.

Martin referred to illustrations and explanations as "clarifications." Martin provided concrete illustrations of terms. He brought his students to the windows on one side of the classroom to see the overhanging *eave*, a vocabulary word from a worksheet passage. Similarly, Andrea described the need to provide "something tangible" and "a hook" to something her students already knew in order for them to understand abstract vocabulary. Andrea described an instance when her students were struggling with the concept of *hollow*. To provide a tangible example, Andrea said she brought in various balls. She cut the balls in half to demonstrate that some were filled (golf balls and base balls) and some were *hollow*, they had nothing inside (basketball). Although I did not observe this demonstration, during my observation of vocabulary flash card practice,

students responded quickly to the word *hollow* after Andrea produced a basketball from behind her desk.

To summarize, I observed little systematic and explicit teacher-directed vocabulary instruction across the classrooms and no interventions targeting vocabulary instruction before or after reading such as directly preteaching vocabulary or using cognitive strategies such as semantic mapping to improve word learning. However, consistent with the teachers' descriptions of their instruction, I observed many instances in which the teachers used verbal association level routines to provide explanations and concrete illustrations of vocabulary words during story reading and during decoding instruction. Additionally, the teachers utilized worksheet activities that focused on dictionary definitions and association level processing.

Vocabulary: Instructional Components

The following section will describe instructional components that teachers utilized during vocabulary instruction. Components include grouping, advance organization, practice, feedback, and control of task complexity.

Grouping

I observed three grouping formats used for vocabulary activities: (a) independent seatwork, (b) whole class, and (c) small homogeneous groups. Students completed worksheets independently in Martin's, Andrea's, and Mary's classrooms. However, Martin checked worksheets as a whole class activity. Consistent with most of her instruction, Mary utilized small homogeneous groups to check worksheets. Mary asked students to read and provide definitions for vocabulary words defined during in-class or out-or-class independent work. Teachers provided explanations and illustrations during whole class activities such as decoding and story reading.

Advance Organization

Unlike the purpose setting activities used by the teachers for decoding and fluency, advance organization for vocabulary activities was limited. Only Andrea provided a purpose setting chart similar to those she used for decoding and fluency prior to a vocabulary lesson. Students in Mary's class were reminded to complete the dictionary activity with vocabulary words prior to reading a passage. Similarly, the worksheet used in Martin's class instructed students to complete the vocabulary activity before reading the paragraph and answering questions. In Sallie's class, I observed no activities involving vocabulary development prior to the lesson.

Explicit Practice

I observed a single instance of explicit practice in which the teacher directed or led the students in a review of previously taught vocabulary words. Explicit practice of vocabulary words consisted of guided massed practice of vocabulary words using flashcards. Sallie and Andrea described their use of vocabulary flash cards as an activity used frequently to reinforce vocabulary found in student reading passages. Sallie stated that she reviewed words daily: "I had, first of all, I use index cards. . . And I put on the vocabulary board all of their vocab words. And so that every day we review them. And I do a game out of it, and I try to do as many games as I can. They give me a definition, I give them a definition, and they have to name the word" [ST/I-1: 85]. Andrea described a similar activity using cards: "We have these cards and we go through them" [AJ/I-1: 93]. She showed me two boxes of cards with words taken from the context ("we get it from the stories") that she used with her students.

I observed vocabulary flashcard practice on only one occasion. Andrea conducted vocabulary practice with flashcards during the warm-up before the day's lesson. She guided her students with corrective feedback as they read through the flash cards first and

then provided definitions or examples of the words after practice in pronunciation. I did not observe explicit practice of vocabulary words in Sallie's classroom.

Corrective Feedback

The teachers provided feedback to students during checking sessions that followed worksheet completion and during vocabulary flashcard practice. Corrective feedback consisted of teachers providing hints to use context to determine word meaning (e.g., "if you see a comma and the word *or*, it almost always means the definition follows") and supplying definitions when students answered incorrectly or did not respond to questions about word meanings.

Control of Task Complexity

The teachers controlled task complexity related to vocabulary activities in two ways: (a) adapted content and (b) teacher examples. Andrea adapted the content of vocabulary activities for her lowest students by reducing the number of words she required them to look up. For example, she assigned her very lowest student, reading a 0.8 (preprimer) passage, two words to define on his vocabulary form whereas the highest student looked up six words. Teacher examples were described previously in the section above on instructional activities.

Summary of Vocabulary

I observed extensive use of worksheets that contained vocabulary exercises. Students looked up words in dictionaries, copied definitions onto worksheets, and matched definitions with words. In one class students also drew a picture, wrote words to remind them of the definition, and generated a sentence using vocabulary words. In addition to worksheets, teachers provided verbal association level routines (i.e., explanations and illustrations of vocabulary words) during story reading. Students

completed worksheets independently and checked answers in whole class and in small group formats. I observed a single instance in which a teacher led students in flashcard practice of previously introduced vocabulary words. Finally, one teacher adapted vocabulary activities for some of her students. She based the number of words her students defined in their worksheets on their reading level.

Reading Comprehension: Interventions

The purpose of reading is to gain meaning from text (Durkin, 1979). Skilled readers use strategies efficiently to understand and recall text and use repair strategies when understanding breaks down (Pressley & Afflerbach, 1995). The lack of or inefficient use of strategies hinders reading comprehension for students with high-incidence disabilities (Deshler et al., 1996). Fortunately, reading comprehension interventions have produced positive outcomes for middle school students who have high-incidence disabilities (e.g., Bos, Anders, Filip, & Jaffe, 1989; Boyle, 1996; Chan, 1991; Gersten et al., 2001; Swanson, 2001).

Interventions that included strategies to be used before, during, and after reading produced strong outcomes for students with high-incidence disabilities who struggled with reading (Gersten et al., 2001). Further, interventions utilizing a combined direct instruction and strategy instruction approach produced strong learning effects (Swanson et al., 1999). Strategies used before reading included previewing the passage, making predictions, determining text structure, and generating questions about the passage (D. P. Bryant et al., 1999; Darch & Gersten, 1986; Englert & Mariage, 1991). During reading strategies included self-questioning to summarize and identify the main ideas (Chan, 1991; Jitendra et al., 2000). After reading strategies included evaluating understanding and clarifying or confirming predictions made before reading (Englert & Mariage, 1991).

Definitions

For the present study, three definitions were important. Reading comprehension interventions were defined as teacher directed instruction in the use of strategies for understanding and recall of text before, during, and after reading passages. Reading instruction was defined as something the teacher did or said to "help [students] understand or work out the meaning of more than a single, isolated word [i.e., connected text]" (Durkin, 1979, p. 488). Reading comprehension assessment was defined as "teachers asking questions and telling students whether their answers were right" (Rosenshine & Stevens, 1984, p. 760).

Implementation

Implementation of reading interventions varied widely across the teachers I observed. In two classrooms, reading assessment predominated with little time devoted to reading instruction and no use of evidence based reading comprehension interventions. In another classroom, the teacher reviewed specific reading strategies she had taught previously. In the fourth classroom, however, I observed the teacher providing explicit comprehension instruction that consisted of guided and independent practice of summarization. In addition, she employed strategies that targeted understanding and recall of text before, during, and after reading passages with her students on each of the six days I observed in her class. Further, she used the technique of directed response questioning or teaching students to ask themselves questions during reading to monitor their understanding.

Description of Interventions or Activities

Three of the teachers described their students' poor reading comprehension as a critical concern. Martin stated that most of his students struggled with vocabulary, but

achieved passing results on SDAA reading comprehension tests. However, Mary, Sallie, and Andrea expressed concerns for their students' reading comprehension and stated that a focus of their instruction was comprehension. I observed three types of activities targeting reading comprehension: (a) assessment using literal level questions during group reading and on worksheets, (b) review of a previously taught strategy, and (c) strategy instruction. In Martin's and in Mary's classrooms comprehension assessment predominated over teaching comprehension-fostering strategies. My observations were consistent with their descriptions of comprehension activities. Similarly, my observations of Andrea's class corroborated her description. Andrea described teaching comprehension strategies using Project Read (Enfield & Greene, 2002) materials with her students at the beginning of the year (i.e., prior to the initiation of my study in her classroom). I observed two instances in which she reviewed the strategies with her students, confirming what she had told me about her instruction. Similar to Martin and Mary, Sallie assessed her students' comprehension with questions during reading. However, I observed comprehension instruction in the use of strategies to help her students gain meaning from the passages they were reading and monitor their understanding. Strategies included: (a) activating prior knowledge, (b) instructing students to preview a passage on their own prior to reading it as a group, (c) summarizing before and during reading and using a graphic organizer after reading to help students organize and remember text, (d) instructing students to reread and "make a movie in your head" when they experienced a break down in understanding, and (e) ask themselves questions to monitor understanding (i.e., directed response questioning).

Comprehension assessment. Comprehension assessment consisted of predominantly literal level questions that the teachers asked during story reading and that were on worksheets. Martin and Sallie followed the procedures in the Corrective Reading

Decoding materials, which consisted of narrative passages. In the teacher's manual, questions were interspersed within short paragraphs. During the story reading activity, individual students read one or two sentences, and the teachers asked the predetermined questions. Most answers could be found directly in the text. For example, on the second day of observations in Martin's class, the students were reading from Lesson 5 in their Corrective Reading books. Martin followed the script and asked questions such as, "Who came up to Art after class?" and "Who came up after Patty left?" Answers to both of these questions came from the passage.

In addition to Corrective Reading, Martin used worksheets that contained expository passages with his students. Passages were approximately 150 words in length. Low-level comprehension questions followed each passage. One worksheet, which had a passage about black widow spiders provided multiple-choice questions to be completed after reading such as, "The black widow has a reputation as a (a) foe, (b) friend, (c) helper." Additionally, the worksheets contained short answer questions with answers found directly in the passage. For example, in a passage about Blackfoot Indians, one question was: "When did the Blackfoot Indians wander the Great Plains?" The first sentence in the passage contained the correct answer: "Before white settlers began moving across the Great Plains, the Blackfoot Indians wandered over the land." All of the students had the same worksheet. Students completed the worksheets during class on three of the eight days that I observed. Martin checked responses to comprehension questions during class on the day following assignment of the worksheet. He read the questions and provided the correct response or asked students to give the response.

Mary used similar types of worksheets, which contained expository text passages and low-level comprehension questions. Unlike the materials that Martin used, Mary used passages that were on the independent reading level of individual students. I

observed different worksheets used by four groups of students. Mary's students completed worksheets during class on all of the six days I observed. On the day following assignment of the worksheet, Mary checked the responses of students in each group. Students read the passage round-robin fashion. After reading the passage, students took turns reading questions and providing answers. However, unlike homework checking in Martin's class, Mary used the time to provide instructional support when students struggled with answers. For example, I observed Mary model finding the main idea with one group of students. The activity involved selecting the best choice for the main idea of the passage. When a student responded with a detail rather than the main idea, Mary picked out all the details and underlined the main idea in the passage, telling the students that the main idea was usually stated in the passage.

Review of previously taught strategy. Similar to activities in Martin's and in Mary's classes, Andrea utilized worksheets that contained expository passages. Although the focus of the activity was reading fluency building (students read the passages repeatedly with a partner or with a tape) and vocabulary development (students completed a form with vocabulary activities), students answered several questions that directly related to comprehension of the passage. Further, my observation of Andrea's teaching her students how to complete the worksheet corroborated the following description of her previous reading strategy instruction:

> We number paragraphs. We take a close look at the title. We take a look at what's going on. We designate whether it's about. . . we find the subject. We've learned how to find the subject by skimming or looking for the words or phrases most often repeated. They've learned to do that and they don't have to circle any more to find the subject. When they find the subject, they determine whether the subject is a person, place, animal-thing or object-thing so they can orient their brain. Then we go in and we read it paragraph by paragraph and we label the facts. What is a fact, first of all? Second of all, what question is that fact answering for us? If it is about an animal, is it answering what the animal eats, what the animal looks like?

> Those kinds of things. Then we label it, we put it on a fact organizer. Then, we can write papers. And we have written beautiful papers from that [AJ/I-1: 61].

I observed Andrea preparing the whole class to use the worksheet. Andrea passed out a Read Naturally passage to each of the students and moved to the overhead projector. "Let's do a practice run." She asked students to look at the picture and tell her who the passage was about. The students provided various answers. "Harriet Tubman." "Is Harriet Tubman alive? Think for a second and tell me something intelligent that you know about Harriet Tubman." The students told what they knew, and some scanned the passage to find information. "After you read the story, you'll know whether what you know is a fact or an opinion." The students put the title in a blank on the worksheet. Another student told the title as Andrea wrote on the transparency. "Is Harriet Tubman a real person?" The students responded, "biography." Students busily fill in the blank on their sheets.

In another example of corroborating evidence of previous strategy instruction, I observed Andrea explaining the worksheet to a student at the end of a fluency coaching session. She told him to find and copy the title, read the story three times and do the vocabulary words, answer the questions, count the paragraphs, and number the paragraphs.

Comprehension strategy instruction. Unlike my observations of the other teachers, I saw Sallie use comprehension strategies with her students before, during, and after reading. In her interview, she stated that the focus of her instruction was summarization. Throughout my observations of her class I saw her use the "five WH questions." She described the procedures she used to help students get the main ideas from expository and narrative passages:

> 'For ten minutes I just want you to read, and after you read, tell me anything that you've been able to pull out from your reading.' And I focus on the Who, What,

> Where, When, Why, you know. But they struggle with that, just to get the basic information out of the reading. And so I give tokens or anything I can think of for any intelligent answer, just that shows me that they are actually going through the passage and pulling out some bigger chunks of information . . . but it has been daunting to them [ST/I-1: 206].

Sallie activated or built her students' prior knowledge before reading in several ways. I observed her introducing a passage with a discussion of things students knew about a topic, by having students write about a related experience, and by having students write a summary of previously read information. Prior to giving students a passage titled, "The Gunfight at the OK Corral," Sallie introduced the topic with a discussion of westerns. "Quickly freeze. Put this [workbook activity] away real quick. We are going to go into This Day in History. Has anybody ever heard of Doc Holliday? Has anybody ever watched an old western movie?" She and the students discussed things that they had seen and learned about the old west from movies they had seen.

Sallie also used what she called "Quick Writing" to introduce topics and activate prior knowledge and to summarize information. Before reading Gary Soto's *The Jacket*, she used the following writing activity: "Warm-up: Write about a time when you had to wear a piece of clothing that someone else picked out or that you thought was uncomfortable or ugly." At the beginning of the second day of reading *The Jacket*, Sallie instructed students to write what they remembered of the previous lesson during the warm-up Quick Writing activity.

In addition to activating prior knowledge, Sallie asked students to preview the passage and to try to pick out important information. Before reading a passage as a group, she told students to "preview skim and scan" to get an idea of what they were reading and to try to answer some of the questions that accompanied the passage. She drew their attention to the "5 WHs" wall chart. After students previewed independently, Sallie spent about six minutes discussing with the students the answers to the Who, What, Where,

When, and Why questions. She ended the preview by writing critical vocabulary and character names on the board and having students read through the list.

Another strategy that I observed Sallie use was summarizing. Sallie used summarizing before, during, and after reading. "We are going to begin the story. Kick your brains in gear and make sure that you think about what happens in the story. Can somebody give me a real short summary of what happened in the story yesterday?" [ST/D2: 107]. During reading, Sallie stopped periodically to ask, "what just happened in the last paragraph?" and "in your own words, can you tell me what the passage just said?" Additionally, Sallie's description of the graphic organizer she called an *information web* emphasized the after reading strategy of summarizing to help student organize the information they gained from the passages:

> This week, we have been doing "This Day in History." And so we have been reading and they do the comprehension questions. . . and they have been doing Information Mapping. Just the who, what, where, when, but they have to map it themselves. We do guided practice first, and then they with a partner have to come up with the next one. . . We did Rosa Parks: The Bus Boycott. We read it together, discussed it, and we did this together, Information Mapping, or Information Web. But it is again, extracting the main concept. [ST/I-2: 13].

After reading a passage on the Bermuda Triangle and leading a discussion, Sallie helped the students summarize what they had learned from reading. "We are going to take seven minutes. Do you remember yesterday what we did with the information? Right, we put it in an Information Web." Sallie asked the students to help her draw the Information Web on the chalkboard. "First of all, why are we doing this?" The students responded, "to get the information." "So what do we ask?" Sallie drew the map on the board as the students provided responses. The Web consisted of six boxes connected by lines. She placed the title of the story in a central box and the Who, What, Where, When, Why questions in each of five surrounding boxes. Students copied the web in their

journals. Sallie allowed the students to work with a partner to complete the web. Afterwards, she conducted a whole class review in which students provided answers to put in the boxes on the chalkboard.

Finally, I observed Sallie cue students to use two strategies when they experienced difficulties in understanding what they were reading: (a) reread and (b) visualize (i.e., "make a movie in your head"). Although I did not observe instruction in the strategies, she reviewed with her students when to use them. On one occasion, Sallie asked students to summarize a portion of a passage they had just read, "What did we just read about?" When no students could provide an answer, Sallie asked, "What do you have to do? Read it over." In another example, Sallie asked a student to describe the action in the story the group was reading. When the student hesitated, Sallie told her to "make a movie" in her mind while they were reading so that she could answer the questions. Further, when Sallie paired the students to discuss and complete the Information Web, I observed the following dialogue in which Sallie reviewed procedures students should use to help them comprehend what they were reading:

> Sallie: When you are reading, what should your mind be doing?
>
> Ss: Thinking
>
> Sallie: Thinking and focusing
>
> Ss: Processing
>
> Sallie: Making a movie in your mind.
>
> Sallie: With your partner (she writes on board)
>
> Sallie: If both of you read the paragraph and do not know what you have read about, what do you do?
>
> Ss: Reread it [ST/D8: 162].

These examples provide evidence of previous instruction in the use of the two repair and comprehension strategies: rereading to clear up misconceptions, and visualizing or making a movie as they read to help students understand.

To summarize, I observed comprehension assessment that consisted of the teachers asking literal-level questions during group reading and questions found on worksheets, and I observed comprehension strategy instruction. Assessment predominated in the classrooms of two teachers. I observed one teacher review previously taught comprehension strategies. However, one teacher consistently used strategies to help students gain meaning from text before, during, and after reading and to help students repairs breaks in comprehension.

Reading Comprehension: Instructional Components

The following section will describe instructional components that teachers utilized during comprehension instruction. Components include grouping, advance organization, practice, feedback, and control of task complexity.

Grouping

The teachers conducted comprehension activities (assessment and instruction) in five formats: (a) independent seatwork, (b) whole class, (c) small homogeneous groups, (d) one-on-one instruction with the teacher, and (e) student pairs. Students completed worksheets independently and checked answers in whole class and in small groups with the teacher. Andrea and Sallie primarily conducted comprehension instruction with the whole class. In addition to whole class instruction, Andrea reviewed the worksheet with an individual student following a one-on-one fluency coaching session. I observed the only example across the entire study of small-interactive groups in Sallie's classroom.

Sallie instructed students to work in pairs to discuss and complete the Information Web graphic organizer.

Advance Organization

I observed the use of advance organization or preparing students to read and understand texts in Sallie's classroom. As described earlier, Sallie used several techniques to activate prior knowledge including discussion, previewing a passage by skimming, and summarizing previously introduced information.

Explicit Practice

I observed instances of guided and independent practice of comprehension activities in Andrea's and in Sallie's classrooms and independent practice in Martin's and in Mary's classrooms. Andrea briefly guided her students through the comprehension portion of the worksheet and provided five days in which students utilized similar worksheets independently. Sallie guided students through various before, during, and after reading strategies including the use of a graphic organizer for summarization and then provided independent practice with worksheets the students took home to complete. Martin and Mary utilized worksheets that were independently completed to practice reading comprehension.

Corrective Feedback

The teachers used two types of feedback. Consistent with instructions in the Corrective Reading teacher manual, Martin indicated to students when they had answered a comprehension question correctly or incorrectly. He kept a tally sheet and gave the students a point when they answered correctly. When the response was incorrect, he gave himself a point. Sallie and Mary provided another type of feedback. When students gave incorrect responses to comprehension questions, they gave hints as to where the

information might be found in the passage and reminding students to reread to find the answer.

Control of Task Complexity

Sallie and Mary modeled the use of comprehension strategies with their students to control complexity of comprehension instruction. I observed one instance in which Sallie modeled the use of comprehension strategies with think-aloud. Similarly, Mary modeled finding the main idea during a homework checking session.

Sallie modeled using information from a story she and the students had read previously to help her understand a new story. The first story had a surprise change of events. Sallie read the new story and made a reference to the earlier story. "It sounds like. . . the story has changed channels." She read further from the story on the overhead transparency and drew an arrow from one paragraph to another spot in the passage. She told the students that now she "understands what is happening in the story" whereas before she didn't "understand what they were doing."

Mary helped students determine the main idea of a passage by modeling how to pick out details and underlining the main idea. Mary used questions to guide her small group of students to locate answers in the passage. She underlined words and told them "this is a big clue."

Summary of Reading Comprehension

Three of the teachers stated in their initial interviews that reading comprehension was a high priority in their classrooms. My observations proved consistent with the teachers' descriptions of their instructional activities. Students spent most of the time allocated to reading comprehension instruction completing worksheets independently. However, assessment activities rather than instruction predominated in most of the

classrooms. Only one teacher consistently used reading comprehension strategies with her students to help them understand and recall text. Sallie used advance organization to activate background knowledge before reading and summarization during and after reading. Mary and Sallie provided the examples of instruction in repair strategies for students to use to help monitor comprehension.

Grouping practices were also consistent with the teachers' descriptions and with the groupings I observed the teachers use for other reading content. Grouping formats included whole class comprehension assessment that was conducted during story reading and independent seatwork. Whole class and small groups were used for worksheet checking. Additionally, Sallie conducted comprehension instruction in a whole class format.

EMERGING THEMES

This study examined the reading instructional practices of four special education resource room teachers in light of evidence based reading interventions and instructional components for adolescents with high-incidence disabilities. Specifically, I observed the teachers' reading instruction to determine if they implemented evidence based interventions for decoding, fluency building, vocabulary development, and reading comprehension and if they utilized components of instruction that have been found to improve learning such as advance organization, explicit practice with corrective feedback, control of task complexity, and small interactive groups, Using cross-case analysis procedures that included three interactive and cyclical flows of data, several overarching themes emerged. To verify the conclusions I drew from the analysis, I returned to the data to review and confirm the themes. In this section, I will provide confirming evidence for each theme.

Theme 1: Evidence based reading interventions for decoding and fluency building instruction were more widely implemented than for vocabulary and reading comprehension instruction.

The teachers observed in this study provided decoding and reading fluency instruction that was consistent with interventions that are known to be effective for middle school students with high-incidence disabilities who struggle with reading. Vocabulary interventions were limited to verbal association routines. Only one teacher used reading comprehension instruction that matched interventions that are known to be effective.

Martin and Sallie used an evidence based direct-instruction approach for decoding instruction and Andrea used an evidence based cognitive strategy for decoding multisyllable words. Although the percent of time spent in decoding instruction was less in Mary's class than in any of the other classrooms (approximate 10% compared to average of 25% in other classrooms), Mary utilized explicit decoding instruction that included teacher modeling and guided practice with corrective feedback.

Additionally, Andrea, Sallie, Martin, and Mary utilized the strategy of repeated reading to build fluent reading of sight words and connected text. Again, the percent of time Mary spent in fluency instruction for her students was considerably less than that of the other teachers (i.e., less than 1% of instructional time compared to 36% in Andrea's class). However, I observed a single instance in which Mary utilized repeated reading of sight words to improve fluency. Thus, evidence based decoding and fluency interventions influenced the practices of teachers in all four classrooms.

However, unlike decoding and reading fluency, the vocabulary and reading comprehension instruction I observed in most of the teachers' classrooms demonstrated only limited influence of evidence based reading interventions. Mary and Martin utilized worksheets for vocabulary and for reading comprehension instruction. Although Andrea,

Sallie, and Martin provided verbal association level routines that included teacher-generated explanations and definitions of vocabulary for improving comprehension of passages during reading instruction, none of these teachers provided vocabulary instruction targeting deeper processing such as cognitive vocabulary strategies (e.g., semantic mapping), or memory strategies that have been found to enhance long term learning. Further, I did not observe consistent vocabulary instruction in any of the classrooms that included before, during, and after reading strategies to help students understand and recall vocabulary.

Andrea described reading comprehension instruction that matched evidence based practices. Additionally, Sallie used reading comprehension instruction that exhibited the influence of what is known to be effective instruction including strategies conducted before, during, and after reading that included self-monitoring or directed response questioning. In Martin's and in Mary's classrooms, comprehension activities reflected tradition worksheet "self-instruction" methods in which students read passages independently and answered literal-level comprehension questions. Finally, Sallie, Martin, and Mary asked literal-level questions during group reading to assess comprehension.

Thus, despite the implementation of evidence based decoding and fluency interventions, practices that have been shown in the literature to improve vocabulary and reading comprehension for adolescents with high-incidence disabilities were not used consistently across the four teachers. This demonstrates the varied influence that evidence based reading interventions have had on reading instructional practices of middle school resource room teachers.

Theme 2: Teachers provided practice with corrective feedback.

All four of the teachers provided explicit practice that included corrective feedback during decoding and fluency instruction. Similar to the implementation of evidence based reading interventions, their utilization of these two instructional components was inconsistent during vocabulary and reading comprehension instruction.

I observed consistent use of practice of decoding isolated words in lists and decoding connected texts. Martin and Sallie used the Corrective Reading program for decoding instruction with daily massed practice and distributed practice in which individual words were reviewed across lessons with word supply feedback for error correction. Andrea also provided guided practice with corrective feedback and independent practice in the use of the SPLIT strategy for decoding multisyllable words. Students in Mary's class practiced decoding isolated words using a computer program.

All of the teachers provided practice in decoding words in connected texts. Martin, Sallie, and Mary used group reading in which students read in round-robin fashion. The teachers used word supply feedback to correct word-reading errors. Further all of the teachers provided independent practice in reading connected text during class in the form of worksheets.

Similar to decoding practice, most of the teachers provided practice in fluent reading of sight words and of connected text. I observed fluency building in Martin's, Sallie's, and Andrea's classes. The teachers guided students to read lists of words repeatedly until the words were read by the group and by individuals accurately. Martin and Sallie used auditory devices to increase reading pace. Further, Martin and Sallie used Individual Reading Checkouts from their Corrective Reading lessons to build connected text fluency. Sallie and Andrea also coached their students in one-on-one fluency

building sessions. I observed a single instance of practice with feedback to build fluency in Mary's class.

Most of the teachers in this study used practice with feedback to improve decoding and reading fluency for their students. However, I did not observe consistent practice or provision of feedback across the teachers for vocabulary and reading comprehension instruction. Sallie and Andrea provided practice with feedback using flashcards with previously introduced vocabulary. Sallie and Andrea also provided guided and independent practice of reading comprehension strategies. However, Mary and Martin used worksheets consistently to assess comprehension and for students to practice reading and answering low-level questions independently. Thus, the teachers used two instructional components that have been shown to improve learning (practice and corrective feedback) for decoding and fluency instruction.

Theme 3: The teachers used alternative grouping formats.

Alternative grouping formats include the use of small groups, pairs, or multiple grouping formats for instruction as opposed to instruction of the whole class using the same materials at the same time. Studies have shown that the use of alternative grouping formats improves learning for students with high-incidence disabilities. The majority of instructional time was divided between whole group and independent seatwork. For example, Martin, Sallie, and Andrea provided whole group instruction for decoding and sight word fluency instruction. However, two teachers also used alternative grouping formats for fluency instruction (pairs), and one teacher consistently used small homogeneous groups for instruction. Martin and Sallie followed the recommended practice of pairing students for connected text fluency practice using the Corrective Reading Individual Checkouts. Mary worked with small groups of students for worksheet checking and for decoding instruction most of the days I observed in her classroom.

Although Andrea and Sallie met one-on-one with students for connected text fluency progress monitoring and assessment, students who were not involved in small groups or working one-on-one with the teacher spend the majority of their class time working independently at their seats. In their classes, most of the students' time was spent in two grouping formats: whole class and independent seatwork. Thus, the teachers used traditional whole class and independent seatwork formats for much of their instruction. However, I observed the use of alternative grouping formats in each of the teacher's classes.

Theme 4: Teachers were consistent in their use of advance organization.

The teachers in this study consistently used advance organization. However, the utilization of the time prior to instruction varied across reading content areas and across teachers. All of the teachers used the time prior to decoding instruction to set the purpose for the lesson. Additionally, Sallie and Andrea used the time prior to decoding instruction to provide guided reviews or probes for understanding of previously taught materials. Three of the teachers used the time prior to fluency instruction to state the students' fluency goals. Further, on one occasion, Andrea used the time prior to a lesson on completing the vocabulary form to set the purpose for instruction.

Because the teachers in this study primarily utilized comprehension assessment rather than comprehension instruction, the use of advance organization for reading comprehension was limited to techniques provided by Sallie and a previewing question on a worksheet used by Andrea. Sallie utilized the time prior to reading to develop background knowledge through discussions, writing activities, and guided previewing of passages with reminders to focus on summarizing questions (who, what, when, where, why, how). The worksheet that Andrea's students completed included previewing questions that have been shown to activate prior knowledge (Idol-Maestas, 1985) such as

directing students to look at the title and skim the passage to look for clues that tell what the story will be about. Andrea described instruction that she conducted prior to the beginning of my study. I observed guided and independent practice in the use of the worksheet in her classroom. Martin and Mary did not provide any form of advance organizers prior to reading comprehension activities with their students.

Advance organization has been shown to improve learning when it is included in the treatment description of interventions (Swanson, 1999). All of the teachers in this study employed advance organization to set the purpose for decoding instruction. Additionally, three teachers stated fluency goals prior to fluency building lessons. Two teachers used the time prior to reading to activate prior knowledge, and one teacher set the purpose for her vocabulary instruction prior to beginning the lesson. Thus, although their use of the time prior to instruction varied by reading content area and by teacher, the teachers in this study consistently utilized advance organization techniques that have been shown to improve learning.

SUMMARY OF FINDINGS

The purpose of this study was to describe the extent to which evidence based reading interventions and effective instructional components influenced the reading instructional practices of four middle school special education teachers. The study used interviews, observations, and document reviews to describe the teachers, their students, and their reading instruction. Four themes emerged from this study. First, results showed that the teachers utilized evidence based reading interventions for decoding and for fluency instruction but that vocabulary development and reading comprehension intervention use was limited. Across the four classrooms, time allocated to decoding interventions and practice ranged from 10% to 25% of total instructional minutes. The range of time spent in fluency practice varied to a greater extent across teachers, from 1%

to 36%. Although the extent to which decoding and fluency intervention were used varied to a significant extent across teachers, all of the teachers used decoding and fluency interventions.

However, the extent to which teachers used vocabulary and reading comprehension interventions was limited. Three of the teachers facilitated student understanding of vocabulary terms during group reading with verbal association level routines, but none of the teachers used vocabulary interventions that focused on long term vocabulary learning or developing independent word learning strategies. Students spent most of the instructional time allocated to vocabulary development and to reading comprehension instruction completing worksheets. Thus, calculating the percent of time students were specifically engaged in vocabulary or in comprehension activities was impossible due to the mix of activities on worksheets. Only two of the four teachers described comprehension strategies in their interviews, and one of these two teachers was observed conducting comprehension instruction. Overall, students spent most of their active reading time in group reading that was followed by the teacher asking low level questions or in completing low level questions on worksheets. Time allocated to vocabulary development was predominantly spent in dictionary "look-up" activities.

Three themes related to teacher utilization of effective instructional components. The teachers provided practice with corrective feedback, two instructional components that have been shown to improve learning for students with high-incidence disabilities who struggle with reading. The teachers' use of practice with feedback was less reliably associated with vocabulary and reading comprehension activities than with decoding and fluency interventions. Thus, the extent to which teachers used practice activities and provided corrective feedback was limited to decoding and fluency instruction for most of the teachers.

In addition to practice with feedback, the teachers used alternative grouping formats that included small group instruction and peer pairs. The primary grouping format in three of the classrooms was whole class instruction or independent seatwork. Students spent most of the instructional minutes in one of these two grouping formats. In one classroom, the teacher led instruction of a small group of students while other students worked independently. Students in that classroom spent most of their time engaged in independent work at their seats. Thus, while alternative grouping formats were used by all teachers, the extent to which teachers utilized formats other than whole class and independent seatwork was small.

The last theme was that the teachers consistently used advance organization to prepare their students for learning. The primary type of advance organization was purpose setting or stating goals of the lessons. Further, advance organization was used during decoding and fluency instruction rather than for vocabulary or reading comprehension instruction by most of the teachers. Only one teacher used the time prior to reading to prepare the students to understand and recall the text with activities that activated prior knowledge.

In conclusion, results of this study showed that evidence based reading interventions influenced fluency and decoding instruction and practice with corrective feedback to a greater extent than vocabulary and reading comprehension instruction or the use of alternative grouping formats and advance organization. In the next chapter, I will discuss the themes in light of what are known to be effective reading interventions and instructional components.

CHAPTER V

Discussion

Middle school special education resource room teachers may provide the last opportunity for adolescents with high-incidence disabilities who have reading goals and objectives on their IEPs to acquire the basic reading skills that they need to succeed in high-school and in adulthood. Studies have provided evidence of effective reading interventions and instructional components that lead to improved learning for middle school students with high-incidence disabilities who have reading goals and objectives on their IEPs. However, special education resource room teachers who provide reading instruction must have the knowledge and skills to implement effective interventions in ways known to improve learning. The purpose of this study was to examine the reading instructional practices of special education resource room teachers in light of what are known to be effective reading interventions and instructional components. This chapter will provide a discussion of the themes that emerged from the study, limitations of the study, and implications for practice and for future research.

THEMES

Four themes emerged from this study. The first theme emerged from findings related to evidence based reading interventions. Themes two through four emerged from findings related to effective instructional components. In this section I will discuss each theme.

Theme 1: Evidence based reading interventions for decoding and fluency building instruction were more widely implemented than for vocabulary and reading comprehension instruction.

Each of the teachers in this study utilized decoding and fluency instruction that demonstrated the influence of evidence based interventions. However, the extent to which each teacher utilized evidence based reading interventions for decoding and for fluency building varied. In contrast to decoding and fluency, three teachers implemented primarily dictionary based traditional vocabulary instruction involving worksheets rather than vocabulary interventions such as concept enhancement and mnemonic strategies that have been shown to produce long-term learning and improve comprehension. Further, comprehension assessment rather than comprehension instruction predominated in three classrooms.

Decoding

Poor decoding skills are considered the source of many reading difficulties (Adams, 1990), and a lack of basic skills including difficulty with decoding long, multisyllable words is a hallmark of middle school students with reading disabilities (Archer et al., 2003). Thus, middle school students who are reading two to five years below grade level require intensive systematic decoding instruction to provide them with the basic reading skills they will need to compete in high school and adulthood (Archer et al., 2003; Fletcher et al., 1994; Moats, 2004; Torgesen et al., 2001). Mary, Martin, Sallie, and Andrea stated that they had students in their classrooms that read two to five years below grade level. For example, in Andrea's sixth-grade resource class were two students she described as "kindergarten level kids," and students in Sallie's sixth-grade class had to be reading at third-grade level or below to be included in her "Reading Lab." Therefore, I expected to see systematic explicit decoding instruction in each of the

classrooms. However, only Sallie and Martin provided consistent systematic and explicit decoding instruction for their students. Both of these teachers utilized the SRA Corrective Reading/Decoding B program. Although Martin said the program was one in a series of programs he had used and was new for his class this year, he stated the program had been successful in other district schools, "they have done it in some other schools, and they seem to have had some success." Mary had three years' experience with SRA/Corrective Reading, and she stated that her students "seem to enjoy that they can do it relatively successfully."

However, Andrea did not consistently provide the systematic decoding instruction that has been shown to develop decoding skills for her lowest students (Archer et al., 2003; Carnine et al., 1997; Fletcher et al., 1994; Kameenui & Carnine, 1998; Moats, 2004; Torgesen et al., 2001). Andrea stated that the primary decoding difficulty for her students was multisyllable word decoding, and decoding instruction was limited to explicit instruction in using a multisyllable word decoding strategy. She stated that though one of her students was "very low in his skills," she would "address his needs as they come up" and that two "kindergarten level" students "are just going to have to bring up the rear" with decoding while she worked on comprehension activities that might be beyond their reading level. She planned to have them work on "computer programs and get tutored that way." but her computers were not working at the time of my observations. I did observe incidental instruction in letter-sound correspondences with individual students during her fluency coaching sessions.

Although Mary grouped students for instruction based on individual needs, Mary's lessons did not provide daily systematic decoding instruction for students who read three or more years below grade level. Instead, she said, "the decoding will have to come, just kind of individually." Mary had been trained in SRA Corrective Reading,

which would have provided systematic and explicit decoding instruction for her students. However, she said she had "not got a chance to use" it. Instead, Mary relied on incidental decoding instruction and a computer program designed to practice decoding skills (i.e., Lexia SOS). Students worked on individualized levels at the computers. However, the use of the computer program was inconsistent over the course of my observations rather than the three twenty-minute sessions that Mary stated were the recommended practice. Studies conducted with the Lexia SOS program are primarily case study and testimonial and have not included adolescents with identified learning disabilities. Further, according to the program materials, the Lexia SOS program is designed to *reinforce* and *practice* word attack skills (Lexia SOS, 1997-2005). Mary's reliance on Lexia SOS for practice might be justified. However, the low performance of her students in reading warranted systematic and intensive decoding instruction utilizing evidence based interventions.

All of the teachers described intensive and systematic decoding interventions for which they had been trained (e.g., SRA Corrective Reading). However, only two teachers provided interventions on a consistent basis. According to the teachers, students in each of the classes read significantly below grade level, indicating a critical need for basic skills instruction including decoding. Despite the knowledge of reading interventions and their knowledge of student characteristics, half of the teachers in this study failed to provide intensive and systematic decoding instruction that has been shown to be effective for students with high-incidence disabilities who have reading goals and objectives on their IEPs. However, despite the inconsistencies, these results are encouraging when compared to previous observational studies of resource room reading instruction. In her study of high school resource rooms, Meents (1990) found no basic skills instruction despite low reading performance of the students. Similarly, Vaughn and her colleagues (1998) found little evidence of basic skills instruction in their observations of elementary

resource rooms. Even in a two-year follow up study in which teachers described the needs of their students for phonics instruction (Moody et al., 2000), little was observed. The teachers knew the value of decoding instruction for their students who struggled with reading. Nevertheless, evidence based interventions had not influenced their practice to a great extent. In contrast, it is clear that evidence based decoding interventions have influenced the reading instructional practices of the teachers in the present study.

Fluency

Slow and labored reading (i.e., dysfluent) interferes with middle school students' ability to comprehend complex text (Archer et al., 2003). According to their teachers, many of the students in this study read slowly and inaccurately. Fluency improvement was a consistently expressed goal of the teachers. Sallie stated that her "biggest goal is to improve fluency." My observations of the students proved consistent with the teachers' descriptions of their students' dysfluent reading. Because the teachers accurately described their students' characteristics, stated that improving fluency was an instructional goal, and described repeated reading as an intervention they used, I expected to see high-utilization of evidence based fluency interventions in the classrooms. Three of the teachers implemented a repeated reading intervention (Samuels, 1979) for building connected text fluency. Martin and Sallie conducted Individual Reading Checkouts according to the Corrective Reading procedures. In addition to Individual Reading Checkouts, Sallie conducted one-on-one fluency coaching sessions with each of her students. Likewise, Andrea conducted fluency coaching sessions with each of her students.

However, several issues should be considered in the teachers' use of fluency building interventions. In a meta-analysis of repeated reading studies, Therrien (2004) found two features of the intervention important to improvements in fluent reading. First,

studies in which the student read to an adult were significantly more effective than those in which students read to each other (peer pairs). Thus, Andrea's and Sallie's use of individual fluency coaching sessions in which the teachers provided specific corrective feedback as they "listened to them individually and figured out what's the next thing we need to smooth out" [AJ/I-1: 67] may have provided an effective boost to the fluency programs of these teachers even though the one-on-one sessions increased the amount of time students spent completing worksheets independently. Second, studies in which corrective feedback was provided produced greater results than those with no corrective feedback. Even though the instructions include student-provided feedback, I observed little corrective feedback being provided by students during the Corrective Reading Individual Reading Checkouts.

A third consideration relates to the consistent use (duration) of the intervention. Across the studies Therrien analyzed, the mean duration in of the repeated reading intervention was 45 days. Similarly, in a study in which repeated reading was used to improve fluency, three groups of students received the intervention five days a week for periods from six to 25 months. In a contrasting study in which a repeated reading intervention was added to the Corrective Reading Individual Reading Checkouts, the number of days of intervention was only 13 (Steventon & Fredrick, 2003). The students in Steventon and Fredrick's study made fluency gains, but the authors indicated that the short duration of the study (due in part to absenteeism) affected results. In the present study, I observed Martin use the Individual Reading Checkouts (repeated reading) twice in four weeks. Sallie used the Individual Reading Checkout once and coached each student individually once a week, and Andrea coached each student once in four weeks. Thus, the teachers' limited use of repeated reading over the course of my observations might lessen fluency gains for their students. Significantly, when asked if he still had

students who struggled with fluency issues despite his use of SRA/Corrective Reading, Martin stated, "even though we are working through that, they still have difficulty" [MB/I-1: 223].

In addition to connected-text fluency building, Martin, Sallie, Mary, and Andrea implemented repeated reading of sight words. Sallie and Martin implemented repeated reading with sight words more consistently than with connected text. In contrast, Mary and Andrea utilized sight word repeated reading in one lesson. Consistent use of a repeated reading intervention with corrective feedback are the critical features that have been linked to fluency improvements (Mercer et al., 2000; Steventon & Fredrick, 2003; Therrien, 2004).

Although the teachers in this study implemented repeated reading to improve fluency of connected text and of sight words, the variation across teachers and between connected text and sight words may impact improvements in fluency for their students. The teachers noted their students' needs for repetition in order to learn (i.e., sufficient practice). For example, Martin stated "some of the students took 10, 11, 12 times of repeating the same thing" [MB/I-1: 137]. However, my observations demonstrated low utilization of systematic fluency-building interventions. Therefore, teachers need to know the importance of consistent use to intervention effectiveness. Additionally, the limited amount of time that Sallie and Martin spent in Individual Reading Checkouts might be more effectively allocated to one-on-one fluency coaching with specific corrective feedback. None of the previous observational studies of resource room reading instruction provided any evidence of the use of evidence based fluency interventions for students who read slowly and inaccurately. Therefore, the finding that teachers in the present study used fluency interventions even inconsistently was not necessarily disappointing. Nor was it surprising when compared to recent survey results which found

middle school special education teachers utilized repeated readings for fluency building only occasionally (Arthaud, Vasa, & Steckelberg, 2000). However, the results demonstrate the continuing need for resource room teachers to be provided the most current knowledge of effective reading instruction.

Vocabulary Development

Because there is a reciprocal relationship between vocabulary knowledge and reading comprehension (Baumann & Kameenui, 1991; Bos & Anders, 1990; Gersten et al., 2001; Stanovich, 1986), students who have experienced significant reading difficulties that result in poor vocabularies benefit from explicit instruction in words they will encounter frequently and that are critical for conceptual understanding of complex middle school texts (Baker et al., 1995b; D. P. Bryant et al., 2003; Jitendra et al., 2004). Effective interventions include the use of memory devices such as mnemonics for association level learning (e.g., Mastropieri et al., 1985) and cognitive strategies using graphic depictions such as semantic maps (e.g., Bos & Anders, 1990) that can be used before, during, and after reading to develop deeper word understanding that leads to improved comprehension (D. P. Bryant et al., 2003; Jitendra et al., 2004). All of the teachers described their students' vocabularies as poor and that improving their student's vocabulary was one of their instructional goals. For example, Andrea described vocabulary as "a huge issue for our population." She stated that one particular student had "very low vocabulary," and that anything above second or third grade vocabulary level "has to be explained to him." Confirming teacher statements, I observed students who were unable to generate definitions for words from reading level passages (e.g., Corrective Reading passages and fourth grade level worksheet passages). Further, I observed three teachers utilize verbal association level routines to explain vocabulary to their students. However, none of the teachers described mnemonic or cognitive

vocabulary interventions in their interviews. Therefore, I was not surprised by the lack of implementation of what has been shown to be effective vocabulary instruction for middle school students who have high-incidence disabilities with reading goals and objectives on their IEPs. Instead of cognitive or mnemonic strategies, the teachers in this study utilized traditional dictionary-based instruction and verbal association level routines.

Mary, Martin, and Andrea relied on traditional approaches to word learning such as the use of worksheets that emphasized looking up words in dictionaries. All three of the teachers assigned worksheets for students to complete during independent seatwork. Martin provided an example of his approach to self-instruction vocabulary worksheets that I observed in his classroom and in Mary's classroom in this description of traditional dictionary based instruction.

> At the very beginning of the year, the students are taught how to use the dictionary to be able to look up any of the vocabulary terms that they don't understand. We also have spell checkers. They look up that information. We also talk about vocabulary terms. We have talked about some of those in class. So, if the students have any questions in reference to those vocabulary terms, we can go over those [MB/I-2: 36].

Traditional approaches are less likely to be effective with students with high-incidence disabilities who do not read widely and develop vocabulary and concept understanding that lead to independent word learning strategies such as learning from context clues (D. P. Bryant et al., 2003). Further, instruction that emphasizes independent seatwork and relies on "looking up" strategies has not been shown to be effective with students with high-incidence disabilities (Bos, Anders, Filip, & Jaffe, 1985) when compared to interactive and mnemonic strategies (D. P. Bryant et al., 2003; Jitendra et al., 2004).

Interestingly, Andrea's worksheet included instructions for the students to "draw a picture" and write "reminder" words that are reminiscent of the keyword or mnemonic

strategies. *Mnemonics* or *keywords* ("verbal link") are defined as "similar sounding familiar words to associate with the unknown vocabulary word" and the *picture* ("imagery link") is defined as a "picture of the definition of the unknown word interacting with a picture of the keyword" (Jitendra et al., 2004, p. 311) Andrea's guided practice of use of the vocabulary worksheet provided neither a verbal nor an imagery link.

Sallie and Andrea described flash card practice and vocabulary games that would have provided their students the type of repetition necessary to help them remember vocabulary. Additionally, the teachers described the need to find a "hook" to their student's existing knowledge. Andrea's comment provides an example of this need to have a hook to get students to benefit from vocabulary instruction.

> And we take our vocabulary out of there and we discuss it. And we have these cards and we go through them. We discuss what does amuse mean. What are words you can make from amuse? Amusing. Amusement. We talk about amusement parks to kind of give them a hook in their brain, 'cause they have all been to Six Flags . . . Everything has to be very tangible for them. I have to have a hook [AJ/I-1: 92].

However, neither teacher described systematic and explicit instruction that included interventions that have been found to improve long-term vocabulary learning or the development of independent word learning skills for students with high-incidence disabilities. I observed Sallie and Andrea provide verbal association level routines that consisted of teacher-generated concrete illustrations of vocabulary during story reading activities. Instruction at the verbal association level in which teachers supply definitions or illustrations of vocabulary terms is appropriate for words that do not occur frequently (Baker, Simmons, & Kameenui, 1995a). However, words that will be encountered often or are critical for understanding passages should be learned at a deeper level and require concept enhancement strategies such as semantic mapping that develop relationships

between words already in students' knowledge and new words (Baker et al., 1995a). Further, in order for students to gain deeper understanding of vocabulary, they must have many opportunities to use new words in speaking and in writing (Baker et al., 1995b).

The development of independent word learning strategies is critical to being able to understand and recall complex texts that are encountered in middle school and high school content area texts (D. P. Bryant et al., 2003). All of the teachers stated that their goals included exiting their students to inclusive general education settings. Disappointingly, however, none of the teachers in this study systematically implemented vocabulary interventions to increase their students' word knowledge or develop independent word-learning strategies. Therefore, it is important to know why there is an apparent mismatch between what the teachers' say students' need are ("they come in with very limited general knowledge and vocabulary") and the teachers' use of practices that have been supported in the literature as effective practices for teaching students who struggle with reading and have poor vocabularies.

One possible explanation is that these teachers may not know interventions to use to provide the type of intense vocabulary instruction that leads to gains in word knowledge. All of the teachers stated in their interviews that they knew their students had poor vocabularies. Further, the teachers described vocabulary instruction that was consistent with my observations in their classrooms. However, none of the teachers described cognitive vocabulary strategies such as semantic mapping or memory strategies such as keyword mnemonics that have been found to be effective vocabulary interventions for adolescents who have high-incidence disabilities. This lack of preparation to teach effective vocabulary interventions matches data collected during their interviews in which they described their preparation for teaching. Few of the professional development trainings listed include vocabulary instruction. Thus, teachers

need to be trained in effective interventions and strategies for building their students vocabularies.

Comprehension

Because students with high incidence disabilities have been characterized as inefficient comprehension strategy users (Deshler et al., 1996), they need to be provided instruction that focuses on when and how to use comprehension strategies. Effective reading comprehension interventions include explicit instruction and practice of strategies that help students activate prior knowledge, summarize during and after reading, and generate questions to deepen understanding (Gersten et al., 2001). Further, in order to understand middle school texts and to pass state-mandated reading tests, students must be able to infer meanings based on prior knowledge and be able to summarize passages (D. P. Bryant et al., 2000). Most of the teachers in this study stated that their students were "daunted" and were "freaked-out" by the comprehension passages on state mandated assessments (SDAA) that were on or near their reading level as mandated by their IEPs. Further, the teachers concurred that their goal for students was exiting from the resource room, which meant that the students had to be able to read and understand grade level literature and content area texts and be able to take grade-level state mandated reading tests (TAKS). Despite the apparent need for effective reading comprehension interventions including comprehension strategy instruction that their students will need to use to understand middle school texts and master grade-level reading assessments, only Sallie and Andrea described reading comprehension strategy instruction in their interviews. In contrast, Martin and Mary described worksheets that assessed comprehension rather than active teacher-directed comprehension instruction. My observations of reading instruction in the classrooms confirmed the teachers' descriptions. Sallie provided instruction in the use of a summarization strategy. Andrea

assigned worksheets that utilized the previously taught strategy. Students in Martin's and in Mary's classrooms completed worksheets independently and checked them together as a whole class activity or in small teacher-led groups. Thus, in examining the data from the present study, three issues are important to consider: (a) the teachers limited use of reading comprehension interventions, (b) the focus on comprehension assessment rather than comprehension instruction, and (c) the apparent mismatch between stated teacher goals (i.e., exit from resource and survival in general education) and the comprehension instruction observed in most of the classrooms.

Sallie defined a strategy as "a tool that the kids can use to do whatever skill that they are working towards" [ST/I-2: 183]. I observed Sallie use a summarization strategy that included a graphic organizer that she described as a tool to help her students get the basic information from text, "when you read to even know what you are reading about" [ST/I-2: 189]. Although studies have demonstrated the effectiveness of utilizing a direct instruction approach to teaching summarization including main idea selection and generation to middle school students with high-incidence disabilities (e.g., Jitendra et al., 2000), I observed no instances of instruction in or of guided or independent practice in writing summary statements or selecting or producing main idea statements.

Similarly, Andrea described a comprehension strategy that targeted the need for her students to get basic information from text. "Before we went to the fluency section, we did the Project Read with expository text. And they did do the fact organizing and getting at the main idea, and they were able to write brilliant summaries from that. So that really was a comprehension strategy that they used" [AJ/I-2: 109]. I did not observe comprehension strategy instruction in her class. However, the worksheet she utilized for practice in comprehension included a previewing question described by Andrea as part of the Project Read materials. Further, I observed Andrea do a "practice run" to review

using the worksheet. She started by asking the students to "look at the picture" and "tell who the passage is about" [AJ/D4: 35]. Thus, only two teachers described the use of practices that are supported in the literature as effective for teaching students who struggle with reading comprehension.

In contrast to the use of interventions by Sallie and Andrea, Martin and Mary described worksheets containing literal level questions to assess comprehension as their primary method of meeting students' comprehension needs. Martin described the questions as those that "they need to find [the answer] within the paragraph and then answer those questions for comprehension" [MB/I-2: 9]. Similarly, Mary's students completed worksheets containing low-level comprehension questions. Students completed worksheets independently in both of the classes. In addition to worksheets, Martin and Sallie asked similarly low-level questions from the SRA/Corrective Reading materials during group reading to assess student understanding of the passages. Thus, for all of the teachers, much of the time allocated to reading comprehension was spent in assessment using literal-level questions on worksheets and in teacher-led questioning.

Despite considerable evidence of the effectiveness of comprehension instruction for typically achieving students (e.g., Block & Pressley, 2002) and for students who have reading disabilities (e.g., Gersten et al., 2001), observational studies have documented the long history of comprehension assessment rather than comprehension instruction (e.g., Durkin, 1979; Gelzheiser & Meyers, 1991; Moody et al., 2000). Thus, the present study extended the information gained from previous observational studies of resource rooms and confirmed low utilization of evidence based reading comprehension interventions with middle school students who have high-incidence disabilities and struggle with reading. Similar to the elementary resource room teachers in a study by Vaughn and her colleagues (1998), the teachers in the present study used round-robin group story reading

followed by the teacher asking factual and literal questions. Also consistent with results from a time-sampling analysis of resource room instruction in which teachers provided only a small percentage of time in teacher-led comprehension instruction (Gelzheiser & Meyers, 1991), I observed little teacher-led instruction in comprehension in three of the classrooms. Instead, the teachers relied on "self-instruction" worksheet activities (Rosenshine & Stevens, 1984) and homework checking activities.

A third issue of importance relates to state-mandated reading tests. In examining the reading portion of the state mandated test similar to the ones that students in these classrooms have taken (SDAA Released Tests/available on-line at the Texas Education Agency website), I found questions resembling worksheet questions used by Martin and Mary in which the student was asked to select the main idea from a paragraph or passage. However, the TAKS reading test taken by most of the students in inclusive general education classrooms requires students to be able to summarize. Only in Sallie's classroom did students practice pulling information from passages to form summaries. In addition to direct instruction in summarizing, Sallie frequently asked students to summarize what had been read previously: "Kick your brains in gear and make sure that you think about what happens in the story. Can somebody give me a real short summary of what happened in the story yesterday?" [ST/D2: 107]. In contrast, I observed no direct comprehension instruction involving summarizing in Martin's or in Mary's classrooms and only the promise of instruction in Andrea's room. The teachers prepared students to meet the stated goal of passing the SDAA on their reading level. However, students in these classrooms may not be prepared to succeed on state mandated reading tests if they exit resource room reading as their teachers hope they will. Consequently, there is an apparent mismatch between the stated goals of teachers and the type of instruction provided in most of the classrooms. Unlike the potential explanation for the mismatch

between what teachers say about student needs and the vocabulary practices they used (e.g., insufficient preservice or inservice preparation), all of the teachers listed preparation they had had for teaching that included practices that are supported in the literature as effective for teaching students who struggle with reading comprehension. Therefore, understanding why teachers do not employ effective comprehension strategies is an important question.

In summary, despite teacher variations, students in the present study spent most of their time actively engaged in oral reading activities (group reading, oral decoding and fluency practice, and worksheet checking) and in silent reading activities (worksheet completion and silent repeated reading). This contrasts with the percentage of active reading time described in previous observational studies (Haynes & Jenkins, 1986; Leinhardt, Zigmond, & Cooley, 1981; Vaughn et al., 2002; Zigmond & Baker, 1994). Unlike instruction in previous studies (Moody et al., 2000; Vaughn et al., 2002; Vaughn et al., 1998), most of the teachers in the present study regularly utilized evidence based interventions for decoding. However, instruction may not have sufficiently targeted needs of the lowest students.

The utilization of fluency interventions has not been examined in previous observational studies. Despite low utilization of repeated reading across the classrooms, it is heartening that teachers knew an effective intervention for fluency development and to document the use of effective fluency interventions by three of the teachers in this study. Similarly, vocabulary instruction has not been examined in previous observational studies. However, in contrast to their use of effective fluency interventions, the teachers in this study provided little systematic and explicit vocabulary instruction utilizing practices that are supported in the literature as effective practices for developing word knowledge of adolescents with high-incidence disabilities.

Comprehension instruction was examined in several previous observational studies (e.g., Gelzheiser & Meyers, 1991; Vaughn et al., 1998). Similar to earlier studies, however, most of the teachers in the present study devoted little time to active teacher-led instruction using comprehension strategy instruction for most of the time that was allocated to reading comprehension. Instead, comprehension assessment that utilized group reading followed by low-level questioning rather than comprehension instruction predominated (Gelzheiser & Meyers, 1991; Vaughn et al., 2002; Vaughn et al., 1998). Further, the teachers prepared students for low-level questions on reading level state assessments but provided limited instruction targeting tests students will take if they exit the resource room for general education inclusive classrooms. Encouragingly, one teacher described the evidence based comprehension intervention she had used with her students prior to the beginning of my observations. Additionally, another teacher focused comprehension instruction on summarization and used a graphic organizer. Thus, while reading comprehension instruction remains a "neglected element of reading instruction in some resource rooms" (Vaughn et al., 2002), this study confirms the importance the teachers placed on comprehension instruction that contrasts with the limited impact of evidence based practices. The next three themes emerged from findings related to the teachers' utilization of effective instructional components.

Theme 2: Teachers provided practice with corrective feedback.

Explicit practice was one of two instructional components that consistently produced learning effects when included in the treatment description of interventions for adolescents with high-incidence disabilities (Swanson, 1999). Swanson's definition of practice included the following features: distributed review and practice, repeated practice, sequenced reviews, daily feedback, and/or weekly reviews. Studies have shown that practice of correct responses (i.e., those the student produces correctly before or after

corrective feedback) leads to higher achievement (Rosenshine & Stevens, 1984). All four of the teachers provided explicit practice that included feedback and that matched their utilization of effective interventions. In other words, the use of what has been shown to be effective practice and feedback procedures was observed more consistently during decoding and fluency instruction than during vocabulary and reading comprehension. Therefore, by providing explicit practice for decoding and fluency with corrective feedback for errors, Sallie, Martin, Andrea, and Mary increased the likelihood that their students would improve in these reading content areas.

Earlier observational studies investigated the quality of reading instruction, which was defined as time spent in silent and oral reading (Vaughn et al., 2002). Findings revealed only a small amount of time (e.g., three to 13 minutes per day) spent in reading activities (Leinhardt et al., 1981; Ysseldyke, Thurlow, Mecklenburg, & Graden, 1984). Although the studies did not reveal the precise nature of the reading activities, time spent in oral and silent reading might be classified as *practice* according to Swanson's definition. It is encouraging to compare the small amount of time teachers provided practice of reading skills in the previous studies of resource rooms to the consistently observed practice activities in the present study.

Also encouraging is the type of feedback provided by teachers in this study. Earlier observational studies, concurred in their finding that resource room teachers spent only a small amount time providing academic feedback during reading (e.g., Haynes & Jenkins, 1986; Rieth et al., 1987). In contrast, teachers in the present study consistently provided specific corrective feedback for decoding and fluency instruction. For decoding and fluency practice, the teachers utilized word supply ("the word is. . . what word?) and drill-and-practice. For example, Andrea used drill and practice during fluency coaching. After listening to one student read, she marked his error words and calculated the words

read correctly in the one-minute timing. Then, she told the student the error words and told him to be careful with those words 'because they are traps for you.' Thus, the type of feedback provided for oral reading errors (i.e., word supply and drill and practice) matched feedback practices that correlate with improved word reading accuracy (McCoy & Pany, 1986) and improved comprehension (Pany & McCoy, 1988).

The utilization of two instructional components that have been found to improve learning for students with high-incidence disabilities was evident in the present study. The teachers consistently provided practice of decoding and used corrective feedback procedures during decoding and oral reading that have been shown to lead to improved accuracy and improved reading comprehension.

Theme 3: The teachers used alternative grouping formats.

Alternative grouping formats include the use of small groups or pairs (peer-mediated instruction) as opposed to whole class instruction (Elbaum et al., 1999). Previous observational studies of resource room reading instruction have provided evidence of the overwhelming use of two grouping formats, whole group and independent seatwork (e.g., C. W. Glaser, Rieth, Kinzer, Colburn, & Peter, 1999; Haynes & Jenkins, 1986; Vaughn et al., 1998). In a meta-analysis of grouping formats used in reading instruction for students with high-incidence disabilities, the use of alternative grouping formats produced educationally significant effect sizes (Elbaum et al., 1999). Findings showed that students who received reading instruction in alternative groupings achieved nearly half a standard deviation higher on reading outcome measures than comparison students. The teachers in the present study used whole group and independent seatwork formats, but they also utilized alternative grouping formats. Mary consistently instructed students in small homogeneous (same reading ability) groups.

Martin and Sallie used pairs for connected text fluency building. In addition, Sallie utilized pairs for reading comprehension.

Small Groups

The use of small groups (three to six students) in which the teacher modified teaching methods or materials has proven more effective than whole group instruction (Elbaum et al., 1999; Lou et al., 1996) and one-on-one instruction (Polloway, Cronin, & Patton, 1986). Mary consistently used small homogeneous (same reading level) groups of four or five students for instruction across reading content areas. In an analysis of effective grouping practices for reading instruction for students with learning disabilities, Elbaum and her colleagues (1999) found only one study in which small group instruction was contrasted with whole group instruction (Englert & Mariage, 1991). The reading strategy and not the grouping format was the focus on the study. However, Englert and Mariage attributed significant findings to the use of small interactive groups for the reading intervention. In contrast to the student-led groups in Englert and Mariage, Mary led instruction that included "verbal interaction" between Mary and the students in her groups. For example, I observed the following interaction in Mary's class with a group of three students: "xxxx reads the first sentences from the text. . . the next student has difficulty with <porpoises.> Other students try to help but Mary must provide the correct pronunciation. Two students practice this word. The next student reads and makes self-correction of pronunciation when Mary stops him. "Remember what <ea> says, or can say [MC/D4 70]. The students in this example attempted to solve the pronunciation problem, indicating engagement in the reading activity. Further, the students practiced a word that another student struggled with allowing Mary to assess their understanding and provide corrective feedback that was meaningful to each student.

Overall, the benefits of the type of small group instruction I observed in Mary's class including increased instructional time (greater opportunities for individual students to respond and receive corrective feedback) and increased student interactions (Polloway, Cronin et al., 1986). Across my observations of Mary's class, the primary alternative to small groups was independent seatwork. Independent seatwork was utilized for entire class periods. Additionally, students who were not involved in the small group in which Mary led instruction completed worksheets independently. Consequently, most students spent their time engaged in independent seatwork. Despite the fact that Mary had a paraprofessional in her classroom, I observed students waiting for individual assistance even when Mary was not conducting small group instruction. Although Mary described her plan to have the paraprofessional help her with decoding instruction, I did not observe the paraprofessional engaged in instructional activities. Thus, the small groups provided students opportunities to engage in interactions with the teacher and other students and to receive immediate corrective feedback.

Peer-Mediated Instruction

In a previous analysis of elementary resource reading instruction, teachers paired students for instruction infrequently (only one teacher) (Vaughn et al., 2002). Teachers did not use student pairs in a study of high-school resource room instruction (Rieth et al., 1987). However, peer-mediated instruction (student pairings) in which students tutor each other reciprocally has proven effective and feasible in both general and special education settings (Elbaum et al., 1999; D. Fuchs, Fuchs, Mathes, & Simmons, 1997; Mastropieri et al., 2001; Mathes & Fuchs, 1994). In peer-mediated instruction, all students in the class are paired and work simultaneously. Pairing students for reciprocal tutoring is a way to increase time-on-task, practice, response, and feedback opportunities for participating students (D. Fuchs et al., 1997; Mastropieri et al., 2001). For fluency building

interventions utilizing connected text such as repeated reading where practice is a critical component, the benefit of increased opportunities for students to respond is evident. Peer-mediated instruction for reading comprehension has produced similar academic outcomes and positive social effects (Mastropieri et al., 2001) with middle school students who have high-incidence disabilities. The use of student pairs by three of the teachers in the present study was modest in comparison with the amount of time students spent working independently or in whole group instruction. Nevertheless, this finding confirms the influence of evidence based grouping practices in these resource rooms.

Three teachers used student pairs for connected text fluency building and one teacher used pairs for reading comprehension instruction. Martin and Sallie used Individual Checkouts as part of their Corrective Reading program, and Andrea instructed students to read an assigned passage three times with a partner of their choice. Studies in which middle school students with high-incidence disabilities used the repeated reading strategy of Partner Reading (Delquadri et al., 1986) have provided evidence that students pairs can be utilized to improve reading fluency with connected text (e.g., D. P. Bryant et al., 2000).

Similar to the benefits provided by Mary's small group instruction, peer-mediated fluency instruction provided increased reading time for individual students during Individual Checkouts when compared to the round-robin group reading. Teachers in Mastropieri and colleagues' study stated that a benefit of having students work in pairs was increased reading time when compared to the group reading format they used previously in which students read individually similar to the format used by Martin (Mastropieri et al., 2001). Further, students working in pairs have higher engagement than during group reading. In Martin's classroom, I observed students engaged in off-task activities such as heads down on desks, getting things from backpacks, and eating

[MB/D8: 21] while awaiting their turn to read in round-robin reading. In contrast, all students were engaged during Individual Checkouts.

In contrast to studies conducted in inclusive middle school general education classrooms (D. P. Bryant et al., 2000) and middle school special education classrooms (Mastropieri et al., 2001) where student pairs included a higher and a lower reader, all three of the teachers used "natural partners" for pair activities. Andrea used student pairs for connected text fluency practice. She explained that the students "knew" who would be a good partner for them. "The kids would group themselves. It just happened that way. They knew who they needed that day to help them. And it worked out great" [AJ/I-2: 80]. Sallie and Martin had students pull desks across aisles to form partners for Individual Checkouts.

Unlike Sallie and Martin, Andrea did not have a program for peer-mediated fluency instruction. Instead, she told students to "get with a partner" to practice reading their assigned passage. When questioned about using a fluency intervention such as Partner Reading (Delquadri et al., 1986) with student pairs, Andrea stated that her student reading levels spanned pre-primer to fifth-grade and that the wide span of reading levels made it too difficult. "It doesn't work as a class, because you have XXXX going "djuh, djuh, djuh" – everyone else is reading" [AJ/I-1: 164]. She explained that this was the reason she had started working one-on-one with her students using a "coaching" model.

Other than the Individual Checkouts in which pairs were used, Sallie explained grouping practices in her room were "optional." She had eight students enrolled for the class I observed. Frequently, there were only five or six students present. Thus, for other reading activities, Sallie did not feel that it was necessary to place students in alternative grouping formats. Instead, as her comment indicates, she justified whole class instruction as a function of class size and the wide range of reading abilities in her class:

> Some of them like to work together, some of them choose not to work. And because we are such a small group now, and because there are some personality conflicts, and there is such a level disparity between some of them, yesterday I did give them the option, if you choose to work by yourself, but I would like to encourage you to work with a partner [ST/I-2: 24].

However, I observed Sallie's students work in pairs to complete the summarization graphic organizer. Similar to fluency development, the purpose of pairing students for comprehension strategy instruction is to increase opportunities for students to practice and respond. Studies have shown positive results for peer-tutoring of reading comprehension strategies when compared to whole class instruction (Mastropieri et al., 2001). Using a comprehension activity in which the student pairs asked and answered scripted questions about the main idea of paragraphs, Mastropieri and her colleagues examined the use of peer-assisted learning in middle school special education classrooms. It was encouraging to see that the only instance of reading comprehension strategy instruction provided by teachers in the present study utilized peer-tutoring as a practice activity. My observations of Sallie's use of peer-mediated reading comprehension instruction confirmed the benefits found by Mastropieri and her colleagues: active engagement of all students in reading, increased opportunities to practice a summarization strategy, social/motivational benefits (i.e., the students enjoyed working together to use the strategy).

Small-group instruction and peer-mediated instruction provided the teachers in this study an effective alternative to traditional grouping formats of whole class instruction and independent seatwork. Similar to previous observational studies of resource room reading instruction, traditional grouping formats predominated in most of the classrooms. However, two of the teachers described the importance of using alternative groupings for instruction, a promising indication of the influence on teacher knowledge of evidence based reading interventions. Andrea described the difficulties

related to wide range of reading abilities she experienced with a previous use of peer-mediated fluency instruction. When I asked her about the possibility of using pairs or small interactive groups for reading comprehension instruction, she explained the main barrier as time to train the students to effectively work in cooperative groups:

> It just never worked out that I could invest the amount of time training the children to do that. I just always just kind of feel the pressure to get them going and to get the buy in and when you get them in pairs, that can kind of work but there's really no give and take of thought. Everything is very flat and very black and white and there's . . . I have not been able to get that conversation going. . . other than spontaneously with the fluency program where they will talk about their numbers and things like that. But to take a central topic and have them work as a group [AJ/I-2: 117.

Interestingly, the comprehension intervention used by Mastropieri and her colleagues (2001) for middle school students with high-incidence disabilities in a resource room setting was scripted. Thus, students had specific questions to ask to "get that conversation going."

The teachers proposed different reasons for their use of grouping formats. Mary used small groups to provide instruction on independent reading levels of her students. Martin and Sallie followed the prescribed directions of their reading program for fluency instruction. Andrea knew about alternative grouping formats, but explained that previous experiences influenced her decision to abandon their use in favor of one-on-one instruction and whole class instruction. Overall, the use of alternative grouping formats was limited. The traditional whole class/independent seatwork combination of instructional grouping formats predominated despite the use of alternative grouping formats in most of the classrooms. Several explanations emerged from comments made by these teachers. The teachers noted the wide range of reading abilities, personality conflicts, small classes, and the time required to teach students to work cooperatively. Because the benefits of improved student engagement and increased opportunities to

respond that are provided by small group instruction and peer-mediated instruction have been linked to reading gains (Elbaum et al., 1999; Leinhardt et al., 1981; Mastropieri et al., 2001), teachers need to be provided training in how to effectively group students and how to manage issues such as personality conflicts.

Theme 4: Teachers were consistent in their use of advance organization.

The purpose of advance organization is to provide "ideational scaffolding" from students' existing knowledge to the knowledge that is to be learned and is intended to provide a framework for new learning (Ausubel, 1963; Bos & Vaughn, 2002). Advance organization has been shown to improve learning outcomes of students who have high-incidence disabilities when it is included in interventions (Swanson et al., 1999). All of the teachers in this study used the time prior to instruction to prepare their students for the lesson. For most of the teachers, advance organization consisted of setting the purpose for the lesson or stating goals of the lesson. However, for Mary and Martin, these actions were limited to decoding and fluency instruction. In addition to purpose and goal setting for decoding and fluency instruction, Andrea told her students the purpose of a vocabulary lesson. Sallie and Andrea also guided students prior to the lesson in reviewing information that had been previously introduced during decoding instruction. Thus, the teachers consistently used advance organization across the reading content areas in which they implemented interventions (i.e., primarily decoding and fluency). Few previous observational studies reported advance organization as a variable. However, in a study by Gelzheiser and Meyers (1991) that compared reading instructional time across three settings (resource room, Chapter I, general education classroom), teachers spent 1% of their instructional time setting the purpose for the lesson. The researchers concluded that the amount of time spent in purpose setting was not significantly different from time spent in purpose setting in general education classrooms. Thus, the resource room

teachers in the present study, though they consistently used advance organization for purpose setting and stating lesson goals, may not be providing instruction that is more intensive than the instruction their students would receive in general education reading instruction similar to the teachers in Gelzheiser and Meyers.

Additionally, and perhaps more important, studies have shown the effectiveness of providing advance organization to help students understand and recall text. Comprehension has been defined as an interaction between existing knowledge and new knowledge (R. C. Anderson & Pearson, 1984; Idol-Maestas, 1985). The teachers in the present study stated that their students had "gaps" in their general knowledge that resulted in poor reading comprehension. For example, Sallie explained that her students failed to gain general knowledge during elementary school:

> Just the basic things, even the basics like what city do we live in, what state, they don't know. Turn around and tell me what time it is now, they just don't know. They don't know how to read a clock. They just don't know a lot of basic information. . . They've missed the boat on lots of basic information from elementary school. And so if I can do grade level things, great. But because they have those gaps already from below grade level. . . So when I talk about general knowledge, we tie a lot with whatever story, whatever incident [ST/I-1: 106].

Gaps in or lack of prior knowledge such as the low general knowledge described by Sallie and specific background (vocabulary and conceptual) knowledge of passages have been shown to interfere with reading comprehension (Bos & Anders, 1990; Gersten et al., 2001; Snider, 1989). Thus, the use of advance organization to bridge that gap and provide students with important information is critical to reading comprehension.

Studies have shown that advance organization can improve the comprehension of students with high-incidence disabilities who have difficulties with reading comprehension (Darch & Gersten, 1986; Swanson, 1999). Advance organization activities may include teachers guiding students by: (a) reminding students to attend or

look over the passage to be read, (b) activating prior knowledge, and (c) using guided probes (Idol-Maestas, 1985; Swanson, 1999). Because Martin, Andrea, and Mary assigned worksheet activities to be completed independently as the primary means of providing vocabulary and comprehension instruction, I was not surprised by the low utilization of advance organization for reading comprehension in their classrooms. Only Sallie provided advance organization prior to having her students read passages to facilitate reading comprehension. Sallie used the time prior to reading to orient her students to getting the big ideas from passages by (a) leading discussions to activate and build background knowledge, (b) having students write about previous experiences that would be linked to the story to be read, and (c) by guiding previewing of the passage that included focusing on summarizing questions (i.e., who, what, when, where, why).

Although I did not observe comprehension instruction in her classroom, Andrea assigned a worksheet with questions that were reminiscent of the guided probe used in a study by Idol-Maestas (1985). Teachers in the study guided elementary and high school students to complete the TELLS-Fact or Fiction previewing exercise. The previewing sheet used the TELLS acronym plus a "fact or fiction" question and directed students to respond to the "look at the title of the passage," "skim the passage for clues to story content (who, what, where, when, why)", "look for difficult vocabulary to discuss with the teacher," and "use inference to determine if the passage was fact or fiction." All students showed improved comprehension, and the author concluded that teacher guidance was a critical feature. When teacher guidance was removed, comprehension deteriorated. The students in Andrea's class completed the worksheets independently, with little feedback from their teacher and with no ongoing guidance as was provided to the students in the Idol-Maestas study. However, Andrea described instruction that

included guided practice and faded scaffolding (i.e., gradually reducing guidance based on student need) that she provided earlier in the year.

Unlike Sallie who used advanced organization to guide her students' comprehension and Andrea who provided independent practice of a previously taught strategy, Martin and Mary did not provide advance organization for reading comprehension activities. Instead, the teachers assigned worksheets and monitored as the students worked at their seats. Further, the worksheets that Martin and Mary utilized did not provide the type of advance organizer statements that have been shown to result in improved comprehension such as those on the worksheet used by Andrea. In other words, the worksheets did not instruct students to preview the passage or make predictions based on the title or pictures. Similar to statements of Sallie and Andrea, Martin and Mary described the impact on comprehension of their students' poor vocabulary and low general knowledge. Yet, neither of the teachers used advance organization to provide the "ideational scaffolding" to support growth of vocabulary and general knowledge that might lead to improved reading comprehension. The literature on the utilization of advance organization for reading comprehension with students who have high-incidence disabilities is well-established (e.g., Darch & Gersten, 1986; Idol-Maestas, 1985). Martin and Mary did not use any form of advance organization to facilitate their students' understanding and recall of passages. I did not observe Andrea provide guidance in her students' use of a previewing worksheet. However, she described instruction she conducted prior to the beginning of my study. Only observations of Sallie reflected the use of the most current knowledge of effective use of the time prior to reading to improve reading comprehension.

The teachers in this study consistently used advance organization for decoding and for fluency instruction. This demonstrates their knowledge of an instructional

component that has been found to be critical to effective instruction across reading content interventions (Swanson et al., 1999). Most of the teachers did not incorporate advance organization in comprehension activities. Thus, the teachers are failing to provide a critically important component of instruction for their students who are described as having significant knowledge gaps. Not only do teachers need to know about the benefits of using advance organization across all reading content areas, they need to know effective ways to incorporate advance organization into reading comprehension instruction.

In summary, my examination of the teachers' use of instructional components that have been shown to improve learning resulted in several important findings. Teachers in this study provided practice in decoding and fluency and used evidence based procedures to correct oral reading errors. Additionally, all of the teachers used evidence based alternative groupings such as small-groups and student pairs. Further, all of the teachers used advance organization to prepare students for decoding and fluency instruction and one teacher used advance organization in ways known to improve reading comprehension of students with high-incidence disabilities who have reading goals and objectives on their IEPs. Previous observational studies of resource room reading instruction have not focused on the use of all of the effective instructional components examined in the present study. However, several studies have provided evidence that teachers gave only small amounts of corrective feedback (e.g., Rieth et al., 1987) and did not use alternative grouping formats for instruction (Moody et al., 2000; Vaughn et al., 1998). Thus, the use of evidence based instructional components by the teachers in the present was encouraging.

LIMITATIONS OF THE RESEARCH

There are several limitations of the present study. First, generalization of the findings from this study is limited due to the small size of the sample of teachers. The teachers in this study provided evidence of many opportunities in their district for training in implementing evidence based reading interventions. Thus, the results of the study may be idiosyncratic. In other words, resource teachers who have not had similar professional development opportunities may be more like teachers in previous studies who felt unprepared to teach struggling readers and who did not implement evidence based reading interventions (Bos, Mather, Dickson, Podhajski, & Chard, 2001; Vaughn et al., 1998).

An additional limitation may be due to observer effects. Studies have shown that several observer effects or "actions by the observer that have a negative effect on the validity or reliability of the data" (Gall et al., 1996, p. 340) that is collected. Observer effects can include: (a) effect of the observer on the observed, (b) effect of observer intentions on the observed, and (c) observer personal bias. To minimize the impact of observer effects, I followed the recommendations of Gall and her colleagues and Lincoln and Guba (1985). I visited the classroom prior to beginning observations so that the teacher and students had an opportunity to become accustomed to my presence and thus be less affected by my being in their classroom. Further, I used the tactics of prolonged engagement, persistent observations, triangulation of data from multiple sources to built trust and thus minimize the effects of the observer on the observed and to reduce the effects of personal bias. Additionally, to lessen the effects of observer intentions on the observed, I reassured the teachers that information from interviews and observations would be kept confidential and reserved questions about the nature of the study (i.e.,

extent of utilization of evidence based reading interventions and instructional components) until after my observations were complete.

A final limitation is that I did not conduct assessments of students to determine the effects of the reading instruction I observed. The teachers in this study described difficulties their students had in reading. Further, they described reading instruction they conducted to meet the students' needs and stated that they felt the instruction benefited their students. Therefore, individual student assessment would have provided important information about the effectiveness of the teachers' reading practices.

IMPLICATIONS FOR FURTHER RESEARCH

This descriptive study provides evidence that reading interventions, which are supported by the literature as effective for middle school students with high-incidence disabilities influenced decoding and fluency instruction to a greater extent than vocabulary instruction and reading comprehension instruction. Additionally, the study demonstrated that instructional components, which have been shown to effect learning gains influenced the teaching practices more consistently in the reading content areas in which the teachers utilized reading interventions (i.e., decoding and fluency).

However, the continued failure of most of the teachers to provide mnemonic strategies or interactive cognitive vocabulary interventions and reading comprehension interventions that focus on teaching students to be strategic readers or to utilize advance organization to bridge the knowledge gap and improve reading comprehension of many of the students in their classes imply several areas for further research. Research should focus on questions related to why teachers do not utilize interventions across all reading content areas and what kinds of interventions would be more readily implemented.

A significant amount of evidence exists to support the effectiveness of vocabulary interventions that include explicit instruction in important or frequently used words and

in independent word learning strategies such as semantic mapping (e.g., Baker et al., 1995b). Also, studies confirm the effectiveness of comprehension interventions targeting strategic reading (e.g., Gersten et al., 2001). All of the teachers in this study stated that their students had poor vocabularies that interfered with reading comprehension. Further, three of the teachers stated that many of their students were "daunted" or "freaked out" by the long passages on state mandated reading tests. That most of the teachers relied on traditional dictionary-based activities or verbal association level routines rather than vocabulary interventions targeting deeper levels of processing (e.g., semantic mapping, semantic feature analysis) and that few teachers were observed using comprehension strategies focusing on summarization or self-monitoring raises several issues. First, it is important to understand why teachers focus on decoding and fluency interventions but fail to utilize what are known to be effective interventions that might help students survive in inclusive general education classrooms such as those for developing independent word learning skills (vocabulary interventions) and for understanding and recalling text (i.e., reading comprehension and self-monitoring interventions). Is the explanation simply that they use the most current program provided by their district as Martin did? Martin stated that he was using Corrective Reading because it was the program that had been adopted by his school this year. He explained that his school adopted it first for general education and now for special education. "Our reading specialists. . . did this in some other reading classes and they felt that, you know, if the school of regular education was concerned, and they felt that they were having some success with it, and they thought that it would be a good program. . ." [MB/I-1: 328]. Further, in his exit interview, he said he would be implementing another program the following year that was newly adopted by his school. Alternately, the explanation may be that teachers select interventions based on their beliefs about student needs and

capabilities. For example, Andrea stated that she needed to be able "to turn on a dime" and that "every generation is different." Andrea pulled from various programs for which she had training to help the students in her classes. Most of the students in these teachers' classrooms were poor and Hispanic or African American. This raises the question: do demographic characteristics of students influence teacher selection of interventions? Studies exploring how middle school special education resource room teachers choose interventions and how the teachers' beliefs about their students characteristics influence the interventions they choose are warranted.

In addition to understanding teachers' reasons for choosing interventions, researchers who develop interventions need to know what are the barriers and facilitators of consistent implementation of interventions. For example, what are the barriers to the use of interactive reading comprehension interventions such as Collaborative Strategic Reading (Klingner, Vaughn, Dimino, Schumm, & Bryant, 2001) that Andrea stated she had received training in and had previously tried? Andrea commented in her exit interview that time to train the students was a critical issue for her. This matches previous studies in which a major barrier to implementation of effective interventions was ease of implementation. In other words, implementing did not require significant expenditures of precious teacher resources such as time. The interventions that were observed in the present study (e.g., SRA/Corrective Reading, SPLIT/cognitive decoding strategy, repeated reading) may be described as programs or packages that are easily implemented in special education resource rooms that have students with a wide range of reading abilities. What kinds of vocabulary and reading comprehension programs would have similar usability? Further, how can components such as advance organization, alternative groupings, and practice with corrective feedback, which lead to learning gains, be incorporated into intervention programs that teachers will find easy to implement?

An additional issue relates to the limitations of the present study. The four teachers in this study described or named professional development or training in a number of reading programs/interventions. Therefore, due to the limited sample size and the variety of opportunities provided the teachers in this district to learn effective reading instructional practices, further studies should be conducted with different samples of teachers and in different districts.

IMPLICATIONS FOR PRACTICE

This study adds to the database on reading instruction in special education resource rooms and provides evidence of the influence of evidence based interventions and use of effective instructional components in the reading content areas of decoding and fluency. The findings of this study have several implications for practice. First, teachers described the difficulties their students experienced related to poor vocabulary and reading comprehension. Disappointingly, the influence of current knowledge of evidence based vocabulary and reading comprehension interventions was not reflected in most of the teachers' reading instructional practices for vocabulary and comprehension. Instead, the teachers provided predominantly traditional rather than evidence based vocabulary instruction and worksheets rather than comprehension strategy instruction. The apparent mismatch between what teachers say students' needs are (i.e., poor vocabulary and reading comprehension difficulties) and the use of practices that are supported in the literature as effective for teaching adolescents with high-incidence disabilities may be due to insufficient of knowledge of effective interventions. Therefore, this demonstrates the continued need for pre-service education and professional development that targets evidence based vocabulary and reading comprehension interventions.

A second issue relates to limited use of alternative grouping practices. My observations provided proof that the teachers could implement interventions in ways that have been shown to improve learning. For example, the teachers who consistently used effective interventions also provided practice opportunities with effective feedback. Further, all four of the teachers used alternative grouping formats for at least some of their instruction. However, despite the encouraging increases from previous studies (Rieth et al., 1987; Vaughn et al., 1998) in the use of alternative grouping formats, the teachers continued to provide whole group instruction and one-on-one instruction that left many students working independently at their seats. Additionally, the use of small-interactive groups that have been shown to be successful in promoting discussion of vocabulary (Bos & Anders, 1990) and independence in comprehension strategy use (Englert & Mariage, 1991) was very limited across these classrooms. Andrea described the constraints that time placed on her to train her students to communicate effectively in small interactive groups. "It just never worked out that I could invest the amount of time training the children to do that" [AJ-I-2: 94]. Yet, Sallie effectively paired her students to read a passage, discuss, and complete a summarization graphic organizer. These findings indicate the continued need for professional development and preservice teacher education on the benefits of using of alternative grouping formats, ways to organize classrooms that maximize use of effective instructional components, and use of strategies such as peer-mediation that middle school resource room teachers have used successfully (Mastropieri et al., 2001).

To summarize, middle school special education resource room teachers who provide reading instruction to students who have high-incidence disabilities with reading goals and objectives on their IEPs need to know how to implement effective interventions for vocabulary development and for understanding and recalling information from text.

Further, they need to use effective instructional components such as advance organization that promote higher order processing such as reading comprehension. Similar to teachers in previous studies, the teachers in this study wanted to know effective ways to help their students learn to read and comprehend complex texts. Although the effects of professional development were evident in the classrooms of the teachers I observed, critical areas appeared unaffected by the current knowledge of effective reading.

Appendix A

INTERVIEW GUIDE

Pre-Interview

Ask teacher to read into tape:

"My name is _____ and I teach resource reading at _____Middle School. Today is _____. I give permission for Caroline Kethley to audiotape this interview."

Directions: Ask the teacher to select a target student from the class whom s/he feels struggles with reading. Direct the teacher to respond to questions with the target student in mind.

1. Tell me about [target student]. What are your reading goals for [target student]?
    a. Describe any difficulties [target student] has with reading comprehension, vocabulary, decoding multisyllabic words, reading fluency.
    b. Describe IEP goals and objectives.
    c. Describe the reading instruction you provide for [target student].
    d. How do you perceive the effectiveness of the reading instruction for [target student]?
2. Describe your preparation for teaching reading to students with high-incidence disabilities?
    a. PROBE: undergraduate/graduate coursework, professional development, independent study
    b. How prepared do you feel to teach reading to students with high-incidence disabilities?

c. How effective do you feel your preparation was to teach reading to students with high-incidence disabilities?

Exit Interview

3. I have noticed that you use whole-class instruction for most of the reading period. Have you ever used other groupings for instruction than whole class?
    a. If the teacher responds no, ask him/her to explain. For example, have you ever tried to use small interactive groups? Why or why not?
    b. If the teacher responds yes, ask him/her to tell me about that.
    c. What did you use groups for?
    d. How did you form groups?
    e. How difficult was that?
    f. How effective did you find it?
    g. How did you learn about it?
    h. What made you decide to use whole-class instruction?
    i. How are the students grouped for individualized work (i.e., worksheets)?
    j. Do you think the students in your classroom could work in cooperative groups? How do their characteristics influence your decision to use a particular grouping structure?
    k. How do you think you could teach them to work together successfully?
4. Define strategy.
5. One of your stated goals for these students is to move out of the resource room and back into an inclusive GE classroom. Further, you said that being able to do the work in their content area classes was one of the most critical elements in their being able to survive in the GE classroom. Have you ever taught specific self-

monitoring strategies such as strategies to help them realize when they are not understanding what they have read?

6. Do you use strategies or specific problem solving plans for reading comprehension? For example summarizing strategies or self-monitoring strategies such as self-directed questions (e.g., who is the passage about, what is happening so far in the passage, what do I think is going to happen next?)
7. You said you have worked with them on summarizing a paragraph. How well are they able to do that on their own? How do you know?
8. What specific cognitive strategies and metacognitive strategies do you use?
    a. Reading comprehension strategies?
    b. Where did you learn about strategies and strategy instruction?
    c. What do you use to insure generalization and transfer of strategy use to GE classroom?
9. Describe/define instructional scaffolding?
10. How do you decide what kinds of scaffolding to use with students who are struggling with a particular concept (e.g., word study)?
11. Do you ever use graphic organizers? Examples?
12. How often do you introduce a new concept? How often do you practice? How do you know when students have achieved mastery?

Appendix B

EXAMPLE OF FIELD NOTES TEMPLATE

Time	#	Field Notes	Grouping/ Activity
D4	11/4	Classroom of Andrea Jones	
10:04 a.m.	1	Students enter and begin writing in Agenda (no homework today)	Whole class
	2	Class Rules: Write a complete sentence; Respect yourself; No Crybabies!	
	3 4	Ms. Jones told me before class began that today she would begin her fluency program (Read Naturally). She is gathering materials: passages	
10:08 a.m.	5 6 7 8 9	Ms. Jones roams/monitors assignment sheet; she gives stickers to students who have correct information on the correct day "Where's you Agenda. At Home? What's it doing at home? Taking a day off? They need to be at school every day so they can work just as hard as you do."	Whole class
10:10 a.m.	10 11 12 13 14 15 16 17 18 19	" I have a list of words that are on the Kindergarten math test. They expect Kindergarteners to be able to read these. This is why your teachers are telling you to pay attention. You may be able to add 2 and 2, but if you can't read the problem to know to add 2 and 2. . . " Ms. Jones points to words on the OH and has students read them chorally. She stops at the term <u>analogue clock</u>. "What is an analogue clock? If you don't know, you aren't going to be able to answer the problem." Ms. J. moves down the list to <u>digital clock</u> and asks students who have digital watch. She points out the analogue clock that hangs on the wall. She produces her timer which is digital.	Whole Class/ Vocabulary
10:14 a.m.	20 21 22	Disruption: one student wants his candy returned. Ms. Jones tells them they have to stay in 40 seconds – "that is 40 seconds of learning time that you have lost!"	Behavior
10:14 a.m.	23 24 25	She continues down the list, describing or giving examples of math terms. "If you can't read the words, you can't do the problems. That is why I am always telling you that you have to read and pay attention."	Whole Class/ Vocabulary
10:16 a.m.	26 27	Ms. J puts up OH. "I tested you at the beginning of the year so I have stories for most of you. A___ is new, so I will test	Whole Class/ Fluency

	28	him today." The overhead has directions. Ms. J. goes over the	
	29	OH and discusses with students. One student says that she	
	30	has done this before. Ms. J. has student explain how she did it	
	31	in 5th grade. She complements the students' previous teachers	
	32	"because you are a terrific reader." She tells students that she	
	33	has program up through 8th grade, so they can make lots of	
	34	progress. She tells students that other kids in this class can	
	35	testify about how the program works. "Let's do a practice	
	36	run." She hands out RN passage worksheet. She asks students	
	37	to look at picture and tell her who the passage is about.	
	38	Various answers. It is about Harriet Tubman. Is Harriet	
	39	Tubman alive? Think for a second and tell me something	
	40	intelligent that you know about HT. Students tell what they	
	41	know and some scan the passage to find information. "After	
	42	you read the story, you'll know whether what you know is a	
	43	fact or an opinion."	
	44	Ms. J. dictates/writes the vocabulary words for the students to	
	45	put in blanks on the worksheet: <u>slave</u>, <u>courage</u>. Student says	
	46	to put the title in the blank. Another student tells the title as	
	47	Ms. J. writes. "Is HT a real person?" Student responds yes.	
	48	"A real story about a real person is called a bi_____."	
	49	Student responds "biography." Students fill in blank space on	
	50	question about whether the story is a biography or not.	
	51	Ms. J. passes out dictionaries. She directs students to look at	
	52	the reverse side of the page they have. It is the vocabulary	
	53	form. "How many steps are there for each of your vocabulary	
	54	words?" The form has 5 steps in boxes:	
	55	1. Write the word: "say the word to yourself, s-l-a-v-e"	
	56	2. Dictionary definition: She directs students to look up	
	57	the word in the dictionary; <u>sl</u>, then <u>sla</u>, then <u>slave</u>.	
	58	Then she tells them it is on p. 702 in the last column.	
	59	When you get a definition, you only write one	
10;45	60	definition. You have to pick the definition that goes	
a.m.	61	along with the story. Willie, tell me definition #1."	
	62	Willie reads. It makes sense with the story. Ms. J.	
	63	tells students to copy that definition into the box.	
	64	"You notice that my handwriting is the neatest that I	
	65	can possibly get it," she says as she writes the	
	66	definition on the OH.	
	67	3. Picture of the word: She reviews the word and	
	68	definition. "Your brain likes color and it likes	
	69	pictures. Draw a picture so it can get in your brain.	
	70	What shall I draw? "A dude in chains," provides a	

student. Ms. J. draws and students tell her things to put in the picture. "You will draw whatever picture it takes for your brain to understand slave." Ms. J. roams and praises pictures that students are drawing. She praises penmanship. "A slave in this case, is it a happy situation?" "Because you are owned by another person." "Slavery still goes on in our world and it is something we have to really guard against." Student mentions that Abraham Lincoln said there would be no more slavery. She expands on that statement and praises student for knowing so much. "Do you remember what paper he(AH) signed to outlaw having slaves?" Student responds, The Declaration of Independence. Student laughs – you cannot nix without a fix. She tells student that he needs a better answer if he is going to put someone else down. "It is the Emancipation Proclamation."

4. Reminding words: Ms. J. marks syllables and says the word slowly (re/min/ding). She asks for suggestions. Sad and unhappy. She asks for examples that make them sad and unhappy: mad, do dishes, whips
5. Write a sentence with the word: "Who can tell me something really good in a complete sentence with the word slave?" Child responds. "Say that again in a sentence so that we can write it." ["Back in the days, people owned slaves, and they had not freedom."] Ms. J. repeats sentence as she writes, asks for clarification about the meaning ("back in the days"). Student provides information. Ms. J. asks "how did he know that." His dad reads history. "You read, you get information," says Ms. J. She praises. Who can tell me what the subject of this sentence is? "Who or what is the sentence about?" People, student responds. "And what did the people do?" Student: "they owned" That is the action word, <u>they owned</u>. Is this a complete sentence. "Back in the days" tells us when.

What is the next word we are going to write? <u>Courage</u>. She spells it out loud as she write it on the OH. "You teach me. I put the word there, so what is the second step?" Students respond. "Do I put all the definitions there?" Students respond, just the best one. Students look up the word. Ms. J. roams, helping students locate word in the dictionary. She breaks the word down for student to help him find the correct

	114 115 116 117 118 119 120 121 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138	page. She reads the definition to the whole class. Reads second definition. "Which one do we want to use?" Student responds and Ms. J. writes/talks the definition on the space on the OH. Ms. J tells students to draw a picture that will tell their brain "Oh, that is what they're talking about!" "Make sure it is a picture that your brain will learn from? Remember, your brain likes three things, speed, color, and pictures." She works with individual students to help them write the definition. She dictates letters as student writes. Praises him for careful writing. She asks student to explain his picture and then tell what <u>courage</u> means. He gives correct explanation. "What words remind you of courage?" Students provide words: brave, helpful (student spells) Ms. J. underlines the <u>ful</u> in helpful. "It has the suffix <u>ful</u>." She asks for more words that remind of courage: unscared. She looks up this word to see if "unscared is a word." "Write a sentence with the word." She asks student for example. "Not being scared means having lots of courage." "So this is your Vocabulary Sheet." She draws students' attention to wall chart of Sentence Criteria. She asks students to check their work against the Criteria: "Begin with a capital; end with a stop sign; No capitals inside; must have action word; must have subject" "Tomorrow you start on your own."	
10: 52 a.m.		Bell	

Appendix C

EXAMPLE OF DOCUMENT SUMMARY FORM

Name/Description of Document: Lesson Plan	**Site:** Hall Middle School **Document:** Lesson Plan **Date Received:** 10/25/04
Event/contact with which document is associated: Sallie Turner 10/25/04 – 10/29/04	
Significance or importance of document: Description of planning to meet IEP goals and objectives	
Brief summary of contents: Lesson plan is outline of plans for week. Includes Corrective Reading lesson number and workbook pages, homework, quizzes (pretest on homophones/ review of compounds), worksheet titles ("Gunfight at OK Corral"), and Literature Book titles ("Scary Story") with emphases (characters, plot, climax, main ideas) plus activities for E/R-TAKS Friday, fluency count	
Comments: Sketchy form. Does not list IEP goals/objectives to be addressed. Does not list TEKS to be addressed. Fluency count is for oral reading fluency progress monitoring	

Appendix D

EXAMPLE OF CODING START LIST

RESEARCH QUESTION	CODE DESCRIPTION	SUBCODE DESCRIPTION	CODE
What word analysis, fluency, vocabulary, and reading comprehension interventions do special education resource teachers implement for middle school students with high-incidence disabilities who have IEPs with goals and objectives in reading?	INSTRUCTIONAL CONTENT:		ICT
	Word Identification		ICT:WID
		Phonic Analysis	ICT:WID_Ph
		Structural Analysis	ICT:WID_SA
	Fluency	Repeated reading of words, phrases, passages with a model and corrective feedback	ICT:F_RR+CF
		Drill and practice on word lists	ICT:F_D/P_IWL
		Training to mastery on word lists	ICT:F_MT_IWL
During reading instruction, to what extent do special education resource teachers use instructional approaches that have been demonstrated to be effective for students with high-incidence disabilities who have IEP goals and objectives in reading? Specifically, to what extent do special education resource teachers use advance organizers, practice, scaffolded instruction, questioning, feedback, and small-interactive groups while teaching reading?	INSTRUCTIONAL COMPONENTS		ICP
	Advance Organization	Explicit Connections	ICP:AO_Ex-Conn
		Lesson Purpose	ICP:AO_Pur
		Prompted Review	ICP:AO_Rv-Prmt
		Explicit Focusing	ICP:AO_Ex-Foc
		T-Directed Lecture/Discussion	ICP:AO_TD-LD
		Direction Setting: Outline/Overview	ICP:AO_O
		Graphic Organizer	ICP:AO_GO
	Practice	Guided	ICP:P_G
		Guided_Massed	ICP:P_G-Ms
		Guided_Spaced	ICP:P_G-Sp
		Independent	ICP:P_I
		Indep_Massed	ICP:P_I-M
		Indep_Spaced	ICP:P_I-S
		Structured Review	ICP:P_StrR
		Multiple Opportunities to Respond	ICP:P_MOP
		Repeated practice of tasks	ICP:P_RPT

Appendix E

INTERPRETING DATA CITATIONS

Data citations indicate the specific source of data quoted and are included throughout the Chapter IV and Chapter V. They may be read in the following manner:

Example 1:

[AJ/I-1: 194]

AJ= teacher's name/Andrea Jones

I-1=source of data/Interview 1

194=line number within data source

Example 2:

[ST/D4: 67]

ST=teacher's name/Sallie turner

D4=source of data/observation day 4

67=line number within data source

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