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Effects of a Research-Based Intervention on Reading Achievement of Middle School English Learners

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Effects of a Research-Based Intervention on Reading Achievement of Middle School English Learners

A Dissertation submitted in partial satisfaction of the requirements for the degree of

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in

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by

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Students with low reading achievement experience difficulty accessing content area instruction. English learners from Hispanic homes traditional lag behind their English speaking counterparts. Previous research has identified various teaching methods that support reading achievement in English learners with particular emphasis on early grades. The current study adds to the existing literature by examining the effects of a small-group intervention cycle on middle school aged students. A small-group intervention was developed with components identified in the research literature on effective teaching methods for English learners. This cycle employed a gradual release of responsibility for instruction from the expert teacher to the students. Areas of reading acquisition receiving particular emphasis included phonemic awareness, phonics, vocabulary, and comprehension. Students were assigned to treatment groups randomly from a stratified sample of English language proficiency and Lexile reading achievement scores. Analyses of variance and covariance were employed to evaluate the differences in reading outcomes for the two treatment groups. The results suggest that research-based
small-group intervention can have positive effects on low performing middle school students and would be a useful strategy for intervention.
# Table of Contents

Chapter 1: Introduction ........................................................................................................... 1
English Learners ..................................................................................................................... 1
Appropriate Instruction for English Learners .................................................................... 1
Effective Literacy Instruction ............................................................................................... 3
Intervention Model .................................................................................................................. 5
Gradual Release of Responsibility ....................................................................................... 5
Purpose of the Study .............................................................................................................. 12
Research Questions .............................................................................................................. 12
Statement of the Problem .................................................................................................... 12
Importance of the Study ....................................................................................................... 12

Chapter 2: Literature Review ............................................................................................... 14
Reading Achievement ........................................................................................................... 14
English Learner Reading Achievement ............................................................................. 19
Research on Reading Improvement for ELs ...................................................................... 23
Long Term English Learners ............................................................................................... 26
Evidence-based Reading Instruction .................................................................................. 30
Reading Instruction In Middle School ............................................................................... 32
Research on Instruction Using Scaffolding........................................................................ 41

Chapter 3: Methods .............................................................................................................. 45
Participants ............................................................................................................................ 45
District and School Demographics ..................................................................................... 46
Procedures ............................................................................................................................ 47
Measures ............................................................................................................................... 47
Procedures for Experimental Group Intervention ............................................................ 49
Control Group Procedures ................................................................................................. 52

Chapter 4: Results ................................................................................................................ 54
Descriptive Statistics ............................................................................................................ 55
Statistical Analyses .............................................................................................................. 57
List of Tables

Table 1. California English Language Development Test Proficiency Levels by Grade ................................................. 114
Table 2. Beginning SRI Lexile Levels ......................................................................................................................... 115
Table 3. Group Assignment by SRI Lexile Levels ........................................................................................................ 116
Table 4. Descriptive Statistics at Pretest for Gates-MacGinitie Reading Tests .................................................................................................................................................................................. 117
Table 5. Descriptive Statistics at Pretest for Additional Measures .............................................................................. 118
Table 6. Descriptive Statistics at Midtest for Additional Measures .................................................................................. 119
Table 7. Descriptive Statistics at Posttest for Gates-MacGinitie Reading Tests .................................................................................................................................................................................. 120
Table 8. Descriptive Statistics at Posttest for Additional Measures .................................................................................... 121
Table 9. ANOVA Results for Gates-MacGinitie Reading Raw Scores ............................................................................ 122
Table 10. ANOVA Results for Gates-MacGinitie Reading Grade Level Scores .................................................................................................................................................................................. 123
Table 11. ANOVA Results for Gates-MacGinitie Vocabulary Raw Scores ..................................................................... 124
Table 12. ANOVA Results for Gates-MacGinitie Vocabulary Grade Level Scores .................................................................................................................................................................................. 125
Table 13. ANOVA Results for Scholastic Reading Inventory ............................................................................................ 126
Table 14. ANOVA Results for Ten Minute Writing Test ................................................................................................. 127
Table 15. ANOVA Results for Test of Silent Contextual Reading Fluency ...................................................................... 128
Table 16. ANOVA Results for Maze Test ......................................................................................................................... 129
Table 17. ANOVA Results for Measure of Text Comprehension ...................................................................................... 130
Chapter 1: Introduction

English Learners

Among the many challenges faced by public schools in the United States, providing appropriate instruction for the increasing population of English learners (ELs) remains a high priority. The number of school-age children (ages 5-17) who spoke a language other than English at home rose from 4.7 to 11.2 million between 1980 and 2009, which represents an increase from 10 to 21 percent of the population in this age range (U.S. Department of Education, 2002). The states with the highest enrollment of ELs, with more than 10 percent, were Alaska, California, Colorado, Hawaii, Nevada, New Mexico, Oregon, and Texas. California had the highest percentage, where 23.2 percent of its enrollment was ELs (U.S. Department of Education, 2002). The great majority of ELs (79%) reported Spanish as their native language (McCardel, Mele-McCarthy, Cutting, Leos, & D’Emilio, 2005; National Education Association, n.d.). Success in school is far lower for Spanish-speaking students than for any other group, and ELs are also more likely to have difficulty in learning to read (August & Hakuta, 1997; Slavin & Cheung, 2005).

Appropriate Instruction for English Learners

Providing appropriate services for ELs attracted increased attention because of the court case, Horne v. Flores (2009), heard by the United States Supreme Court, who found adequate funding for English learner programs a necessary prerequisite to equal opportunity (Garcia, Arias, Harris-Murri, & Serna, 2010). Though the court did not identify the exact nature of those resources that were required, others have outlined
important factors for the appropriate instruction of ELs. Reading is considered the primary skill for academic success and is the typical measure of school effectiveness (National Reading Panel, 2000), and the National Center for Education Statistics (2011) reported in the Nation’s Report Card: Reading 2011 that less than 10% of ELs are proficient in reading comprehension, which in turn contributes to further academic failure. What is known about reading instruction for ELs is limited when compared to the research on effective teaching techniques for native English speakers (August & Hakuta, 1997; Gersten & Baker, 2000). There remains considerable controversy among educators on how best to instruct ELs (Geva, Wade-Woolley, & Shaney, 1997; Lesaux & Siegal, 2003; Lesaux & Geva, 2006; Lindsey, Manis, & Bailey, 2003). Some research demonstrated that bilingual programs (Greene, 1997; Ramirez, 1992; Rolstad, Mahoney, & Glass, 2005; Thomas & Collier, 2002; Willig, 1985) were effective, and others found benefits of “English as a second language” instruction (Celce-Murcia & Olshtain, 2000; Freeman & Freeman, 1998). In addition, some research suggests culturally responsive instruction due to the fact that ELs bring a wealth of cultural and linguistic knowledge into the classroom; however, many ELs encounter a complex schooling process that is different from their own personal learning experiences, which, in turn influences their acquisition of reading competence (Snow, 2002). In this vein, ELs may come from homes and communities that emphasize collectivist-learning approaches (interdependence, sharing, and collaboration). In contrast, the instruction they receive may promote more individualistic approaches (e.g., direct instruction) that mirror a dominant society’s learning patterns. As a result of this, ELs may need to be provided with interactive
teaching approaches (e.g., explicit instructional practices, small-group instruction) that support and strengthen their discourse and learning styles (Au, 2005; Cazden, 2001; Heath, 1983; Orosco & O’Connor, 2014).

Effective Literacy Instruction

Even though instruction in English-only has not been found to be effective in improving the academic achievement of ELs when compared to other models (August & Shanahan, 2006; Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Goldenberg, 2008; Ramirez, 1992; Thomas & Collier, 2002), most ELs are taught in general classrooms by teachers with various levels of expertise and training in specialized instruction (Barron & Menken, 2002; Kindler, 2002). That many teachers are not prepared for this task has been frequently reported (American Federation of Teachers, 2004; Gandara, Rumberger, Maxwell-Jolly, & Callahan, 2003; Menken & Antunez, 2001; Nieto, 2003; Wong-Fillmore & Snow, 2002). This reality has resulted in focus on effective instruction in general classrooms.

Effective literacy instruction for ELs is similar to that for English speakers (Coleman & Goldenberg, 2011) albeit with adjustments that consider their unique needs (Gersten & Baker, 2000; Gersten & Jimenez, 1994; Haager & Windmueller, 2001). Gersten, Baker, Haager, and Graves (2005) cited adjustments like providing more linkage of vocabulary instruction with word analysis or teaching phonemes and sounds prevalent in English that do not exist in the student’s native language. They also identified research that demonstrated that the same strategies used with struggling readers are also effective with ELs (Gunn, Biglan, Smolkowski, & Ary, 2000; Haager & Windmueller, 2001;
Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanai, 2003; Rousseau, Tam, & Ramnarain, 1993; West, Denton, & Germino-Hausken, 2000). This research focused on small-group intervention and not whole class instruction. However, some have suggested that something entirely different should be used with ELs (August & Hakuta, 1997; Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanai, 2003).

Research has attempted to identify effective teachers and the instructional methodology they use with ELs. This area has received far less attention than other areas of research on ELs (Duffy & Hoffman, 1999; Institute for Medicine Staff, 1997). Teachers found to be effective used explicit skills instruction for all students, but this was particularly important for ELs (Wong-Fillmore, Ammon, McLaughlin, & Ammon, 1985). The literature on instructional characteristics shows that teachers who support their students in the construction of knowledge and development of skills rather than just the transmission of information are more effective (Richmond, Underwood, Jordan, & McGee, 2005; Torff, 2003; Torff & Sternberg, 2001). These interactive techniques reflect the research linking instructional quality and teacher characteristics with ELs’ achievement (Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007).

This body of research has implications for further research that can contribute to our understanding of effective instruction for ELs. One major question that remains is how research on effective small-group instruction that focused on the primary grades might inform instruction in intermediate or middle grades. Additional information on how to include small-group instruction as part of a language arts curriculum would also
have implications for classroom practices and professional development for teachers of ELs.

**Intervention Model**

An intervention model was designed to be consistent with current research on best literacy practices and modifications for ELs. These included: (1) instruction that focuses on the critical skills of phonics, fluency, vocabulary, and reading comprehension (National Reading Panel, 2000); (2) explicit skills instruction (Wong-Fillmore, Ammon, McLaughlin, & Ammon, 1985; Adams, 1990); (3) explicit, interactive instruction in multisyllabic decoding skills (Shaywitz, 1996; Bhattacharya & Ehri, 2004); (4) emphasis on reading comprehension and vocabulary skills in addition to phonics (Haager, Gersten, Baker, & Graves, 2003); (5) linking vocabulary instruction with word analysis (Gersten, Baker, Haager, & Graves, 2005); (6) fluency (Kamps & Greenwood, 2005; O’Connor, White, & Swanson, 2007; Torgeson, 2000); (7) matching pupils and texts, access to interesting texts, and expert tutoring (Allington, 2005); (8) construction of knowledge and development of skills (Richmond, Underwood, Jordan, & McGee, 2005; Torff, 2003; Torff & Sternberg, 2001); (9) interactive techniques (Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007); and (10) increased student interaction and opportunities for structured talk (Coleman & Goldenberg, 2010, 2011).

**Gradual Release of Responsibility**

An overarching principle in the intervention employed in the current study was the principle of the gradual release of responsibility. The gradual release of responsibility is a model of teaching that shifts the roles of teacher and student over time. This model
recognizes that various levels of support are needed to help students become independent in their learning. Teaching that employs a gradual release of responsibility from teacher to student is based on learning theory that is constructivist. Constructivism is a learning theory, when applied to literacy learning, that holds that children generate knowledge and meaning through their experience. Best teaching practices are constructivist and emphasize a focus on learning rather than on teaching. The gradual release approach is best described as methods that are characterized as: (1) teachers model the strategy and the student observes and participates, (2) the teacher and the student work together, (3) the student works with teacher support and guidance, and (4) the student works independently and the teacher observes and supports at points of need.

The gradual release model has been the subject of considerable research and is generally described as scaffolding of instruction. Sawyer (2006) described scaffolding as support given during the learning process that is tailored to the needs of the student with the intention of helping the student achieve his/her learning goals and that would include various levels of support from the expert by way of modeling, giving advice, and coaching. Essential features of scaffolding include the importance of interaction and collaboration between teacher and student, establishing the current level of student knowledge and designing instruction to extend learning from this point, and then gradual removal of this support until the learner is independent (Beed, Hawkins, & Roller, 1991; Palincsar, 1986; Wood & Wood, 1996). The importance of scaffolding has been emphasized in various successful teaching models (Clay, 2005; Cazden, 1983). This principle has also been explored in research regarding instruction for non-native speakers.
of English (Donato, 1994). The importance of teacher support to the negotiation of meaning and the modification of interaction has been demonstrated (Long & Porter, 1985; Porter, 1986; Pica, Holliday, Lewis, & Morgenthaler, 1989). The interaction between individuals of unequal abilities (teacher and student) is an important way for the learner to extend competence (Wertsch, 1979; Vygotsky, 1978).

The teaching framework for this intervention included both whole-group instruction and small-group instruction.

**Whole-group instruction**

Whole-group instruction preceded small-group instruction in this intervention cycle. This instruction focused primarily on accessing unfamiliar words. Word recognition and vocabulary instruction is a critical aspect of reading comprehension for students in upper elementary and middle school. Multisyllabic word decoding was integrated within vocabulary and comprehension in order to address student reading difficulties (Moore, Bean, Birdyshaw, & Rycik, 1999). Stahl and Fairbanks (1986) demonstrated that it is necessary for students to have multiple encounters with a word to truly have an effect on their comprehension and to become a part of their repetoire. Vocabulary instruction must be frequent and varied to demonstrate the facets of a word’s usage (Beck & McKeown, 2007a).

The design used for vocabulary instruction in this model introduced vocabulary words with follow-up activities to increase student encounters with new vocabulary and to show the varied usage for new words. For instruction to be robust, instruction must be
interactive and involve students in active engagement that has them thinking about word meanings and associations (Beck, McKeown, & Kucan, 2013).

The vocabulary words targeted for this model focused on what Beck, McKeown and Kucan (2013) called Tier Two words, which are made up of high utility words that could be encountered across different content areas and are frequently found in written language compared to conversational language (Hayes & Ahrens, 1988).

**Small-Group Instruction**

**Interactive Read Aloud.** Interactive Read Aloud is a whole-group oral reading activity in which a book or a piece of text is chosen, usually relating to a specific topic being taught, and read aloud. The teacher reads out loud while modeling appropriate reading behaviors and allows students to participate in the discussion of the book while making predictions, clarifying ideas, discussing vocabulary, and building on skills and strategies for comprehension. Particular attention was given to decoding multisyllabic words.

Reading aloud to students is an important learning opportunity in which students actively participate and engage in the reading of text with a proficient reader who models reading strategies that include, but are not limited to, decoding multisyllabic words and comprehension. In addition, “read alouds” that are well-planned and interactive can promote vocabulary development (Beck, McKeown, & Kucan, 2013; DeTemple & Snow, 2003; Brabham & Lynch-Brown, 2002, Senechal, 1997; Sharif, Ozuah, Dinkevich, & Mulvihill, 2003), higher-order thinking skills, and reading enjoyment (Lane & Wright, 2007).
**Shared Reading.** Shared Reading is a whole-group activity in which a piece of text, which has large print and is visible to all students, is read simultaneously by the entire class with the teacher as the leading voice, modeling good reading behaviors. It allows all students to participate in the reading process and builds on comprehension skills. It also allows some students to interact with text that they could not access independently while at the same time more proficient students can practice fluency and other reading behaviors. Shared Reading is also an important support for language acquisition, in that all students can hear words pronounced by a proficient speaker.

Shared Reading is an extension of reading aloud to students and has a positive impact on student’s language and literacy development (Crain-Thoreson & Dale, 1992; Lonigan et al., 1999; Stevenson & Fredman, 1990). The needs of Long Term English Learners (LTELs) are in many ways similar to beginning readers. The Shared Reading method of accessing print encompasses the methodology of read aloud but has the student play an active role in the reading of text. Research has also shown that students acquire vocabulary during Shared Reading that may be more than they would acquire during direct instruction (Ninio, 1983; Kame`enui & Simmons, 1999.) Shared Reading is also effective in building fluency with students (Kuhn et al., 2010; Kuhn & Schwanenflugel, 2006; Schwanenflugel et al., 2009; Stahl & Heubach, 2005). Increased comprehension is also supported by the literature on Shared Reading, especially with the knowledge of the link between vocabulary and comprehension. Numerous studies have shown the impact of Shared Reading on overall comprehension (Coyne & Simmons; Kame`enui, & Stoolmiller, 2004; Fisher, Frey, & Lapp, 2008; McKeown & Beck, 2006).
**Guided Reading.** Guided Reading is a small homogeneous group activity, typically in groups of two to four, in which the students each have an individual copy of a piece of text at instructional level and read aloud at their own pace. The teacher observes and makes notes of students’ reading behaviors and prompts students at the point of error. A prompt is similar to a question in that the teacher encourages the student to use what they know to problem-solve. Prompting is in contrast to the frequent teacher behavior of giving information in the hope that the student will remember and use the information.

Guided Reading is one of the most important reading strategies used in U.S. schools (Fawson & Reutzel, 2000). Guided Reading allows students to independently handle text with support as needed by the teacher. This approach allows teachers to meet the various instructional needs of students as they access text based on their current ability (Fountas & Pinnell, 2001). Begeny, Yeager, and Martinez (2012) found students’ reading fluency increased from this small-group reading instruction as much as or more than comparable students in one-on-one interventions. Research studies have shown that explicit skills instruction that is integrated into small-group reading intervention has significant positive effects on students’ overall reading achievement (Heibert, Colt, Catoto, & Gury, 1992; Taylor, Short, Shearer, & Frye, 1995). The interaction with the teacher as well as other peers also allows the student to benefit from small-group instruction (Slavin, 1987). Though implementation of Guided Reading procedures varies greatly, a study that compared explicit instruction in decoding and fluency followed by Guided Reading against Guided Reading alone, found those with the explicit instruction followed by Guided Reading performed significantly better than their counterparts.
In this same study, ELs in the intervention had significant growth in decoding, word reading, and comprehension with large effect sizes compared to ELs who received only Guided Reading. This shows that explicit skills based instruction within the context of Guided Reading can be an effective reading intervention for students with and without reading difficulties (Denton, Fletcher, Taylor, Barth, & Vaughn, 2014).

**Independent Reading.** Independent Reading was used in the intervention model as the opportunity for students to demonstrate and practice various reading skills. The teacher was able to observe and assess student reading behaviors during Independent Reading and plan further instruction. The amount of Independent Reading done by students is related to growth in vocabulary, reading comprehension, and fluency (Anderson, Wilson, & Fielding 1988; Greaney 1980; Guthrie & Greaney 1991; Taylor, Frye, & Maruyama 1990) and helps students become better readers and have greater content knowledge (Krashen 1993; Cunningham & Stanovich, 1991; Stanovich & Cunningham 1993). There is a significant correlation between the amount of time spent on Independent Reading and reading achievement, verbal ability, and attitude toward reading (Greaney & Hegarty, 1987). In the classroom, Independent Reading is used as ongoing assessment and is a guiding tool for instruction, which is an essential element of education (Wren, 2004). Information gathered from Independent Reading provides information about student skill level and reading performance and allows a teacher to observe reading behaviors. This information can inform decision-making both at the student and class level to determine future instruction.
Purpose of the Study

The research base strongly suggests that instruction for ELs should be no different than that of instruction for native-speaking students, though modifications must be made based on student need. It is of particular interest that the research describes the instruction as the same and then calls for modifications specific to ELs. The primary purpose of this study is to investigate the impact of a research-based small-group intervention on reading achievement. This study will compare typical English language development instruction to small-group intervention using elements identified in the research literature.

Research Questions

Two research questions will be explored:

1. What are the effects of a small-group intervention on overall reading achievement of middle school ELs when compared to typical English language development instruction?

2. What specific aspects of reading achievement are most impacted by a small-group intervention?

Statement of the Problem

Why do some ELs continue to underperform in middle school? What supports can be identified to increase reading achievement in this resistant subgroup?

Importance of the Study

The primary importance of this study is to investigate the potential benefits of a small-group intervention on reading achievement of middle school ELs. Most prior
research has focused on reading achievement in the primary grades. Can research on effective instruction for ELs be used to develop an intervention for older students still struggling with reading? The findings of this study might be used to change the configuration of instruction used to support reading achievement as a method to access content area instruction.
Chapter 2: Literature Review

Reading Achievement

Low reading achievement has been identified as a crisis in the public schools (National Reading Panel, 2000). The National Reading Panel (NRP) (2000) was established by Congressional mandate to determine research-based knowledge about teaching children to read (Pressley, 2002). The research literature on reading achievement in children is voluminous. Research continues to focus primarily on the five critical skill areas originally identified in the report of the NRP: phonemic awareness, phonics, fluency, vocabulary, and reading comprehension (National Reading Panel, 2000), and there is considerable consensus on the content of scientifically based reading instruction (National Reading Panel, 2000; New Standards Primary Committee, 1999; Snow, Burns, & Griffin, 1998). Singly and in combination, these skills and the variables that impact them have been examined in great depth.

Research has found that as many as 20% of children have difficulty in learning to read (Lyon, 1995; Shaywitz, Fletcher, & Shaywitz, 1994). This has been attributed to both lack of understanding the alphabetic principle (Adams, 1990) and inadequate instruction (Slavin, Karweit, & Wasik, 1994). A significant body of research has identified phonological processing as a specific cause of inadequate proficiency in reading (Fletcher et al., 1994; Foorman, Francis, Fletcher, & Lynn, 1996; Liberman et al., 1989; Stanovich & Siegel, 1994; Wagner, Torgesen, & Roshotte, 1994). Foorman, Francis, Fletcher, and Schatschneider (1998) reported that decoding is a necessary skill in learning to read but that phonics rules might just play an attentional role in identifying the
connections between orthographic and phonological units (Adams, 1990). Research has continued to follow the assumption that decoding accuracy is the single best predictor of reading comprehension in primary grades (Stanovitch, 1990; Vellutino, 1991). These research studies demonstrated the positive effects of direct code instruction but suggested that these findings might not generalize to entire classrooms and research that used a large, more diverse sample was recommended.

Foorman et al. (1998) acknowledged that there is a question of how explicit decoding instruction should be and whether it might also be supported implicitly as incidental learning in literature-based instruction. Code-emphasis versus meaning emphasis teaching approaches continue to be a source of disagreement with extremes on both ends of this continuum (Chall, 1983). Despite this ongoing controversy and disagreement regarding “the never-ending debate” about learning to read (Goldenberg, 2000; Smith, 1992), there is agreement based on research about what we know about effective instructional practices for students in primary grades (Coleman & Goldenberg, 2011; Goldenberg, 2000). This research has helped establish how critical it is for beginning readers to develop phonemic awareness and phonics, in addition to reading comprehension and vocabulary skills (Haager, Gersten, Baker, & Graves, 2003). Contrary to this general agreement about what is to be taught, the debate continues on the implementation of this instruction and effective teacher practices (Foorman & Schatschneider, 2003).

In addition to the substantial body of research that focused on phonemic awareness and phonics, a wide variety of important studies have explored various aspects
of literacy acquisition. Fluency has been identified as an important variable in reading achievement and one that is difficult to remediate (Kamps & Greenwood, 2005; Torgeson, 2000). O’Connor, White, and Swanson (2007) evaluated two methods to improve reading fluency and found that reading aloud under repeated or continuous reading conditions resulted in significant improvements in fluency and reading comprehension. Swanson and O’Connor (2009) found that practice in reading fluency had a causal influence on working memory and text comprehension.

The importance of vocabulary development on reading acquisition has been established in numerous studies (Sénéchal, Ouellette, & Rodney, 2006; Yopp & Yopp, 2006). A predictive relationship between language skills and reading comprehension has also been established (Catts, Fey, Zhang, & Tomblin, 1999; Roth, Speece, & Cooper, 2002).

If there is any consensus in the reading research, it is that reading comprehension is the end goal (Fuchs & Fuchs, 2006; Klinger, Vaughn, Boardman, 2007). Using research-based strategies have been demonstrated to increase understanding (Liang, Peterson, & Graves, 2005), and various other access strategies have proven effective (Nation & Angell, 2006; Rapp, van den Brock, McMaster, Kendeou, & Espin, 2007). Mahdavi and Tensfeldt (2013) identified five reading comprehension strategies (peer learning, self-questioning, story grammar and text structure, story mapping and graphic organizers, and vocabulary development) that increased reading achievement.

It is important to consider that the issue of the direction that reading research should take is still an open question. In fact, Pressley (2002) suggested that the
prevailing perspective on reading research is flawed because it is based on clear bias in both the report of the National Research Council, Preventing Reading Difficulties in Young Children (Snow, Burns, & Griffin, 1998) and the report of the National Reading Panel (National Reading Panel, 2000). His criticism of the work reported by Snow, Burns, and Griffin (1998) was that a great deal of emphasis was placed on natural development of literacy competencies and not as much on development through instruction in school. The members of the National Reading Panel were not balanced to the extent that the authors represented the fields of developmental psychology and exceptionality, but not literacy or classroom teaching. The selective references in the report favored the work of the members and focused on lower-order skills. Pressley suggested that the document represented the opinions of the writers and that equally qualified experts might have come up with entirely different conclusions. The review by Pressley of the NRP (2000) recognized that the scope was intentionally limited because of what the panel considered overwhelming evidence regarding early reading instruction. The review only followed the topics of alphabetics, fluency, comprehension, teacher education and reading instruction, and computer technology and reading instruction, but did not consider the instruction needs of older students. Additionally, only research studies that were experimental and quasi-experimental were considered, and a meta-analysis was used to summarize findings. Pressley (2002) agreed that the report was persuasive as far as it went but that other findings that the NRP ignored, because of the inclusion criteria established, might also be valuable. This list of other findings included: instruction at home, television, community resources, whole language instruction,
language of instruction, and school reform movements. Pressley argued that the almost exclusive focus on skills instruction ignored other important research (Gersten & Baker, 2001; Pressley, 1998; 2002). In all, Pressley concluded that the NRP is an inadequate blueprint for reading instruction.

Allington (2005) followed a similar line by identifying important elements of effective reading instruction that were omitted by the NRP (2000). These five “pillars” included: access to interesting text and choice, matching kids with appropriate text, writing and reading have reciprocal positive effects, classroom organization, and availability of expert tutoring. He indicated that any one-size-fits-all curriculum was not scientific and that effective reading instruction is provided in classrooms that organize to provide whole-group, small-group, and tutoring lessons each day. Texts used by children must include those that have an appropriate level of complexity to ensure differentiated instruction. Children also need reading material that is interesting and that gives children the opportunity to choose. A major criticism of the National Reading Panel report was the absence of research on the reading and writing connection when it is known that writing can contribute to reading comprehension. Also absent from the report was any consideration of the benefit of tutoring for struggling readers. Reading Recovery (Clay, 1993) was cited as an example of access to an expert tutor. Allington (2005) concluded that no approach to reading instruction could be considered evidence-based unless these additional five “pillars” are considered in addition to those identified by the National Reading Panel (2000).
English Learner Reading Achievement

Schools continue to struggle to meet their yearly progress goals because of the low literacy outcomes of their ELs (Slavin & Cheung, 2005). Yet as of 2000, 41 percent of teachers had taught ELs, but only about one-eighth of those teachers had received specialized training to address the needs of those learners (National Center for Education Statistics, 2002). As students progress from elementary to middle and high school, ELs have problems with mastering content because of general problems with poor background knowledge, and they must simultaneously master the English language (Calderón, Slavin, & Sánchez, 2011). Taking this into account shows how important effective instruction is for this population. Reading instruction for ELs is in many ways similar to that used with English speakers (Coleman & Goldenberg, 2011; Gersten & Baker, 2000). Having said that, much of the research calls for modification of instruction for ELs with only some agreement about the exact nature of the modifications that would be most effective (e.g., Gersten & Baker, 2000; Gersten, Baker, Haager, & Graves, 2005; Gersten & Jimenez, 1994; Gunn, Biglan, Smolkowski, & Ary, 2000; Haager & Windmueller, 2001; Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanai, 2003; Rousseau, Tam, & Ramnarain, 1993; West, Denton, & Germino-Hausken, 2000).

Not all of the research that considers appropriate instruction for ELs addresses teacher practices (Foorman & Schatschneider, 2003). There has also been no small attention to the question of teacher capacity and preparedness (Garcia, 1996; Lucas, 2010; Lewis et al., 1999; Tellez & Waxman, 2005). A large achievement gap between majority and minority students has been reported, with proficiency levels in reading achievement for
white students at 41%, compared to African American and Hispanic students at 15% (Snow, Burns, & Griffin, 1998). The difficulty when identifying best instructional practices to support students with low reading achievement is that there is very little research examining the interactions between instructional practices that have an effect on literacy outcomes and instructional characteristics (Foorman, Schatschneider, Eakin, Fletcher, Moats, & Francis, 2006). Foorman et al. (2006) examined instructional practices in first and second grade classrooms in low-SES classrooms. The teachers used Reading First adopted materials (Success For All, Reading Mastery, Open Court, or Houghton Mifflin) and teacher effectiveness was measured using the Checklist of Teacher Competencies and a global rating scale of effectiveness and found that there were significant effects, albeit low, of ratings of teacher effectiveness with all literacy outcomes, with a main effect for passage comprehension. There was between-level variance of about 4% that showed highly-rated teachers had students with higher passage comprehension scores than teachers who were low-rated. This study demonstrated that good teaching results in differences in student achievement and that the role of the teacher on influencing student’s reading abilities was positive.

Graves, Gersten, and Haager (2004) stated that, while little is known about what type of instruction best supports ELs or supports their long-term success, instruction that is explicit and focuses on literacy subskills is effective and can help ELs learn to read at a similar rate to native speakers. This study showed that the instruction that was most effective for second language learners in primary grades was interactive, small-group instruction and Guided Reading when grouping was homogeneous, and included explicit
instruction in phonemic awareness and phonics, vocabulary instruction, and comprehension. The researchers investigated literacy instruction in first grade classrooms with large populations of ELs to examine the relations between instructional practices observed and student reading growth. A strong correlation of $r = 0.65$ was found, using the English Language Learner Classroom Observation Instrument, between ratings of literacy practices and gains in oral reading fluency. Oral reading fluency was chosen because of its tendency to correlate with reading achievement in the moderate to high range for ELs and English-only speakers (Baker et al., 2004; NRP, 2000).

Trofimovich, Lightbrown, and Halter (2013) also found that explicit, interactive instruction in alphabetic reading skills with students in Kindergarten through third grade increased their ability to decode and led to fluent word recognition. These improvements then predicted increased oral reading fluency, which was then predictive of performance on reading comprehension tasks (Fuchs & Deno, 1992; Vellutino, Scanlon, & Tanzman, 1994). The identification of students at-risk for early reading difficulties is important, and the instruction provided for ELs should be similar to that of all struggling readers. In a study by Vaughn et al. (2006), first grade EL students were randomly assigned within schools to intervention or control groups, and researchers examined the effectiveness of a seven month, daily, intensive intervention that provided reading instruction in English to students at-risk for reading difficulties. Students made significant gains in beginning reading skills, including comprehension, affirming that ELs who have difficulty in reading, when provided effective instruction, can make progress equal to or greater than that of their English speaking peers.
In English reading intervention studies with ELs, interventions that taught phonics, decoding, where students were actively engaged with texts and were provided comprehension instruction, had significant outcomes for all students who were still-developing English proficiency while learning to read in English (Denton, Anthony, Parker, & Hasbrouck, 2004; Gunn, Biglan, Smolkowski, & Ary, 2000; Linan-Thompson, Vaughn, Hickman-Davis, & Kouzekanni, 2003). Despite these studies not providing explicit instruction in English language development, students did make gains in reading achievement. This supports the research on reading instruction for ELs being similar to that of English speakers.

Opportunities for students who fall behind in literacy acquisition significantly decrease over time (Good, Simmons, & Smith, 1998). There is no doubt that limited English proficiency plays a part in low reading achievement in Hispanic students (Gunn, Biglan, Smolkowski, & Ary, 2000), but research also suggests that ELs, when taught and tested in their primary language, still struggle in literacy (Gersten & Woodward, 1995; Goldenberg & Gallimore, 1991). Explicit instruction in alphabetic reading skills with students in grades Kindergarten through third increased their ability to decode and led to fluency in word recognition (Good, Simmons, & Smith, 1998). Providing reading instruction that is grounded in research supports students in making the necessary gains to close the reading gap so as not to fall further behind their peers. Three key skills are predictive of reading ability: phonological awareness, print knowledge, and oral language. The more proficient students are in each of these areas the more they profit from instruction, read sooner, and read better (Farver, Lonigan, & Eppe, 2009;
Whitehurst & Lonigan, 1998). Instruction provided to ELs should not differ from instruction for all struggling readers. It should be intense, explicit, and systematic, in order for students to make the most gains (Farver, Lonigan, & Eppe, 2009; Good, Simmons, & Smith, 1998; Hatcher, Hulme, & Snowling, 2004; National Reading Panel, 2000).

Coleman and Goldenberg (2010, 2011) summed up instruction for ELs stating that there is a need for explicit instruction in literacy, with early instructional focus around NRP (2000) identified best instructional practices in phonemic awareness, phonics, fluency, vocabulary, reading comprehension, and writing. But for students to mirror the progress of their English speaking peers, instruction must be modified to be clear, focused, and systematic, with increased interactive teaching. Coleman and Goldenberg (2010; 2011) described interactive teaching as instruction that allows for increased student interaction and opportunities for structured talk. This allows students to practice using language with a purpose that is embedded in instruction.

**Research on Reading Improvement for English Learners**

Most reading research of the past in the U.S. is based on native English speakers, and not until more recently has the research examined the struggles of the English learner (Martinez, Harris, & McClain, 2014). This population, when compared to their non-EL counterparts, is underperforming (Orosco & Klinger, 2010).

EL students have difficulties in word, vocabulary, and comprehension skills in comparison to their peers who are reading at grade level (Swanson & Deshler, 2003) in addition to their struggles with oral language development. There is an urgent need for
effective instructional methods that can improve academic achievement in reading for EL students (Martinez, Harris, & McClain, 2014). The research for this study addressed these issues in order to provide the necessary support for students to learn sufficient basic reading skills in order to access grade level text. Schools have recognized that they need to do a better job supporting ELs and that adopted programs are weak and do not address the needs of long-term English learners (LTEs) to support them to proficiency, instead allowing them to fall further behind their non-EL peers and limiting their life options (Olsen, 2010).

To promote reading achievement in ELs, effective instruction must support oral language development and include explicitly taught vocabulary, assessment to inform ongoing instruction, and instructional strategies provided in small groups to meet individual needs (e.g., Effective Literacy and English Language Instruction for ELs in the Elementary Grades: A Practice Guide (2007); Developing Literacy in Second-Language Learners: Report of the National Literacy Panel on Language-Minority Children and Youth (2008); Educating English Language Learners: A Synthesis of Research Evidence (Genesse, 2006).

**Fostering Academic Language.** LTEs after all of their years in English Language Development programs display language proficiency in their Basic Interpersonal Communicative Skills (BICS) but in order to be fully successful in an academic setting must develop Cognitive Academic Language Proficiency (CALP). This requires experiences in classrooms that allow them to understand the depth and complexity of their second language acquisition through discussions based around text,
readings, and academic-based discussions (Cummins, 2000). Cummins (1984; 2000) went further to say that EL students are a very heterogeneous group of learners where each student’s needs are different and instruction must be differentiated based on what student’s strengths and weaknesses are. A one-size-fits-all approach to reading instruction will not work with ELs (Martinez, Harris, & McClain, 2014).

**Explicit Vocabulary Instruction.** Many ELs can develop reading decoding skills fairly quickly, but even after they meet fluency benchmarks, it is still necessary to teach vocabulary explicitly to build and support comprehension (Freeman & Freeman, 2003). Comprehension simultaneously requires readers to fluently decode and understand what they decode in order to successfully access text. Repeated exposures to new vocabulary are required to learn and be able to apply newly learned words, with research demonstrating students’ need to encounter a word a minimum of a dozen times in multiple settings to internalize it (McKeown, Beck, Omanson, & Pople, 1985).

**Ongoing Assessment to Inform Instruction.** It is important to frequently monitor the academic progress of individuals and groups of students to inform and modify instruction to meet their needs (Shinn, 1998). Frequent progress monitoring is a main component of a Response to Intervention model (RtI) and research using this framework suggests it can be highly effective for EL students to support students with achievement difficulties (Linan-Thompson, Vaughn, Prater, & Cirino, 2006; Orosco & Klinger, 2010). Using data to drive instruction will allow teachers to differentiate students with different weaknesses in reading and provide accommodations that will scaffold English reading for ELs. Students who show mastery in reading achievement
can then progress to increasingly difficult texts while students who are not achieving acceptable academic progress can have instruction altered or intensified to support areas that they may be lacking.

**Small-group Literacy Instruction.** Small-group instruction could be shown to be the best way to provide reading instruction for ELs (Avalos, Plasencia, Chavez, & Rascon, 2007; 2008). Small-group instruction in reading should have student clustered homogeneously in groups of three to six and meet daily for a minimum of thirty minutes (Gersten et al., 2006). Research using these methods with native English speakers has been found to be successful, and Kamps et al. (2007) showed that these same interventions also benefitted ELs.

**Long Term English Learners.**

In addition to the research on ELs, there is increased attention to what are described as long term English language learners (LTELs), those who have been enrolled for six or more years and have not made sufficient progress in achieving English proficiency (Olsen, 2014). Olsen (2014) further describes this population as those students who have typically been enrolled in U.S. schools since Kindergarten but as they enter secondary schools still read below grade level with a resultant lack of success in all of their schoolwork. Because of these skill deficits, students enter secondary schools unable to benefit from instruction and remain in what threatens to be a permanent dead-end. The dual challenge of learning a language while mastering the same content as their English fluent peers requires a significant and carefully planned program of intervention and instruction to meet the unique needs of the population (Olsen, 2010). Specific
language deficits include language that is not precise enough for deeper expression because of a lack of vocabulary, syntax, and grammar, and lack of literacy skills to understand vocabulary used in textbooks. In the guide developed for teachers, *Meeting the Unique Needs of Long Term English Language Learners*, eight components of successful school programs were identified: (1) specialized English language development that emphasizes writing, academic vocabulary, active engagement, and oral language, (2) placement in heterogeneous and rigorous grade-level content classes with differentiated instructional strategies, (3) explicit academic language and literacy development across the curriculum, (4) primary language literacy development, (5) systems for monitoring progress which drive support, (6) focus on study skills, metacognition, and learning strategies, (7) data supplied to students and their parents regarding assessments and testing accommodations, and (8) developing an affirming school climate and the use of relevant texts (Olsen, 2014).

Common Core State Standards (CCSS) have caused a shift in thinking regarding instruction in classrooms in that these standards stress higher-order thinking skills that include, but are not limited to, the ability to identify main ideas, to compare and contrast, and to identify cause-and-effect relationships in varying degrees of complex informational texts that students are required to take on independently (National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010).

Students who have difficulty accessing text at grade level are at a severe disadvantage and are less likely to be academically successful because they lack the basic
reading skills necessary to be able to access Common Core curriculum. This problem becomes much more challenging when trying to teach reading effectively to middle school poor readers because of their difficulties in word, vocabulary, and reading skills (Swanson & Deshler, 2003).

No particular set or combination of instructional strategies has been identified as best practices for middle school LTEs. Research efforts are ongoing to develop an effective model to support reading achievement in middle schools. O’Connor et al. (2015) designed an experiment to improve reading skills using history content that focused on both English language learners and students receiving special education services. Citing the Common Core Standards (National Governors Association for Best Practices & Council of Chief State School Officers, 2010) call for students that are able to read complex information text, this design-based research focused on middle school reading improvement research to develop an intervention. This program emphasized decoding, vocabulary, and comprehension of expository text. The specific cycles of this program included: (1) decoding multisyllabic words, (2) learning academic vocabulary, and (3) identifying cause and effect relationships. Results showed gains in performance in each of the cycles and supported the conclusion that a model like this has the advantage of improving reading achievement in a way that does not compromise content area study but, in fact, supports increased achievement in content areas.

The number of ELs in Kindergarten through twelfth grades in the U.S. has increased over 60 percent in the last ten years, becoming the fastest growing group of students in U.S. schools. This increase brings difficulties with language and problems
that arise with accessing content in English for this population. As a result schools struggle to meet the needs of these students who eventually become underserved and underachieving (Olsen, 2014). No Child Left Behind identified these students as a significant subgroup in need of focus, but schools are far from making any significant impact on ELs, causing them to become LTEs. Despite the call to action to meet the needs of all students, particularly ELs, this subgroup’s needs have remained unaddressed, especially in California where almost one-third of all ELs are in grades six through twelve and 59 percent of all secondary school ELs are considered to be long term (Olsen, 2014). It is estimated that somewhere between 50 percent to 70 percent of ELs in secondary schools were born in the U.S. (Batalova, Fix, & Murray, 2007; Capps et al., 2005, Olsen, 2010). The reality that students who become long term ELs are progress through the programs designed to meet their needs without increased success.

What is known about LTEs is that they are capable of social functioning in both their home language and in English, but their academic skills related to oral language, vocabulary, reading, and writing are inadequately developed for them to be successful in school. These students have participated and continue to participate in English Language Development programs that are designed for students who are considered newcomers to education in the U.S., with the assumption that they have received adequate schooling in their home country (Menken et al., 2012; Zen, 2001). These programs do not provide the skills and academic language necessary for LTEs (Callahan, 2005; Menken, 2013) and, even after participating in these programs for a substantial number of years, students’
instructional needs have not been met, causing them to severely underperform compared to their English speaking peers (Jacobs, 2008; Reeves, 2006).

As schools progress further into the Common Core State Standards (CCSS; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010), the shift in focus of instruction now stresses the importance of higher-order thinking skills as students access complex informational texts (O’Connor et al., 2015). This is problematic for ELs in that many LTELs have difficulty reading any kind of text near grade level, especially middle school students who are transitioning to high school. This puts middle school LTELs at a severe disadvantage with their peers as they start the transition to high school.

**Evidence-based Reading Instruction**

Foorman and Torgensen (2001) stated that evidence-based research has been identified and that these conditions must be in place for effective reading instruction. These strategies are based on instruction focused on phonemic awareness, phonics, fluency, vocabulary, and reading comprehension. For students who are at-risk for reading failure, this instruction must be more explicit, intensive, comprehensive, and supportive since these children acquire skills more slowly. The researchers also stated that instructional pacing plays a key role in addressing students with difficulties learning to read. Phonemically explicit instruction is more effective than instruction that is not phonemically explicit for this population (Juel & Minden-Cup, 2000; Foorman et al., 1998; Torgensen, Wagner, Rashotte, Rose, Lindamood, Conway, & Garvin, 1999).
Instruction using phonemically explicit instruction can increase opportunities for students to close the achievement gap, as can increasing the amount of instruction.

Time spent on learning and its relationship to student achievement are well documented in the research (Borg, 1980; Caldwell, Huit, & Graeber, 1982; Frederick & Walberg, 1980; Karweit, 1983). There is an important relationship between time allotment to instructional practices and student achievement (Cotton & Wikelund, 1990; Gettinger, 1984), but it is not enough to increase the amount of instruction to achieve learning gains. Most studies examine allocated time or time in class, some examining engaged time of students participating in learning activities. Few study academic learning time or when actual learning occurs (Aronson, Zimmerman, & Carlos, 1998).

For learning to occur, students must be attentive, and there must be appropriate instruction (i.e., effective and meaningful instruction, appropriate level, and engaging); this happens with proper pacing, grouping, and materials (Karweit, 1983). The assumption in classrooms is that learning occurs when the student is attentive to appropriate instruction, but learners have varying degrees of attentiveness which can differ significantly depending upon their interest and distractions (Karweit & Slavin, 1981). The effects of teaching on learning are mediated by student behaviors, therefore no direct relation between instruction and student achievement can be made. Time allocated to instruction is necessary for student achievement but in itself is not enough to ensure learning. Curriculum allocation, interactive teaching, engagement, quality of instruction, and student ability play vital roles in addition to time on instruction to

**Reading Instruction in Middle School**

When specific reading difficulties are identified and an intervention is designed to address the specific needs of students, adolescence is not too late to intervene. Students can benefit from explicit interventions, but are unlikely to significantly change in a short period of time. Adolescent struggling readers benefit most from improved knowledge about concepts and vocabulary in content areas because this knowledge is underdeveloped compared to their peers reading at grade level. Intervention for students who are in Grades 6, 7, and 8 that focuses on vocabulary, word knowledge, and comprehension can remediate difficulties but could take several years to close the gap (Scammacca et al., 2007; Vaughn et al., 2011; Vaughn & Fletcher, 2010).

O'Connor, Beach, Sanchez, Bocian, and Flynn (2015) developed an intervention designed to measure reading growth for both special needs learners and English language learners. The study was developed as design-based research (DBR) (Smith et al., 2013) focused on persistent practice problems and defined by its collaborative, iterative, and systematic nature (Penuel, Fishmand, Cheng, & Sabelli, 2011). Citing research on reading improvement in middle school, three reading components were emphasized in instruction using history curriculum: (1) a decoding strategy to identify word patterns and morphemes across multisyllabic words, (2) vocabulary, where meaning was taught through examples, conversation, and connected to other words in instructional texts, and (3) vocabulary focused on a cause and effect strategy. Both groups showed
improvement, with students in intervention showing stronger gains in vocabulary and comprehension strategies. Students with disabilities scored at similar levels as typical students. Because of time limitations on reading instruction, a model that imbeds efforts to improve reading achievement in content area study is an important finding.

Swanson, Hairrell, Kent, Ciullo, Wanzek, and Vaughn (2011) completed a meta-analysis of 27 studies on the effects of reading interventions using social studies content for students with learning disabilities in Kindergarten through Grade 12. Strategies identified in these various studies included the use of graphic organizers, mnemonics, reading and answering questions, guided notes, and multicomponent comprehension instruction. They found an effect size of 1.02 for these programs and concluded that social studies content could be used effectively as the basis for reading instruction. One important finding was that a greater effect size for older students was encouraging because of the demands placed on these students to learn from informational text. Of interest for further research was the expressed need for studies that used random assignment of students and standardized measures.

Gamex and Lesaux (2015) indicated the need for a better understanding of the foundational processes of the classroom environment where the development of reading comprehension skills are expected to take place. The study was designed to explore the effects of the language used by teachers when engaging their students in instruction and exposure to the complex words that were necessary to support reading. They described the focus on the classroom environment as a decision based on the sociocultural theories of Bruner (1978) and Vygotsky (1986) where social interaction is an integral part of
developing language. This study focused on measuring the teacher’s use of language primarily focusing on the use of sophisticated vocabulary and the total amount of talk. Previous research of this nature focused on early childhood and this research extended into middle school to consider the effect of teacher’s language on more complex language processes such as reading comprehension. Findings were that teacher talk was a significant source of variability in reading comprehension scores and a primary conclusion was that this work supported sociocultural theories that hypothesize that exposure to varied language and literacy experiences guided by experts has a beneficial effect.

Kieffer and Lesaux (2008) examined the effects of derivational morphology (students’ ability to extract meaningful base words from their derived forms, e.g., popular from popularity) on reading comprehension in English language learners with the hypothesis that students’ awareness of morphology could explain differential outcomes in two ways: (1) depth of vocabulary knowledge compared to breadth of vocabulary, and (2) a variation of this awareness might lead to differential success in vocabulary learning. Findings were that this skill strengthened between fourth and fifth grade and became a significant predictor of reading comprehension. These findings justified the recommendation that the inclusion of derivational morphology in reading instruction for ELs was justified. Kieffer and Lesaux (2010) concluded from previous research that, though the complex nature of vocabulary knowledge was recognized, the dimensionality of vocabulary knowledge was rarely addressed. This study identified three distinct dimensions of vocabulary: (1) breadth (number of words known compared to depth
which is the richness of knowledge about words known), (2) contextual sensitivity, and (3) morphological awareness. Findings included that morphological awareness and contextual sensitivity could be distinguished from knowledge of specific word meanings. They also found a limited distinction between breadth and depth of vocabulary knowledge for specific words and concluded that this variable did not represent a meaningful distinction in individual differences. In addition, ELs performed significantly lower than learners with English as a first language. Compared to national samples, these two groups were closer than expected. This finding was interpreted as consistent with the metalinguistic benefits of bilingualism but only relative to linguistic knowledge and not to morphological awareness.

Pacheco and Goodwin (2013) studied the importance of middle school students’ understanding of morphemic relations and the use of root words, prefixes, and suffixes to support word learning and strengthen vocabulary acquisition. The study cited Anglin (1993) who found that younger readers favor a part-to-whole strategy and Tyler and Nagy (1989) who found that middle school readers are more likely to use a root word strategy. Findings resulted in numerous morphological teaching recommendations including, encouraging students to (1) chunk into meaningful parts, (2) make connections to other words, (3) learn morphology connections to academic language and text, and (4) engage in problem-solving across languages using their native language to build English word knowledge.

Kieffer (2010) examined the effects of both socioeconomic status and English proficiency on late-emerging reading difficulties. Drawing on a nationally representative
sample, substantial proportions of both ELs and native English speakers were found to be experiencing reading difficulties in middle school grades (9% and 4%, respectively), however significantly greater for ELs (all \( ps >.05 \)). The analysis determined that, taking into account SES, the only statistically different risk was for early-emerging reading difficulties and the differences between ELs and native English speakers were not significant for upper grades or middle school. The study concluded that low SES was a primary factor for reading difficulties in ELs though even students from high SES showed some risk and that the challenges of reading for adolescents is not limited to those students from low SES backgrounds.

Vaughn, Roberts, Wexler, Vaughn, Fall, and Schnakenberg (2015) conducted a study of 9\(^{th}\) and 10\(^{th}\) graders, comparing a small-group intervention to a control group who participated in an elective. Three treatment groups were established: (1) business as usual (reading without dropout intervention), (2) reading with dropout prevention, and (3) dropout prevention without reading. The dropout supports were a modified version of Check & Connect (Anderson, Christenson, Sinclair, & Lehr, 2004). Check & Connect is an intervention model designed to promote student engagement through relationship building, problem-solving, and persistence. Students in reading treatment demonstrated significant gains on reading comprehension (effect size = .43) (though scores were still in the low average range) with resultant improved grades in social studies. The use of the dropout prevention model was recommended as part of reading intervention for older students.
Vaughn, Wexler, Leroux, Roberts, Denton, Barth, and Fletcher (2012) developed and examined the effects of small-group, intensive reading intervention for eighth graders who had demonstrated low response to a response to intervention (RtI) model. The treatment group was provided a 50-minute reading intervention during an elective period, that was characterized as a clinical teaching model, that used data to inform decision making and was designed to address individual needs in phonics, word reading, fluency, vocabulary, and comprehension. Based on student need, the treatment was designed to include specific minutes of instruction and was adjusted biweekly based on progress monitoring. The control group was business as usual that might have included various reading interventions designed by the school. Results showed that the treatment group had significantly higher scores in comprehension (effect size = 1.20) and word identification (effect size = .49) though both groups failed to reach grade level proficiency.

Edmonds, Vaughn, Wexler, Reutebuch, Cable, Tackett, and Schnakenberg (2009) compiled a synthesis of intervention studies conducted between 1994 and 2004. Interventions reviewed addressed decoding, fluency, vocabulary, and comprehension that measured effects on reading comprehension. Of those studies, the effect size on comprehension was 0.89 and 0.34 on word level. These studies also concluded that (1) students reading comprehension improved when taught reading comprehension skills, (2) word-level intervention resulted in only small to moderate gains, and (3) fluency did not always result in improved comprehension. The primary practice recommendation was
that the value of providing instruction that targets comprehension skills was clearly demonstrated.

Bhattacharya and Ehri (2004) compared two word-level interventions, one that analyzed graphosyllabic units and one that decodes words as unanalyzed wholes. Results demonstrated the importance of analyzing words when compared to whole word instruction at the third grade level and less so at fourth and fifth. The effect of word-level training on reading comprehension was not measured.

Vaughn et al. (2010) examined 6th grade students with reading difficulties in a year-long study that focused primarily on class small-group instruction. The intervention focused on word recognition, vocabulary, fluency, and comprehension. All students in the study received core instruction from teacher who received professional development from the researchers. In-class intervention received 25 lessons over seven to eight weeks that emphasized word study and fluency. The next 17 to 18 weeks emphasized vocabulary and comprehension, with practice time for word study and fluency. The last eight to ten weeks maintained the vocabulary and comprehension focus in the intervention. The study found that in-class intervention students showed gains on decoding, fluency, and comprehension measures albeit small compared to the control group. Intervention students did score significantly higher on word attack ($d = 0.15, p = .009$), spelling ($d = 0.22, p = .013$), passage comprehension ($d = 0.19, p = .072$), and phonemic decoding efficiency ($d = 0.19, p = .071$).

In a study designed to expand the research base on the implementation and effectiveness of academic vocabulary programs designed for middle school students who
are language minorities, Lesaux et al. (2010) examined academic vocabulary intervention instruction over an 18-week period compared to district-adopted English language arts curriculum with the understanding that the relationship between vocabulary knowledge and reading comprehension is reciprocal (Freebody & Anderson, 1983; Stanovich, 1986). Instruction focused on Academic Language Instruction for All Students (ALIAS) with language minorities for 45 minutes a day, four days a week, implemented in the English language arts block. The study demonstrated significant effects on vocabulary taught ($d = 0.39; p < .0001$), morphological awareness ($d = 0.20, p = .0003$), word meanings presented in expository text ($d = 0.20; p = .0227$), and for reading comprehension ($d = 0.15; p = .0568$) and added to the literature base on the importance in developing effective vocabulary and reading interventions for middle school language minority students.

Vaughn et al. (2011) randomly assigned students to classrooms that implemented Collaborative Strategic Reading (CSR) or “business as usual” for 18 weeks, 2 days a week, 50 minutes a day. The CSR instruction focused on phonics, reading, comprehension, writing, and other language arts instruction with similar focus. Configuration of CSR groups also varied between whole-group, small-group, partnered, and one-to-one. Both conditions used the same curriculum over the same amount of time. The treatment condition used the strategies of previewing, Click and Clunk, Get the Gist, and question generation and summative statement writing. The study found that students who participated in the CSR intervention outperformed the control group on the Gates-MacGinitie ($\chi^2 = 9.91; p < .01$), but significant differences were not found on the
AIMSweb (Reading Curriculum Based Measure) or TOSREC (Test of Silent Reading Efficiency and Comprehension). This study showed the positive impact that can be made on the reading achievement of middle school students even with intervention twice a week.

Vaughn and Fletcher (2012) conducted a multiyear study with secondary students with reading difficulties that focused on providing high levels of teacher support and scaffolding in multisyllabic word reading, daily vocabulary instruction with appropriate definitions and examples, and comprehension questioning analyzing text and rereading to identify answers. Instruction varied throughout the intervention based on student needs and changes in competency. The study found that instruction in the intervention was associated with gains in decoding, reading fluency, and comprehension ($d = 0.16$) in comparison to students receiving classroom instruction alone. There were no statistically significant differences between students who received small-group instruction ($n=5$) versus those in a larger group ($n=10-14$). This demonstrated the efficacy of interventions in middle school, but it is important to note the small effects because older students may require more intensive and longer interventions that are designed to meet individual needs.

Vaughn et al. (2012) designed a study to examine the effects of an intensive reading intervention on eighth graders who demonstrated little response to intervention provided in sixth and seventh grade. The researchers provided the intervention to students in grade 6 and continued to provide intervention in grade 7. Students in this intervention study for eighth graders were members of the original treatment group. The
intervention was designed for small groups (two to four students) in which decoding, vocabulary, text comprehension, and motivation were the focus. Students were taught 50 minutes daily during an elective period. Significantly higher scores were found for the treatment condition on standardized measures of comprehension ($g = 1.20$) and word identification ($g = 0.49$). Overall the study supports the implementation of intensive reading interventions for adolescent students although understanding how best to meet their individual needs remains a challenge.

In a randomized field trial, Lesaux et al. (2014) conducted a classroom-based vocabulary intervention designed to improve overall vocabulary knowledge, morphological awareness, and expository text comprehension. Language minority students with underdeveloped vocabulary skills make insufficient progress in literacy outcomes in comparison to native language speakers. Focusing on academic vocabulary with words that are used across academic content areas can support struggling learners’ outcomes (Baumann & Graves, 2010; Nagy & Townsend, 2012). Over the course of twenty weeks, in an intervention lasting 45 minutes daily, the study found significant intervention effects on academic word mastery ($d = 0.41, p < .0001$), for academic words present in text ($d = 0.17, p < .002$), and comprehension of expository text including academic words ($d = 0.15, p = .0076$). These data showed promising results for interventions designed to meet the language needs of students.

**Research on Instruction Using Scaffolding**

Typical teacher training materials endorse instruction using scaffolding as a primary teaching concept (Galda & Graves, 2007). There is a substantial research base
on using scaffolding, usually citing the work of Vygotsky (1978) and his concept of the zone of proximal development (ZPD) as its beginning point. ZPD, in general, defines the range in which children learn, from those tasks that the students can do independently to those tasks on which they need support. This concept supports various methods that emphasize teaching that uses the gradual release of responsibility from high teacher support to student independence. Wood, Bruner, and Ross (1976) described scaffolding as a “process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts”. The RAND Reading Study Group (2002) developed an agenda to identify effective ways to engage student and teach reading. A recommendation primary in this report included the fact that students acquire literacy through social interactions with more expert peers and adults. A strategy that implements this concept is that the students are able to perform tasks that are slightly beyond their level of independence with the support of a knowledgeable teacher.

Clark and Graves (2005) described the value of scaffolding as allowing an activity to be whole rather than segmented into parts, representing a distinct advantage in comprehension. They also described the gradual release of responsibility model as one that allows teachers to provide various levels of support, where the teacher models and then uses guided practice as a joint responsibility, and as a transition to student independence.

A number of particular models of scaffolding have been reported as effective, two of the most notable being The Scaffolded Reading Experience (SRE) (Graves & Graves, 2003) and Direct Explanation of Comprehension Strategies (DECS) (Duffy, 2002). The
SRE model uses a flexible framework involving pre-reading, during-reading, and post-reading activities using levels of support identified by the teacher. The model emphasizes that the teacher support only at the level necessary to succeed without intruding on the cognitive effort needed to learn and improve. The DECS is designed to teach specific strategies also using pre, during, and post activities to support the learner. What distinguishes this model is the pre-teaching of strategies that will be needed for text selection. A related model, Reciprocal Teaching (RT) (Palincsar & Brown, 1989) is also identified as primarily a scaffolding model. In RT, the teacher leads the students through four comprehension strategies: questioning, summarizing, clarifying, and predicting. The dialogue between teacher and students is a primary tool to support students at various levels to reach independence.

Applebee and Langer (1983) argued that the use of extensive practice of component skills in reading has been adopted at the expense of important aspects of learning to read, like motivation. They characterized school learning as a series of problems that must be learned in context and that scaffolding involves a process where the teacher identifies the difficulties of the new task, selects strategies that can be used to overcome those difficulties, and structures the activity so that teacher support can be provided at the point of difficulty. Anderson and Armbruster (1990) identified what they called maxims for good instruction. These principles included four areas fundamental to the concept of scaffolding: (1) instruction should be framed in complete tasks (whole-to-part) because learning of subskills is facilitated within the context of the whole, (2) learning best occurs in real-world situations using tasks that are rich and complex, (3)
instructional flexibility that supports multiple perspectives helps students develop the
cognitive flexibility for coping with complexity, and (4) instruction needs to recognize
the progression of learning and the supports necessary to reach independence.

The review of the research did not yield a definitive model for small-group
instruction for middle school ELs. The model developed for this study used those
strategies with substantial support in the research literature and developed the conditions
to examine their effectiveness. A cycle of instruction that delivered best practices applied
using a scaffolding model of instruction was tested to compare this instruction with
typical instruction for ELs. The results of this study will add to the research base for
effective instruction for LTELS.
Chapter 3: Methods

This study examined the differences in reading achievement for ELs who received a small-group reading intervention when compared to a group receiving typical language arts development instruction. The methodology for this intervention was derived from the current related research. Both standardized tests and curriculum-based measures served as outcome measures.

Participants

Students. Sixth, seventh, and eighth graders (N=53) participated in this study. The sample comprised students from nine different classrooms. This school was selected because of the high percentage of Hispanic enrollment, specifically the number of LTEIs who were reading two years or more below their grade level.

Students selected for this study were designated as ELs based on the administration of the California English Development Test (CELDT) by the school. Developed by the California Department of Education, the CELDT is a required skills test for all students in Kindergarten through grade twelve whose home language is not English. The test is used to identify students who need to improve their skills in listening, speaking, reading, and writing in English. The CELDT establishes proficiency ranges: Beginning, Early Intermediate, Intermediate, Early Advanced, and Advanced for each of the domains of listening, speaking, reading, writing, and comprehension, as well as an overall score. Students were classified by their overall CELDT English proficiency category. The sample of 53 students included 100% Hispanic students, with 100% reporting Spanish as the primary language spoken in the home, and 100% of the students
receiving federally funded free and/or reduced lunch. Table 1 summarizes CELDT scores for all students in the study population, grades 6 through 8.

Lexile was measured using the Scholastic Reading Inventory (SRI) (2014). The SRI is a research-based, online adaptive assessment designed to measure a student’s reading skills. Table 2 summarizes the SRI Lexile levels for the study population. Lexile level is currently used by the school to determine students’ grade level equivalent reading ability. The assessment uses both fiction and non-fiction texts with in-context vocabulary embedded within the assessment.

**District and School Demographics**

*District and school.* The participating school was located in a large urban district in southern California. Data for the 2014 school year indicated that the school district in this study served more than 22,750 students Pre-K through eighth grade in 26 elementary schools and six middle schools. Approximately 90% of the entire district population was Hispanic students. The school that participated in this study was a low-SES school. The school was 90% Hispanic, 3.6% White, 2.3% Asian, 3% African-American, 2% other, with 100% participating in the federally funded free and/or reduced lunch program (FRLP).

*Teachers.* Two male teachers with primary responsibility for intervention with low performing students participated this study. Both were experienced teachers with the proper credentials for teaching reading at the middle school level in addition to the CLAD (Cross-cultural Language and Academic Development) certificate. Both teachers
had a Master’s Degree in Education with more than ten years of teaching experience in both primary and middle school.

**Procedures**

Students were randomly assigned to either the Control group or the Experimental group based on an alternate ranking of their Lexile level. A stratified sample was established by determining low, middle and high Lexile scores. Instruction in the Control group was primarily whole-group instruction. Instruction in the Experimental group included whole-group instruction and eight small groups based on Lexile levels and subsequent assessment. Students in all three Lexile ranges (low, middle, and high) participated in intervention groups because students were a minimum of 2 years below their grade level expectation. Table 3 shows group assignment by Lexile level.

**Measures**

Standardized tests and curriculum-based measures were administered to assess various components of reading achievement.

*Gates-MacGinitie Reading Tests.* The Gates-MacGinitie is a paper-and-pencil, group administered reading survey test. The Mature Reading: Levels 3-10/12 was selected for this study. It includes vocabulary and comprehension sections. Form S was used as the pretest and Form T was used as the posttest. These scores can be linked to the Framework for Reading that is used by the school.

*Scholastic Reading Inventory (SRI).* The school measures Lexile level using the Scholastic Reading Inventory (SRI). The SRI is a computer adaptive test that presents students with varying levels of expository texts and literature. Lexile is used to match a
student’s reading level with appropriate texts. This test was administered to both the Control and Experimental groups as a pre-posttest. Reader measure consistency reliability was reported as .848 for Grade 6, .860 for Grade 7, and .877 for Grade 8. Construct validity was reported as .792 to .824 matched to the SAT 9/10 (Stanford Achievement Test, a norm-referenced test), and .817 to .835 on the SSS (Sunshine State Standards Test, a criterion-referenced test).

**10 Minute Writing Test.** The 10-Minute Writing Test (Leal, 2005) is a procedure to assess student writing for complexity, accuracy, and fluency. Word writing skills can be assessed and compared to typical grade level performance. This writing sample demonstrates student vocabulary selection and use. A student writing sample can be analyzed for fluency (the total number of words attempted), accuracy (the number of accurate words), and complexity (number of syllables). Writing fluency can be compared to reading fluency where speed and accuracy are measures of student proficiency. Using complexity as a measure considers the same principle as readability level (Fry, 2002). This test was administered during weeks one, five, and ten.

**Test Of Silent Contextual Reading Fluency.** The Test Of Silent Contextual Reading (TOSCRF) is a measure of reading comprehension and general reading ability. It includes measures of a student's essential contextual reading abilities (i.e., word identification, word meaning, word building, sentence structure, comprehension, and fluency). This test was administered as a pretest and posttest.

**The Maze Test.** The Maze test was used as a curriculum-based measurement (CBM) of reading growth. Reading growth was measured three times, during weeks one,
five, and ten. The Mask test involves a grade-level text selection where students select the correct word from three choices, two of which are distractors. Reliability for testing with a one-month interval has been reported to be approximately .83 (Shin, Deno, & Espin, 2000). The same passages used in text comprehension were used in the Maze test.

**Measure of Text Comprehension.** Students in both groups were assessed using comprehension questions at their grade equivalent Lexile level. These data were collected during weeks one, five, and ten. Four multiple-choice questions were used for each passage. A passing score was established at 75%. Reading passages were selected from ReadWorks, which provides free reading materials based on Lexile level, grade, and various types of text (i.e. informational and narrative). Reading comprehension questions are provided for each selection.

**Graded Word Passages.** Students in the Experimental group were assessed three times (weeks 1, 5, and 10) for reading accuracy on text passages graded by student’s current Lexile level. Student performance expectation was 95% accuracy to establish the level of performance. This procedure was used to modify both text selection and instructional emphasis for small-group instruction.

**Procedures for Experimental Group Intervention.**

Texts for the intervention group were selected from ReadWorks. ReadWorks in an online site aligned to Common Core State Standards that provides reading passages, both fiction and non-fiction free to teachers to support academic achievement for all students. Passages can be selected based on grade, theme, topic, and Lexile level. For
the purpose of this study, nonfiction informational texts were used and selected based on matching Lexile levels for students.

The teacher of the experimental group followed these specific intervention procedures:

Whole-group instruction preceded the four-step reading cycle. Whole-group instruction was scheduled daily for a period of 10-15 minutes depending on the length and complexity of the text selection. In whole-group instruction, the teachers provided specific instruction on multisyllabic word reading. Students were provided grade-level appropriate words and strategies on how to decode an unfamiliar word through the use of syllable patterns and morphology. This instruction was integrated into specific vocabulary lessons. Multisyllabic words make up most of the unfamiliar vocabulary for middle school students, and these words also tend to provide the information in content-area reading (Shaywitz, 1996). Vocabulary instruction that focuses on Tier Two words (Beck, McKeown, & Kucan, 2013) will support the growth of academic language that fosters reading comprehension. Students were given student friendly definitions of these words and had multiple exposures to them in text. Students kept track of these words in a vocabulary log. Vocabulary logs were checked weekly for accuracy of definitions and use of the words in sentences. Errors in sentence use were included as part of subsequent whole-group instruction and targeted specifically in reintroducing the book in small-group intervention sessions. When students were not participating in a small-group intervention they continued to work on the texts introduced in whole-group instruction.
Each of the intervention groups met three times per week for 10-15 minutes depending on the length and complexity of text. Interactive Read Aloud was Step 1 when the teacher read to the students. The students listened, participated in a discussion of the text, and were attentive to the print. The Interactive Read Aloud in the intervention differs from the traditional read aloud used in the classroom in that the students had their own copy of the text and tracked text line by line. The teacher began this step by introducing the book with careful attention to the meaning of the text, unknown words, unique phrases, and irregular spellings. This step had the additional purpose of increasing academic vocabulary and oral comprehension.

Step 2 was Shared Reading. Shared Reading was where the teacher and the students read the text together. The lesson began with an introduction but at a lower level of support than the one provided in Step 1, Interactive Read Aloud. The use of the same text was designed to provide the child with a reduced level of teacher support in that the task of reading is shared. In Shared Reading, the teacher and the students read the text in unison. The students had a copy of the text and tracked print line by line. The teacher always remained the guiding voice during this step of the reading.

In Step 3, Guided Reading, the students handled the text. Each student had an individual copy to use as instruction began. In Guided Reading, the students read the text at their own pace and the teacher observed and prompted the students to use independent strategies to problem solve. Students were encouraged to use what they learned during the Read Aloud and Shared Reading steps of the cycle. The critical role for the teacher in this step was to prompt students to use what they know rather than giving them the
information. It is a frequent error to give students information too soon, rather than helping them use what they know to problem solve on their own.

Independent Reading is Step 4 and was the teacher’s opportunity to assess the impact of the instructional cycle and design next steps for teaching. The students read the text independently and the teacher recorded the errors that the students made as they read through the passage. This information was used to determine the necessary next steps for instruction. Students not being assessed returned to the whole group and completed the comprehension questions of the text selection.

**Control Group Procedures**

The intervention for the students who participated in the Control group was the English language development curriculum and material approved by the district for use with low-performing ELs. This intervention can be described as primarily whole-group with emphasis on increasing language skills for language learners, including LTELs, with instruction focused on academic vocabulary, reading, writing, speaking, and listening. The curriculum is designed to support students for career and college readiness through the use of engaging informational texts based on relevant issues for middle school-aged students. These texts increase in complexity as units progress. Instruction in these passages provides academic language instruction, which focused on vocabulary, syntax, and grammar in addition to the use of discussions and collaboration to increase listening and speaking skills. Students also develop their academic writing focusing on summarizing, research, and justification of arguments using information from classroom instruction and reading passages. The teacher for this instructional group adapted and
modified this curriculum to meet student needs. Specific grade-level passages were selected for progress monitoring. Instruction included pre-teaching of vocabulary, reading of passage chorally, comprehension discussion, Independent Reading, and assessment for reading comprehension.
Chapter 4: Results

The data obtained from the Gates-MacGinitie Reading Tests, Scholastic Reading Inventory, Ten-Minute Writing Test, Test of Silent Contextual Reading Fluency, Maze Test, and the Measure of Text Comprehension were used to analyze the two research questions. Analyses of variance (ANOVAs) using pre and posttest scores for the Gates-MacGinitie and pre, mid, and posttest scores for all other reading measures were used to answer both research questions: (1) What are the effects of small-group intervention on overall reading achievement of middle school English learners when compared to typical English Language Development instruction? and (2) What specific aspects of reading achievement are most impacted by a small-group intervention? The dependent variable in the study was reading achievement as measured by the various reading tests. The independent variable was instruction (small-group reading intervention, business as usual instruction). Descriptive statistics were generated for test scores for the Treatment and Control group on all measures. Pretest means and standard deviations are reported in Table 4 for the Gates-MacGinitie and Table 5 for all other measures. Midtest scores are reported in Table 6 for the Scholastic Reading Inventory, Ten-Minute Writing Test, Test of Silent Contextual Reading Fluency, Maze Test and the Measure of Text Comprehension. Posttest means and standard deviations are reported in Tables 7 for the Gates-MacGinitie and Table 8 for all other measures. A two-way mixed analysis of variance was used to analyze the pre-posttest scores for the Gates-MacGinitie and the pre/mid/posttest scores on all the other measures. This procedure met the assumptions of (1) a continuous dependent variable; (2) one between-subjects factor independent
variable that is categorical; and (3) one within-subjects independent variable that is categorical. In addition there were no outliers and the dependent variable was normally distributed. ANOVA results for the Gates-MacGinitie are reported in Tables 9 through 12. ANOVA results for the other measures are reported in Tables 13 through 17.

**Descriptive Statistics**

*Gates-MacGinitie Reading Tests.* The mean and standard deviation on pretest reading raw scores for the Control group were $M = 15.30$, $SD = 7.55$ and for the Treatment group were $M = 15.79$, $SD = 8.55$. The mean and standard deviation on the posttest reading raw scores for the Control group were $M = 17.00$, $SD = 5.53$ and for the Treatment group were $M = 18.21$, $SD = 7.30$. Mean score for the Treatment group was higher on the posttest reading raw scores.

The mean and standard deviation on the pretest reading grade level equivalent scores for the Control group were $M = 4.10$, $SD = 1.10$ and for the Treatment group were $M = 4.26$, $SD = 1.58$. The mean and standard deviation on the posttest reading grade level equivalent scores for the Control group were $M = 4.62$, $SD = 1.27$ and for the Treatment group were $M = 4.79$, $SD = 1.36$. The mean score for the Treatment group was higher on the posttest reading grade level scores.

The mean and standard deviation on the pretest vocabulary raw scores for the Control group were $M = 13.37$, $SD = 4.71$ and for the Treatment group were $M = 13.28$, $SD = 5.89$. The mean and standard deviation on the posttest vocabulary raw scores for the Control group were $M = 14.78$, $SD = 4.85$ and for the Treatment group were $M = 15.00$, $SD = 5.44$. ANOVA results for the other measures are reported in Tables 13 through 17.
Mean score for the Treatment group was higher on the posttest vocabulary scores.

The mean and standard deviation on the pretest vocabulary grade level equivalent scores for the Control group were $M = 4.24$, $SD = 1.21$ and for the Control group were $M = 4.27$, $SD = 1.35$. The mean and standard deviation on the posttest vocabulary grade level equivalent scores for the Control group were $M = 4.62$, $SD = 1.25$ and for the Treatment group were $M = 4.61$, $SD = 1.19$. Mean scores for the vocabulary grade level were approximately the same for both groups.

**Scholastic Reading Inventory.** The mean and standard deviation on the pretest for the Control group were $M = 621.33$, $SD = 147.95$ and for the Treatment group were $M = 610.10$, $SD = 162.15$. The mean and standard deviation on the midtest for the Control group were $M = 723.52$, $SD = 146.13$ and for the Treatment group were $M = 721.90$, $SD = 166.42$. The mean and standard deviation on the posttest for the Control group were $M = 769.93$, $SD = 142.90$ and for the Treatment group were $M = 774.38$, $SD = 140.84$. Mean score for the Treatment group was higher on the posttest reading raw scores.

**Ten-Minute Writing Test.** The mean and standard deviation on the pretest for the Control group were $M = 94.44$, $SD = 24.44$ and for the Treatment group were $M = 100.06$, $SD = 21.72$. The mean and standard deviation on the midtest for the Control group were $M = 96.00$, $SD = 22.83$ and for the Treatment group were $M = 103.86$, $SD = 27.26$. The mean and standard deviation on the posttest for the Control group were $M = 103.44$, $SD = 25.98$ and for the Treatment group were $M = 104.17$, $SD = 25.88$. Mean score for the Treatment group was higher on the posttest reading raw scores.
**Test of Silent Contextual Reading Fluency.** The mean and standard deviation on the pretest for the Control group were $M=90.48$, $SD=11.18$ and for the Treatment group were $M=88.65$, $SD=9.62$. The mean and standard deviation on the midtest for the Control group were $M=92.04$, $SD=9.28$ and for the Treatment group were $M=94.31$, $SD=7.31$. The mean and standard deviation on the posttest for the Control group were $M=98.81$, $SD=9.33$ and for the Treatment group were $M=96.69$, $SD=8.86$.

**Maze Test.** The mean and standard deviation on the pretest for the Control group were $M=10.88$, $SD=4.00$ and for the Treatment group were $M=8.55$, $SD=5.58$. The mean and standard deviation on the midtest for the Control group were $M=15.07$, $SD=5.96$ and for the Treatment group were $M=17.97$, $SD=5.74$. The mean and standard deviation on the posttest for the Control group were $M=18.74$, $SD=5.96$ and on the posttest for the Treatment group were $M=18.83$, $SD=7.01$.

**Measure of Text Comprehension.** The mean and standard deviation on the pretest for the Control group were $M=51.74$, $SD=28.45$ and on the pretest for the Treatment group were $M=65.76$, $SD=29.53$. The mean and standard deviation on the midtest for the Control group were $M=70.93$, $SD=18.52$ and on the midtest for the Treatment group were $M=67.90$, $SD=19.34$. The mean and standard deviation on the posttest for the Control group were $M=67.89$, $SD=21.86$ and on the posttest for the Treatment group were $M=74.86$, $SD=23.23$.

**Statistical Analyses**

ANOVAs were conducted on student scores at pre- and posttest using the Gates-MacGinitie Reading Tests raw and grade level equivalent scores to determine whether
there was a statistically significant difference between the reading intervention and BAU conditions.

**Gates-MacGinitie Reading Tests.** The Gates-MacGinitie is a standardized measure of vocabulary and reading comprehension. No significant effect was found on the Gates-MacGinitie Reading Test raw scores (GMRR) for the Treatment group, $F(1, 54) = .24, p = .63$, partial $\eta^2 = .00$. There was no statistically significant difference between interaction of time and condition as measured by the GMRR, $F(1,54) = .15, p = .70$, partial $\eta^2 = .00$.

No statistically significant difference was found as measured by Gates-MacGinitie Reading Test grade level scores (GMRG), $F(1, 54) = .31, p = .58$, partial $\eta^2 = .00$ or for the interaction of time and condition, $F(1,54) = .02, p = .90$, partial $\eta^2 = .00$.

No statistically significant difference was found as measured by Gates-MacGinitie Vocabulary Test raw scores (GMVR), $F(1, 54) = .00, p = .96$, partial $\eta^2 = .00$. There was no statistically significant difference between interaction of time and condition as measured by the GMVR, $F(1,54) = .05, p = .82$, partial $\eta^2 = .00$.

No statistically significant difference was found as measured by Gates-MacGinitie Vocabulary Test grade level scores (GMVG), $F(1, 54) = .00, p = .97$, partial $\eta^2 = .00$ as measured by GMVG scores or for the interaction of time and condition, $F(1,54) = .02, p = .90$, partial $\eta^2 = .00$. This non-significant Time X Condition interaction indicates that the groups did not differ in their pattern of change across time.

ANOVA were conducted on student scores at pre-, mid- (after 5 weeks), and posttest to determine whether there were statistically significant differences between the
reading intervention and BAU conditions. Five assessments were used to measure academic growth: Maze test, TOSCRF, SRI, Ten-Minute Writing test, and Measure of Text Comprehension.

**Scholastic Reading Inventory.** The SRI is a measure of Lexile level and is used to match text to student’s reading level. No statistically significant effect was found on the SRI for the Treatment group, $F(1, 54) = .01, p = .94$, partial $\eta^2 = .00$. There was no statistically significant difference found in the interaction of time and condition measured by Scholastic Reading Inventory (SRI), $F(2,108) = .16, p = .85$, partial $\eta^2 = .00$. This non-significant Time X Condition interaction indicates that the groups did not differ in their pattern of change across time.

**Ten-Minute Writing Test.** The Ten-Minute Writing Test assesses student writing for complexity, accuracy and fluency and can be used to measure vocabulary selection and use. It is limited as a reading measure to the extent that it is primarily an assessment of an encoding task (writing) for what is actually a decoding task (reading). No statistically significant effect was found on the Ten-Minute Writing Test for the Treatment group, $F (1, 54) = .59, p = .45$, partial $\eta^2 = .01$. There was no statistically significant difference found in the interaction of time and condition measured by the Ten-Minute Writing Test, $F (2,108) = 1.48, p = .23$, partial $\eta^2 = .03$. This non-significant Time X Condition interaction indicates that the groups did not differ in their pattern of change across time.

**Test of Silent Contextual Reading Fluency.** The Test Of Silent Contextual Reading (TOSCRF) is a measure of reading comprehension and general reading ability.
No statistically significant effect was found on the Test Of Silent Reading Fluency (TOSCRF) for the Treatment group, $F(1, 54) = .07, p = .79$, partial $\eta^2 = .00$. There was no statistically significant difference found in the interaction of time and condition measured by the TOSCRF, $F(2,108) = 2.25, p = .11$, partial $\eta^2 = .04$. This non-significant Time X Condition interaction indicates that the groups did not differ in their pattern of change across time.

**Maze Test.** The Maze test is a curriculum-based measurement (CBM) of reading growth. No significant effect was found on the Maze test for the Treatment group, $F(1, 54) = .03, p = .87$, partial $\eta^2 = .00$. A statistically significant difference was found in the interaction of time and condition on the Maze test $F(2, 108) = 5.95, p = .00$, partial $\eta^2 = .10$ for Treatment group. To understand these results further and to determine significant interaction, the Maze data was analyzed pretest/posttest, pretest/midtest, and midtest/posttest. Results for the pretest/postest approached significance in the interaction of time and condition $F(1, 54) = 41.08, p = .09$, partial $\eta^2 = .05$. A statistically significant difference was found in the interaction of time and condition for the Maze test $F(1, 54) = 191.12, p = .00$, partial $\eta^2 = .18$ for the pretest/midtest. Results approached significance for the midtest/posttest interaction of time and condition $F(1, 54) = 54.99, p = .09$, partial $\eta^2 = .05$. These findings suggested that the small-group reading intervention over the ten-week study positively impacted the reading achievement of middle school LTELs, and the significance was due to the early gains made by the treatment group.

**Measure of Text Comprehension.** The Measure of Text Comprehension is a researcher developed test that can be used to assess reading comprehension of text at the
appropriate student Lexile level. Although findings approached significance, there was no statistically significant difference found on the Measure of Text Comprehension for the Treatment group, $F(1, 54) = 1.95, p = .17$, partial $\eta^2 = .04$ or in the interaction of time and condition, $F(2,108) = 2.19, p = .12$, partial $\eta^2 = .04$. This non-significant Time X Condition interaction indicates that the groups did not differ in their pattern of change across time.

**Summary**

The first research question concerned the effects of small-group intervention on overall reading achievement of middle school ELs when compared to typical English language development instruction. To answer this question scores from the Gates-MacGinitie reading comprehension subtest, Scholastic Reading Inventory, TOSCRF, and Measure of Text Comprehension were considered. These are the measures used in this study that are the better indicators of overall reading achievement. Though mean scores were higher for the Treatment group at posttest, except for the TOSCRF, no significant differences were found and the hypothesis of effect for the Treatment group was not established. Interestingly, the students in the Treatment group had lower mean scores ($M= 610.33, SD= 162.15$) than the Control group at pretest ($M= 621.33, SD= 147.95$) and higher mean scores at posttest ($M= 774.38, SD= 140.84$) compared to ($M= 769.93, SD= 142.90$) on the Scholastic Reading Inventory test. Additionally, the data from the midtest ($M= 70.93, SD= 18.52$) to posttest ($M=67.89, SD= 21.86$) on the Measure of Text Comprehension indicated a decrease in the Control groups reading comprehension. This was the only instance of mean test scores decreasing in the study.
The second research question concerned which specific aspects of reading achievement are most impacted by a small-group intervention. To answer this question, scores from the Ten-Minute Writing Test and the Maze Test were considered because both measure specific aspects of reading achievement. Though the mean score at posttest for the Treatment group was higher on the Ten-Minute Writing Test, the level of significant difference between groups across time was not established. The Maze Test results were highly significant \( (p < .05) \) and demonstrated an important effect for the Treatment group. The Maze Test is a frequent choice in similar research and can be considered a primary result of this study. The effect of the intervention is established with this finding.
Chapter 5: Discussion

LTELs continue to be a resistant subgroup for achievement generally and reading achievement specifically (August & Hakuta, 1997; Slavin & Cheung, 2005). By definition, LTELs are those learners who have attended school for five years or more and whose levels of performance have not improved at rates necessary for advancement despite the various models of instruction or intervention used by the schools. This problem is considered urgent given the increasing number of ELs who are attending the public schools (U.S. Department of Education, 2014). The continued lack of progress at the middle school level is also reflected in lower high school graduation rates and would be expected to impact lifelong success (National Center for Education Statistics, 2015). This study examined a small-group intervention model developed based on research that identified effective elements of instruction for ELs (Gersten, Baker, Haager, & Graves, 2005).

This study extended previous research by identifying a research-based intervention that was effective in increasing the reading achievement of LTELs. The importance of this finding has implications for appropriate intervention that focuses on individual needs of students and a model that can be embedded in existing programs of instruction. The program of instruction provided to the Control group in this study was typical of efforts by schools to address the language and achievement issues of ELs (Coleman & Goldenberg, 2011; Gersten & Baker, 2000). In this “business as usual” instruction, a program of study selected by the district was used, and extra support was provided in a separate class that addressed the various needs of ELs. The services
provided were delivered primarily using whole-group teaching methods and program modification was minimal. In contrast, the intervention provided to the Treatment group was based on carefully monitored individual assessment with small-group instruction used as a primary method of intervention (Vaughn et al, 2010; Vaughn et al., 2012). Individual students were progress monitored, and intervention was designed accordingly (Lesaux et al., 2010; Scammacca et al., 2007; Vaughn et al., 2011; Vaughn & Fletcher, 2010; 2012). The intervention model was developed using ten key features: (1) instruction that focused on the critical skills of phonics, fluency, vocabulary, and reading comprehension (National Reading Panel, 2000), (2) explicit skills instruction (Wong-Fillmore, Ammon, McLaughlin, & Ammon, 1985; Adams, 1990), (3) explicit, interactive instruction in multisyllabic decoding skills (Shaywitz, 1996; Bhattacharya & Ehri, 2004), (4) emphasis on reading comprehension and vocabulary skills in addition to phonics (Haager, Gersten, Baker, & Graves, 2003), (5) linking vocabulary instruction with word analysis (Gersten, Baker, Haager, & Graves, 2005), (6) fluency (Kamps & Greenwood, 2005; O’Connor, White, & Swanson, 2007; Torgeson, 2000), (7) matching pupils and texts, access to interesting texts, and expert tutoring (Allington, 2005), (8) construction of knowledge and development of skills (Richmond, Underwood, Jordan, & McGee, 2005; Torff, 2003; Torff & Sternberg, 2001), (9) interactive techniques (Cirino, Pollard-Durodola, Foorman, Carlson, & Francis, 2007), and (10) increased student interaction and opportunities for structured talk (Coleman & Goldenberg, 2010; 2011).
Research Question 1

The first research question, regarding effects of a small-group intervention on overall reading achievement in middle school ELs when compared to typical English language development instruction, was designed to consider the impact of an instructional model that was developed consistent with best teaching practices for ELs to support reading achievement. The measures used to address the first research question were the Gates-MacGinitie Reading and Vocabulary Tests and the Scholastic Reading Inventory.

**Gates-MacGinitie Reading and Vocabulary Tests.** The results from the Gates-MacGinitie Tests showed no significant results or results approaching significance. Based on the difficulty of the assessment, in addition to the time needed to administer and grade the assessment, it was concluded that this measure would be better suited as an annual assessment given at the beginning and end of the year and might not be appropriate for a ten-week study with the objective of measuring small gains in reading achievement.

**Scholastic Reading Inventory.** The SRI generates a Lexile score that allows schools to place students in reading proficiency bands. The test uses short reading passages with questions related to vocabulary and comprehension. As students do well, the questions get progressively harder. If a student begins to struggle, the questions become easier. The participating school, as well as many other schools throughout Southern California, are faced with the reality that most of their LTEL population are not being reclassified as English proficient based on their reading Lexile scores. They are
required to meet stringent criteria to reclassify by: (1) passing the CELDT, (2)
maintaining a minimum grade in English Language Arts, and (3) reaching an appropriate
Lexile level compared to their grade level. Lexile bands are established as below basic,
basic, proficient, and advanced. Though the statistical analyses showed no significant
differences between the two groups, these results would be meaningful to the school and
the district as measures of progress. The Treatment group had lower mean scores ($M=610.33, SD=162.15$) than the Control group at pretest ($M=621.33, SD=147.95$) and
higher mean scores at posttest ($M=774.38, SD=140.84$) compared to ($M=769.93, SD=
142.90$). Using the Scholastic SRI College and Career Lexile basic proficiency band at
pretest, the Treatment group means would place them in the band for fourth grade
compared to the Control group at fifth grade level. After the ten-week intervention, the
Treatment group means placed the group in the seventh grade band while the Control
group was placed in the sixth grade band. The data presented this way, which is typically
used for decision-making and placement at the district and school level, showed the
Treatment means increasing three grade levels, while the Control means increased only
one grade level. An important note regarding the previous measures is that the Maze,
Measure of Reading Comprehension, and SRI are all based on Lexile levels. The Maze
and Measure of Reading Comprehension passages are chosen based on expected reading
levels for a student’s current grade. The SRI generates a student’s Lexile level based on
the level of difficulty of the text on which they are successful. Based on the findings of
this study, the SRI Lexile level generated did not reflect the level of text they were able to
read on the Maze and pass on the Measure of Text Comprehension. The text and
comprehension scores on the SRI were well below that of the other assessments, which raises some questions regarding the comparability of these tests.

**Research Question 2**

The second research question concerned which specific aspects of reading achievement are most impacted by a small-group intervention, so examined the impact of the intervention model on various specific reading skills. The measures considered to address the second research question were the Maze Test, Measure of Text Comprehensive, Ten-Minute Writing Test, and the Test of Contextual Silent Reading (TOSCRF).

**Maze Test.** The Maze test is a curriculum-based comprehension measure (CBM) that provides grade-leveled passages to students where, after the initial sentence, every seventh word is bolded with three possible answer choices: one correct answer and two distractors. Students are given three minutes to read the passage and choose the correct word that demonstrates their comprehension of the text. This type of measure is designed to be sensitive to small academic changes in skill development. Maze Test passages for this study were informational pieces chosen to match their grade level Lexile, not their current Lexile. The research that supports the use of CBM, including how well it measures growth at the middle-school level (Shin, Deno, & Espin, 2000; Tolar et al, 2012), makes significant results on this assessment of particular importance. The results demonstrated that an intervention focused on instruction in syllabication, word recognition, vocabulary, and reading comprehension provided to whole-group, small-group, and individually had a significant impact on students’ reading achievement. This
is an encouraging finding in that the Maze is a measure that is frequently used in research on reading achievement and has been part of numerous studies with designs similar to this one (e.g. Fuchs, Fuchs, Hamlett, & Ferguson, 1992; Wiley & Deno, 2005).

**Measure of Text Comprehension.** The reading comprehension measure used the same passage as the Maze, but was administered a day later. Students were given the passage and multiple-choice questions that focused on understanding the vocabulary and comprehension of the text. Again, these passages were leveled based on their grade-expected reading level, not their current reading level. While the Control group had a large gain between pretest (M= 51.74, SD= 28.45) and midtest (M= 70.93, SD= 18.52), the mean test scores dropped slightly at posttest (M= 67.89, SD= 21.86). In comparison, the Treatment group had greater mean scores at pretest (M= 65.76, SD= 29.53), but continued to make gains in reading comprehension for the duration of the intervention (M= 74.86, SD= 23.23 at posttest). Though the ANOVA analysis did not have significant results, the upward trend of mean scores approached significance and demonstrated that the Treatment group’s reading comprehension was positively impacted by the intervention.

Taken together, the results of the Maze Test and the Measure of Text Comprehension, demonstrated the potential of the intervention model. It is clear that a model that progress monitors individual students and modifies instruction for small-group and individualized intervention is more effective than a whole-group, “business as usual” approach.
**Ten-Minute Writing Test.** The Ten-Minute Writing test is designed to assess student fluency in accuracy of writing words. Students are given ten minutes to write as many vocabulary words that they can think of. The environment in which the assessment was given was not print rich in order to minimize students accessing vocabulary from their surroundings. The purpose of this assessment was to measure growth in general vocabulary that could be attributed to instruction. No significant results were found. The concept of generating vocabulary “off the tops of their heads” was difficult for all students. This could explain the lack of significant growth because the task was conceptually difficult.

**Test of Silent Contextual Reading Fluency.** The TOSCRF is a reading comprehension measure designed to assess contextual reading ability. Students are given increasingly difficult sentences and passages without spaces or punctuation between the words and are asked to draw lines between the words as they read. Students have three minutes to complete as many of the passages as possible. Results for this measure were not significant, though both Control and Treatment mean scores increased throughout the ten weeks. These findings suggest that there was no difference between the Control group and Treatment group scores. It might be that the format of the test was so unfamiliar and unlike what students are required to do on a regular basis that it may have caused the lack of significant results.

**Discussion**

The Gates-MacGinitie Tests, SRI, Maze Test, and Measure of Text Comprehension are considered near transfer of learning tasks (Cree & Macaulay, 2000)
in that students are presented with actual text that mimics the types of readings, activities, and exams they are given in school. In terms of this study, the transfer of learning considers the application of newly acquired knowledge and skills to a different learning situation, a reading test (Perkins, 1992). The way these tests measure reading growth are very procedural where students are asked to read text and chose an appropriate answer that meets the requirements of what is usual in comprehension or vocabulary instruction.

The Ten-Minute Writing Test and TOSCRF measures of reading are far transfers of learning. These assessments are unlike ways students usually demonstrate their acquisition of knowledge. Both measures use a writing activity as a method to measure reading achievement.

Lexile level is used by schools and districts to make decisions about children, from class placement to rewards. Issues that arose during this study demonstrated the inconsistency of Lexile levels. SRI would generate a Lexile level that was incongruous with the reading passages students were able to independently read with comprehension. For this intervention to be successful, more difficult text had to be chosen to ensure appropriate instruction. One specific example of the variability was a student with a Lexile of 580 who required text leveled at 800 or higher in order to participate in the instruction and discussion. As with any text leveling procedure, one can assess the overall level of difficulty without actually understanding the features of text that make it so. Teachers also find that students experience difficulty without knowing exactly what they misunderstand or what confuses them. In this study a Record of Oral Reading (ROR) was used to examine reading behaviors and practices in the Treatment group.
This ongoing assessment allowed accurate passages to be chosen regardless of current SRI generated Lexile level. The data from the ROR matched text to students’ current abilities, allowed for flexible grouping, and resulted in individualized instruction. In addition, SRI Lexile levels fluctuated hundreds of points in student test scores from test to test and even in retake situations. This drastic change in scores suggests that Lexile levels are volatile and not necessarily a basis on which student decisions should be made.

The school intervention plan was established as a self-styled Response to Intervention model that did not meet the generally accepted RtI criteria of at least three levels of intervention and periodic progress monitoring (Fuchs & Fuchs, 2006; Grane & Shinn, 2005). These three levels would be Tier 1 (core instruction), Tier 2 (in-class intervention), and Tier 3 (pull-out intervention). At best, the school plan could be described as whole class instruction with focus on improvement of English skills. This is typical of many English Language Development classes regardless of level of proficiency. The Treatment group used a two-tier model with modified in-class instruction and targeted small-group and individual intervention.

One of the usual assumptions in any program is that the core instruction provided will be effective for most of the students. The expectation for an intervention is that it will include more targeted in-class instruction to small groups. Tier 3 then would include using pullout for even more individualized instruction. The model used by the participant school moved students directly from Tier 1 classroom instruction to pullout instruction for LTEls. The instruction provided in the ELD class was also focused on whole-group instruction using an adopted program for ELs. No Tier 2 or Tier 3 type instruction was
provided as part of their model. This Treatment group in this study used a Tier 2 design with both small-group and individual instruction to adhere more closely to the RtI research literature.

**Limitations to the Study**

The participants in this study were selected based on their status as ELs using the California English Development Test (CELDT). Scores on this test are used to reclassify students so that they can exit programs of intervention for ELs and return to regular instruction. The overall reading pretest in this study was the Scholastic Reading Inventory (SRI) used by the school to measure reading achievement and monitor progress of students in English learner intervention programs. The lack of consistency between CELDT and SRI scores raised the question of the extent to which using CELDT scores as a classification criterion was accurate given the SRI scores. The use of the CELDT should be reexamined to determine its value in predicting student achievement.

The teacher of the Control group used the district-adopted program but, by school policy, retained authority to modify the program and use supplemental procedures and materials. The issue of fidelity to this program needs to be raised should an attempt be made to replicate the findings of this research. The best program cannot anticipate individual needs, which means an intervention has to go off script and supplement or change instruction to address needs not anticipated by a scripted program.

**Implications and Conclusions**

The district-adopted program for ELs was not as effective in raising achievement scores when compared to the research-based intervention, although few statistically
significant findings were observed. There are a number of characteristics of these two programs that can be used to explain the differences in measures for student achievement. The English learner curriculum adoption was approved by the California State Board of Education as a program with acceptable outcomes; however, the research base used by the State of California for this designation in unclear. This program consists primarily of whole-group instruction, and differentiation for individual needs is minimal. It is a reasonable conclusion that whole-group instruction is an insufficient support for individual needs. Instruction should include various levels of intervention, including small groups organized by similar need and individually designed intervention for specific need.

Future Considerations

The small sample size (n=56) may have impacted results in this study. The sample size was limited to the LTEL population within a school. This stratified sample was then assigned to either the Control or Treatment group. Increasing the sample size in this study to include more students and more classrooms would allow greater power to detect differences between the intervention and BAU. This study was conducted over a ten-week period, and a yearlong intervention would be a more suitable period to compare the differences these two models.

There are a number of realities of how schools operate on a day-to-day basis that should be considered variables outside the control of this study. The intervention block at this school was after lunch, four days a week, with one day excluded because of early release. This created a problem during parent conferences, when the school modified the
conference week to also be early release days for students. This postponed one week of instruction during the middle of the study. The school district’s spring break also occurred during the study, postponing the intervention yet again. In addition, the intervention block was in the afternoon right after lunch and before the middle school elective. If there were assemblies, fire drills, or any other general need for schedule modification, intervention was dropped to preserve core instruction. These factors took time away from the intervention and disrupted the schedule of the study.

The time of the year might have affected the results of this study. The intervention started the last trimester of school and district scheduling caused the intervention to go longer than originally expected, so it ultimately ran until the end of the school year. Extraneous activities and the distraction of the end of the school year (i.e., report cards due weeks before the end of the year, eighth grade promotion, and lack of motivation) interfered with implementation of the intervention. Adolescence and motivation factors may have influenced overall reading achievement in this study and could account, at least in part, for the lack of significant results for the Treatment group on some of the measures.

The model of intervention in this study, which included students participating in reading groups with a teacher, has a strong research base, especially with elementary students. As both the researcher and intervention teacher for this study, some aspects of the problem in design can be put in perspective. Each year, right before CELDT testing, administration puts pressure on the upper grade teachers regarding their efforts to their reclassify students. This only disguises the issue at hand. These students should have
reclassified as early as third grade. Therefore, the focus on instruction for ELs who have not reclassified should be in grades four through six. Instruction provided in grades K through 3 should also be examined. No Child Left Behind and Reading First changed the scope of small-group instruction. Much of what is done during Universal Access is highly scripted with the intention of meeting the needs of all learners; however, individualization to meet the specific needs of individual students is not typical. Research has found that small-group instruction is important and necessary (Bryant et al., 2000; Burns, Hodgson, Parker, & Fremont, 2011; Kamps et al., 2007; Foorman & Torgesen, 2001). Students not only gain valuable instruction with one-to-one instruction, but the teacher is able to observe student behaviors and practice and can use that information to inform future instruction. Any model of instruction that does not include small-group intervention ignores the research.

The majority of LTELs who participated in this study have attended U.S. schools since Kindergarten but still remain classified as ELs, despite state initiatives to reclassify them in three years. There is little doubt that home-language is a factor in this failure. The influence of native/home-language in the home is severely underestimated. Spanish-speaking parents want their children to succeed, but many of these parents are unable, and some are unwilling, to acquire English to support the process. Perhaps because of cultural factors, they rely on the schools and believe that it is the school’s responsibility to handle this problem. Parent support and collaboration with the school and district is vital to student success. This factor is difficult to overlook when there are students in this study who have been classified as ELs for as many as nine years.
It is important to note that, while students agreed to participate in the study, their attitudes and behaviors did not always reflect whether they were interested in improving. As the study progressed and moved towards the end of the year, many students, especially the eighth graders preparing to transition to high school, were no longer motivated to do their best. This issue, when considering educational research overall, is problematic. Research that does not take into account the likely accuracy of assessments because of students’ overall attitude, motivation, and errors in testing can skew results and present unrealistic data. During this study it was obvious that many students did not care about the tests and their outcomes and were careless and non-attentive when taking tests. Some researchers proceed with little or no consideration given to these factors. It is reasonable to conclude that many of these factors influenced the final results of this study.
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classrooms.*


first-grade students in a restructured Chapter I program. *American Educational


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Reading Intervention for Middle School English Learners Protocol

**Whole-group reading instruction**

Whole-group reading instruction precedes small group instruction. In whole-group instruction, a reading passage is chosen based on similarities of text students access in their content area classes. The Lexile is chosen based on expected reading levels for students in the group. Reading instruction within the whole-group text will focus on multisyllabic word decoding, vocabulary, and comprehension. Multisyllabic words make up most of the unfamiliar vocabulary of middle school students, which also tend to provide the information in content-area reading (Shaywitz, 1996). Vocabulary instruction must focus on high-utility words that students are likely to encounter across all content areas. These Tier Two words (Beck, McKeown, & Kucan, 2013) will support the growth of academic language that fosters reading comprehension.

1. Teacher reads the text and prepares teaching points before the instruction. This will include the multisyllabic words and vocabulary that will be discussed in addition to specific questions to build comprehension. High-utility words are words that appear frequently in various types of texts. Tier Two words can be identified by considering if students have words in their repertoires to represent the new word being introduced. (For example: Consequence is the result of something, relevant is connected to something, and maintenance is the process of keeping something going.)

2. Teacher introduces the text and will pre-teach specific multisyllabic decoding skills and vocabulary. This can include content specific vocabulary that is necessary for comprehension and Tier-two words that will be the focus of vocabulary instruction. The number of words chosen should range between 5 and 10 words depending on the length of the text.

3. Teacher and students then read the text together in unison or taking turns. This will provide more opportunities for decoding and vocabulary instruction based on student need. Teacher needs to regularly check for understanding to ensure all students have comprehension as the text is being read. Vocabulary is highlighted as the text progresses.

4. Vocabulary is added to a vocabulary log at the end of the reading maintained by each student. Words are syllabicated to ensure the correct pronunciation. A student-friendly definition should be provided. Students then create an image to represent the word (i.e. drawing icon to help remember the word) and write a sentence that demonstrates the correct use of the word.
5. Students will then answer comprehension questions based on the text. The next day the vocabulary words will be reviewed and the comprehension questions shared with the class by students. This instruction cycle will be repeated.

**Small-group reading instruction**

Small groups are formed homogeneously by Lexile level. Text that is 100-150 Lexile higher than independent text is chosen. Small-group instruction is similar to that of whole-group instruction where there will focus on multisyllabic word decoding, vocabulary of high-utility Tier Two words, and text comprehension. The procedures use a gradual release with the following steps: Interactive Read Aloud, Shared Reading, Guided Reading, and Independent Reading.

1. Similar to that of step 1 in whole group instruction, teacher reads the text and prepares teaching points about decoding, vocabulary, and comprehension beforehand.

2. Teacher introduces the text and will pre-teach specific multisyllabic decoding skills and vocabulary. This can include content specific vocabulary that is necessary for comprehension and Tier Two words that will be the focus of vocabulary instruction.

3. Interactive Read Aloud is Step 1 when the teacher reads to the students while students follow along on their own text tracking line by line with their finger so the teacher can ensure they are following along in the correct place. This lesson begins with a robust introduction (introducing the reading with careful attention to the meaning of the text, unknown words, unique phrases, and irregular spellings) of the text before the reading. The students will listen, participate in a discussion of the text, and be attentive to the print. The Interactive Read Aloud in this intervention differs from the traditional read aloud used in classrooms in that the student can follow along on their own text while the teacher reads. At the end of the reading, vocabulary and comprehension are discussed. NOTE: Due to the length of text, some texts may be used in parts over multiple meetings.

4. Step 2 is Shared Reading. Shared Reading is where the teacher and the students read the text together. The lesson begins reviewing the text read but at a lower level of support than the one provided in Step 1, Interactive Read Aloud. The same text from the Interactive Read Aloud will be used. The use of the same text was designed to provide the child with a reduced level of teacher support in that the task of reading is shared. In Shared Reading, the teacher and the students read the text in unison. The students read from their copy of text tracking line by line. The teacher always remained the guiding voice during this step of the reading. At the end of the reading, vocabulary and comprehension are discussed.
5. In Step 3, Guided Reading, the students handle the text on their own. They are reading the same text used in the Read Aloud and Shared Reading portions of the intervention. In Guided Reading, the students read the text at their own pace and the teacher observes and prompts the students to use independent strategies to problem solve. Students are encouraged to use what they have learned during the Read Aloud and Shared Reading steps of the cycle. The critical role for the teacher in this step is to prompt students to use what they know rather than giving them the information. It is a frequent error to give students information too soon rather than helping them use what they know to problem solve on their own. (NOTE: Students can be staggered at the starting point of the text so that they will all be in different areas during the reading. This allows them to each be heard so the teacher can prompt students at point of need and praise them for application of taught skills.) At the end of the reading, vocabulary and comprehension are discussed.

Examples of prompt to use during Guided Reading:

Multisyllabic decoding:
- Does what you read sound that way?
- Do you see a part you know?
- Could you look at the letters of the word and see if you know a word that begins (or ends) like that?
- Do you see the sound you read in that word?
- Can you divide that word into syllables and read it again?
- Can you compare this (the word you tired that made sense) and this (the letters you would see if it were the word) to help you?

Comprehension
- Can you read that again to see if the word you read makes sense in this text?
- Does what you read match the text?
o Could you reread what you’ve read so far and try a word that makes sense there?

○ Is there anything you know about the text that helps you with this word?

6. Independent Reading is Step 4 and is the teacher’s opportunity to assess the impact of the instructional cycle and design next steps for teaching. The student reads the text independently and the teacher assesses for accuracy to see if the student’s level matches that of the text. The teacher records the errors that the students made as they read through the text. This information is used to determine the necessary next steps for instruction.

7. At the end of the intervention, students should add any new vocabulary to their vocabulary log and answer the comprehension questions at the end of the text. This instruction cycle will repeat for all small group reading instruction groups.

**Independent Student Work**

At times students may have finished all the work from their whole group and small group instruction. In this case students should work from a portfolio of work that gives them similar readings to that being used in whole group and small group instruction, but at an independent level. Students should follow the same guidelines used when they meet in whole and small-group instruction by highlighting new vocabulary words that they add to their vocabulary log and completing the comprehension questions provided with the text.
Table 1

*California English Language Development Test Proficiency Levels by Grade*

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<td>7.1%</td>
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<td>% within Proficiency</td>
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### Table 2

*Beginning SRI Lexile Levels*

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<tr>
<th>Year End Proficiency Ranges</th>
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<th>Grade 3</th>
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| Total                       | 4       | 12      | 24      | 11      | 5       | 0       | 0       | 0       |
Table 3

*Group Assignment by SRI Lexile Levels*

<table>
<thead>
<tr>
<th>Year End Proficiency Ranges</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
<th>Grade 6</th>
<th>Grade 7</th>
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<tbody>
<tr>
<td>Students in Control group</td>
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<td>5</td>
<td>12</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>Students in Experimental group</td>
<td>2</td>
<td>7</td>
<td>12</td>
<td>6</td>
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Table 4

Descriptive Statistics at Pretest for Gates-MacGinitie Reading Tests

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<th>GMVR</th>
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<td>M</td>
<td>SD</td>
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Table 5

Descriptive Statistics at Pretest for Additional Measures

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<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
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Note. Mean and standard deviations of test scores. Control group N = 27. Treatment group N = 29. SRI = Scholastic Reading Inventory, Writing = 10 minute writing test, TOSCRF = Test of Silent Contextual Reading Fluency, Comp = Text Comprehension.
Table 6

**Descriptive Statistics at Midtest for Additional Measures**

<table>
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<th>Comp</th>
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<td>M  SD</td>
<td>M  SD</td>
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<td>70.93 18.52</td>
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<td>94.31 7.31</td>
<td>17.97 5.74</td>
<td>67.90 19.34</td>
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*Note. Mean and standard deviations of test scores. Control group N = 27. Treatment group N = 29. SRI = Scholastic Reading Inventory, Writing = 10 minute writing test, TOSCRF = Test of Silent Contextual Reading Fluency, Comp = Text Comprehension.*
### Table 7

**Descriptive Statistics at Posttest for Gates-MacGinitie Reading Tests**

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<th>GMVG</th>
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<td>M</td>
<td>SD</td>
</tr>
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<td>4.79</td>
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### Table 8

**Descriptive Statistics at Posttest for Additional Measures**

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*Note.* Mean and standard deviations of test scores. Control group N = 27. Treatment group N = 29. SRI = Scholastic Reading Inventory, Writing = 10 minute writing test, TOSCRF = Test of Silent Contextual Reading Fluency, Comp = Text Comprehension.
### Table 9

**ANOVA Results for Gates-MacGinitie Reading Raw Scores**

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<td>.00</td>
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*Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).*
Table 10

ANOVA Results for Gates-MacGinitie Reading Grade Level Scores

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<th>Source</th>
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<td>.01</td>
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<td>Time X Subj/Trt</td>
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Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).
### Table 11

**ANOVA Results for Gates-MacGinitie Vocabulary Raw Scores**

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<td>.70</td>
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*Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).*
Table 12

ANOVA Results for Gates-MacGinitie Vocabulary Grade Level Scores

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<td>.00</td>
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<td>.00</td>
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<tr>
<td>Treatment X Time</td>
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<td>.01</td>
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<td>.00</td>
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<tr>
<td>Time X Subj/Trt</td>
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Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).
Table 13

ANOVA Results for Scholastic Reading Inventory

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<th>η²</th>
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Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).
Table 14

ANOVA Results for Ten Minute Writing Test

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Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).
Table 15

ANOVA Results for Test of Silent Contextual Reading Fluency

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Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).
Table 16

ANOVA Results for Maze Test

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*Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).*
Table 17

**ANOVA Results for Measure of Text Comprehension**

<table>
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<th>η²</th>
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*Note. N = 56. Treatment = Treatment group assignment (Control n = 27, Treatment n = 29).*