

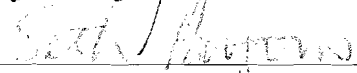
A FORMATIVE STUDY INVESTIGATING THE ACQUISITION OF EARLY
READING SKILLS AMONG HIGH SCHOOL ENGLISH LANGUAGE LEARNERS
BEGINNING TO READ ENGLISH

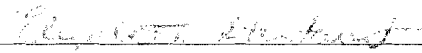
by

Athene Cooper Bell
A Dissertation
Submitted to the
Graduate Faculty
of
George Mason University
in Partial Fulfillment of
The Requirements for the Degree
of
Doctor of Philosophy
Education

Committee:


_____ Co-Chair


_____ Co-Chair




_____ Program Director


_____ Dean, College of Education
and Human Development

Date: July 25, 2012 _____ Summer Semester 2012
George Mason University
Fairfax, VA

A Formative Study Investigating the Acquisition of Early Reading Skills Among High
School English Language Learners Beginning to Read English

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at George Mason University

By

Athene Cooper Bell
Master of Education
Bowie State University, 1985

Co-Directors: Dr. Kristien Zenkov, Associate Professor, and
Dr. Seth A. Parsons, Assistant Professor
College of Education and Human Development

Summer Semester 2012
George Mason University
Fairfax, VA



This work is licensed under a creative commons attribution-noncommercial 3.0 unported license.

DEDICATION

This dissertation is dedicated to my parents,
Colonel George James and Pauline Chiadis Cooper.
Children of Greek immigrant parents,
Who lived with abundant love for family,
And who made believing more than making believe.
I will always miss you.

This dissertation is also dedicated to my husband,
James Rodney Bell.
S'aga po, polee.
Σ'αγαπώ πάρα πολύ.

ACKNOWLEDGEMENTS

It is with humility and gratitude that I recognize my dissertation committee members Drs. Kristien Zenkov, Seth Parsons, and Elizabeth Sturtevant, who have provided me with invaluable support and guidance in writing this dissertation. In the collaborative spirit of learning, each has a remarkable gift for summoning fine scholarship while simultaneously supporting the student.

Dr. Kristien Zenkov, committee co-chair, advisor, and mentor has provided me with many opportunities to learn and develop professionally over the past several years. I heartily thank him for all of his efforts on my behalf. He seemed to know when encouragement was needed and when it was best to gather my own resources. His command of the research process, sound pedagogy, and commitment to excellence were sustained by his uncompromising dignity and integrity, both personally and professionally.

Dr. Seth Parsons, committee co-chair, epitomizes the spirit of learning. He empowers his students to discover their inner capabilities through encouragement and attention to the task at hand. Under his tutelage, organization and structure were transformed to unfathomable depth. Dr. Parsons was there to provide support at each and every step along the way offering challenge, intuition, and insight.

Dr. Elizabeth Sturtevant, committee member, has been central to my success over the years. She has remained an unfailingly true guide, always deepening my understanding of where I needed to turn next. Her guidance has always sent me in the right direction. It was her effort that opened doors for me in meeting Drs. Zenkov, Parsons, and Malloy. Knowing Dr. Sturtevant lends a degree of personal credibility as a result of the admiration she has inspired in others.

Dr. Jacquelynn Malloy, former committee member and George Mason University professor and current professor at Anderson University, South Carolina, provided me with an in-depth understanding of formative design research. Although we only worked together for a short time, her insight, encouragement, and humor inspired a hope that has remained with me. I am grateful for our short time together.

My dissertation committee has guided me in ways most necessary, yet with such friendliness and encouragement that I have been lucky enough to brag about my wonderful committee. I know that their influence helped to make my life as a doctoral student one full of richness—an experience not all are lucky to have.

I would also like to gratefully acknowledge the teacher and students of this study. Their willingness to contribute, as I watched the story unfold before me, made this study possible.

Additionally, a network of mentors provided me with countless hours of guidance and invaluable counsel: Thanks to Dr. Michaelene Meyer, Deputy Superintendent and my direct supervisor, for her words of wisdom and unbending commitment to the formation and completion of this project; to my MUSCO colleagues Kim Kopfman, Dr. Arvinder Johri, and Kathleen Reilly, who encouraged me to remain focused and provided many hours of discussion on countless educational issues; to Dr. Melissa Saunders, middle school principal, who provided ongoing support and words of wisdom from her personal experience as a doctoral student; to Leanne Cook, co-worker, who listened to my story with attentiveness and compassion and offered new avenues of thought as she encouraged and supported my effort; to my dear friend Reggie Moore who offered unconditional support at every juncture; to Paul Osir whose knowledge of statistics guided me toward completion; and to Colleen Spears whose editing expertise finalized my effort.

The completion of this dissertation would not have been possible without the support of my family. I am grateful to each of them and am most fortunate to have them in my life: Thanks to my husband Rod who provided never-ending love and support; to my sons James Cooper Bell, Esq. and George Cooper Bell, Esq., I am grateful for our late-night conversations and the love and support generously offered; to their wives Beth and Hannah for their words of encouragement; and to my five grandchildren, Cooper, James, Natalie, Catherine, and Madeline, the next generation of hope.

TABLE OF CONTENTS

	Page
List of Tables	ix
List of Figures	x
Abstract	xi
1. Introduction	1
Statement of the Problem	1
Purpose of the Study	4
Background	5
Research Questions	9
Operational Terms	11
Organization of the Report	14
2. Review of the Literature	15
Social Constructivist Theory and the Instructional Intervention	17
Vygotsky	18
Piaget	20
Dewey	21
Critical Considerations for Adolescent English Language Learners (ELLs) Learning to Read	23
Special Needs of Adolescent English Language Learners	24
Effective Reading Programs for English Language Learners	27
Oral Language Development and English Language Learners	30
The Nature of Cooperative Learning	32
Heterogeneous Grouping	35
Positive Interdependence	36
Individual and Group Accountability	37
Promotive Interaction	37
Interpersonal and Small Group Skills	38
Group Processing	39
Cooperative Learning Meta-Analysis Research Investigations	40
A Meta-Analysis on Cooperative Learning	41
Another Meta-Analysis on Cooperative Learning	45
The Nature of Guided Reading	52
Guided Reading Research for Adolescent English Language Learners	57
The Nature of Computer Assisted Instruction	64
A Meta-Analysis on Computer Assisted Instruction	69
Literature Review Summary	75
3. Methodology	79

Design.....	80
Characteristics of Formative Experiments	83
Formative Design Phases.....	86
The Pedagogical Goal and its Justification.....	87
The Development of the Intervention	89
Research Site.....	91
The City of Marville	92
Marville City Schools	92
Isaac Newton High School	94
Participants	95
Students	95
The Classroom Teacher	99
Data Collection.....	99
Qualitative Data	102
Teacher Interview and Informal Discussions With the Teacher	102
Classroom Observations and Field Notes	103
Student Conversational Interviews	112
Student Artifacts	113
Qualitative Data Analysis	114
Quantitative Data.....	119
Scholastic <i>System 44</i>	120
Quantitative Data Analysis	121
Procedure.....	122
Computer Assisted Instruction.....	126
Guided Reading Groups.....	127
Cooperative Groups	131
Summary	134
4. Results	136
Phase 1: Planning the Intervention.....	137
Phase 2: Demographic Data Collection.....	144
Phase 3: Baseline Data Collection.....	150
Phase 4: Intervention Implementation.....	150
Factors That Enhance the Effectiveness of the Intervention	151
Chronology of Phase 4.....	152
Factors That Inhibited Progress Toward the Pedagogical Goal.....	173
Modifications to the Intervention.....	183
The Conclusion of Phase 4	187
Themes Recap.....	197
Phase 5: Postassessment	199
Summary	213
5. Discussion	215
Summary of Findings	215
Unanticipated Effects Produced by the Intervention.....	221
Changes in the Instructional Environment	224

Limitations.....	228
Recommendations	230
Future Research.....	235
Concluding Thoughts	238
Appendices	
A. George Mason University Human Subjects Review Board Approval	239
B. School District’s Permission to Conduct Research.....	240
C. Teacher Interview Questions Protocol	241
D. Motivation to Read Conversational Interview for English Language Learners.....	243
E. Student Assent Form	247
F. Parent Informed Consent Form	250
G. Scholastic, Inc. Permission.....	253
H. Student Certificate of Achievement	254
References.....	255

LIST OF TABLES

Table	Page
1. Conceptual Overview of Formative Design	84
2. Mixed Methods Design and Six Phases of the Formative Study	87
3. Participant Demographic and Descriptive Information.....	97
4. The Intersection of Phases, Data Sources, and Research Questions	101
5. Classroom Observation Schedule.....	104
6. Observation Questions Within Components of the Instructional Intervention	108
7. An Example of Observation Question Response Notes and Reflective Notes for a Guided Reading Group	110
8. Initial Categories and Codes: An Inductive Approach.....	116
9. Explanation of Codes	117
10. Emerging Themes and Categories.....	119
11. Example of the Instructional Intervention Within a 90-Minute Class Period	124
12. Participant Skill Focus and Instructional Grouping.....	167
13. Participant Total Time Spent on the Computer During the Intervention.....	169
14. Interruptions to Participation Within Groups	171
15. Pre- and Postintervention Means and Standard Deviations for Students' Scores on the Scholastic Phonics Inventory (SPI) Subtests	210

LIST OF FIGURES

Figure	Page
1. Eighth Grade 2011 National Assessment of Educational Progress (NAEP) Reading Assessment Results	2
2. Instructional Intervention Reading Model for High School English Language Learners (ELLs)	9
3. Five Essential Elements of Cooperative Learning	36
4. Twenty-Minute Guided Reading Group Lesson	128
5. Progression of Student Skills	156
6. Coordinated Guided Reading and Cooperative Learning Lessons	162
7. Cooperative Learning Sequencing Lesson	194
8. Letter Names Accuracy Percentages and Class Mean Scores.....	201
9. Sight Words Accuracy Percentages and Class Mean Scores	203
10. Sight Words Fluency Percentages and Class Mean Scores.....	204
11. Nonsense Words Accuracy Percentages and Class Mean Scores	206
12. Nonsense Words Fluency Percentages and Class Mean Scores.....	207
13. Scholastic Phonics Inventory (SPI) Fluency Scores and Class Mean Scores	209

ABSTRACT

A FORMATIVE STUDY INVESTIGATING THE ACQUISITION OF EARLY READING SKILLS AMONG HIGH SCHOOL ENGLISH LANGUAGE LEARNERS BEGINNING TO READ ENGLISH

Athene Cooper Bell, Ph.D.

George Mason University, 2012

Dissertation Co-Directors: Dr. Kristien Zenkov and Dr. Seth A. Parsons

A formative design experiment methodology was employed to investigate the acquisition of early reading skills for high school English language learners (ELLs) beginning to read English. A fundamental challenge facing high school ELLs entering schools in the United States for the first time is learning how to read. While there is considerable research evidence and literature regarding the teaching of reading to elementary aged ELLs, there is less evidence to support reading instruction for high school students learning to read English. This study sought to create a successful reading model for high school ELLs learning to read.

The pedagogical goal of this study was improved acquisition of early reading skills. Participants included one classroom teacher and nine students (eight native Spanish speakers and one native Chinese speaker). The classroom teacher taught only in English and did not speak Spanish or Chinese. According to the World-Class Instructional Design and Assessment (WIDA) all students were designated at the lowest

proficiency level of English acquisition within a school district 35 miles from one of the nation's busiest economies.

Informed by theories of language development and social constructivism, the instructional intervention of this study focused on the interactions of students as they worked within three distinct group configurations. These included guided reading, cooperative learning, and computer assisted instruction groups that were integrated into one instructional reading model. Throughout the course of the intervention, students rotated to each of the three groups during daily 90-minute class sessions over a period of 14 weeks. Each group was configured based on students' individual reading skill levels and areas of need. The intervention was iteratively adapted based on factors that inhibited its effectiveness.

Quantitative data were collected prior to and after implementation of the intervention to establish a baseline of performance and to determine progress toward the pedagogical goal. The Scholastic Phonics Inventory (SPI) was administered at pre- and postintervention and was analyzed by total percentage of accuracy and fluency on five SPI subtests that included letter names accuracy, sight words accuracy, sight words fluency nonsense words accuracy, and nonsense words fluency. In all subtests, students' mean scores were higher on posttests compared to pretest scores, even though scores on all parameters varied. A Wilcoxon signed- rank test was also conducted at postintervention to evaluate the students' performance on each of the five SPI subtests and on the cumulative SPI fluency score. Results of the Wilcoxon were significant, indicating students' progress toward the pedagogical goal.

Qualitative data were coded for recurring themes derived from classroom observation and field notes, student and teacher interviews, classroom artifacts, and informal discussions with the teacher. Analyses revealed that progress toward the pedagogical goal was related to the following: Working in small groups allowed the students to solve their own academic problems through interaction with each other; participating in a variety of groups coordinated for skill instruction enhanced ELLs' early reading skills and vocabulary development; creating a classroom environment that encouraged oral language interaction enhanced ELLs' movement from passive to active learning; and the use of technology for early reading skills instruction engaged ELLs in class work. Results indicated students' progress toward the pedagogical goal.

Implications for future research suggest that further investigation of multiconfigured reading interventions as designed in this study may be warranted. This might span the range of ESOL and content area classes in which ELLs participate throughout high school. Additionally, the evidence from this study suggests that future research might benefit from formative design studies as described in this investigation.

1. INTRODUCTION

Statement of the Problem

Schools in the United States are now providing instruction in reading to a larger proportion of middle and high school students than ever before (Deshler, Palincsar, Biancarosa, & Nair, 2007). This is due to the focus on the establishment of academic standards in reading by individual states and the measurement of student reading achievement as a result of those standards. Furthermore, once seen only in remedial or special education programs, reading courses are now common in middle schools, and remedial reading courses are becoming more widespread in high schools (Slavin, Cheung, Groff, & Lake, 2008). With this increased emphasis on reading in the United States, it would seem likely that the achievement of secondary students in reading would be improved. While to some degree this is true, this is not the case for all secondary populations (Joftus & Maddox-Dolan, 2003).

While the overall trend of adolescent literacy achievement shows that a large proportion of adolescents struggle with academic reading, not all populations are equally at risk for difficulty (Balfanz & Legters, 2004; Fergus, 2009; Greene & Winters, 2006). According to the National Assessment of Educational Progress (NAEP) eighth grade reading assessment (NAEP, 2011), only one-third of all eighth graders in the United States read proficiently; the remaining two-thirds read at or below grade level. English

language learners (ELLs) who are expected to develop academic literacy skills in English while still developing oral proficiency are at heightened risk for low literacy achievement. In fact, further review of NAEP (2011) results reveal that only 18% of Hispanic ELLs scored at the proficient level in reading while 81% scored at the basic and below basic level in reading (see Figure 1). In short, nearly all Hispanic ELLs read at the basic or below basic level of proficiency for reading. The literacy achievement of ELLs is especially noteworthy when taking into account that ELLs represent the fastest growing segment of the school-age population, having increased from 6.8% of the total K-12 school population in 1995-1996 to 10.3% just one decade later (Batalova, Fix, & Murray, 2007).

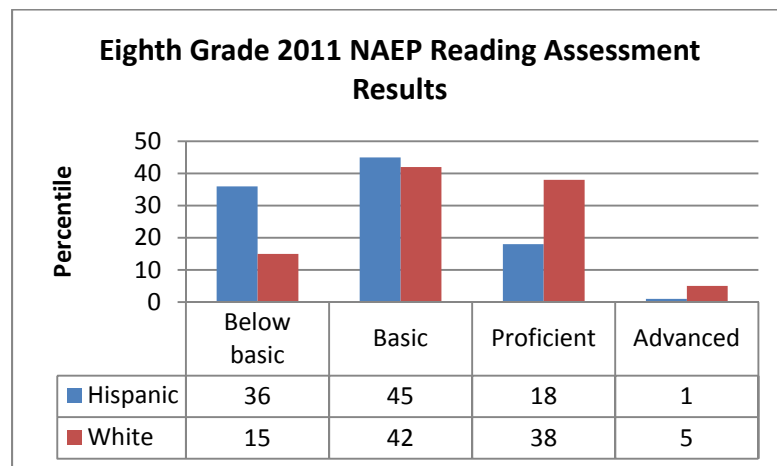


Figure 1. Eighth Grade 2011 National Assessment of Educational Progress (NAEP) Reading Assessment Results.

It should be noted that a lower percentage of eighth grade ELLs performed at or above the basic level in 2009 than in 2007 in reading achievement (Lee, Grigg, & Donahue, 2007; Salah-Din, Persky, & Miller, 2008). However, based on the overall current reading achievement of ELLs in the United States, the implementation and study of secondary reading interventions that focus on the improvement of the literacy achievement of ELLs seem warranted.

In addition to intervening academically with students in order to improve reading achievement, it is important to consider intervening with students who are at risk for dropping out of school. Chapman, Laird, and Kewal Ramani (2010) reported that in the United States, approximately 3 million 16- to 24-year-olds dropped out of school in 2008. These dropout statistics account for 8% of the 38 million 16- to 24-year-olds living in the United States. It is also of concern that recent estimates (Mishel & Roy, 2006) based on the National Education Longitudinal Study (NELS) suggest that only 75% of Hispanic students graduate from high school when their progress is tracked longitudinally. Students who drop out of high school and cannot read proficiently may not be able to participate fully in society in the future. This could potentially contribute to problems such as increased crime rates and detrimental effects to the United States economy (August & Shanahan, 2006). Supported by these findings in terms of overall educational, economic, and quality of life-impact, it seems that the development of effective reading interventions for high school ELLs is urgent.

Furthermore and contingent on these findings, it seems important to focus on reading interventions that might positively impact the reading achievement of secondary

ELLs in an effort to provide positive alternatives to dropping out of school and sustained low reading achievement. A fundamental challenge facing high school ELLs entering schools in the United States for the first time is learning how to read. Increasing numbers of ELLs come from homes in which English is not the primary language spoken. Although many children of immigrant families succeed in reading, many do not. And while there is considerable research evidence and literature regarding the teaching of reading to elementary-aged ELLs, there is little scholarly evidence to support reading instruction for high school students learning to read English. This study sought to begin to create a body of evidence that supports successful early reading instruction for high school ELLs who were learning to read English.

Purpose of the Study

The purpose of the study was to investigate the impact of a multiconfigured 90-minute instructional reading model on student acquisition of early reading skills for ELL high school students beginning to read English. This study was based on social constructivist theory and the theory of oral language development for ELLs in an effort to understand the conditions that enhanced or inhibited the intervention's effectiveness as is characteristic of formative design studies (Reinking & Bradley, 2008). Rather than relying solely on understanding the created conditions that allowed the intervention to achieve the pedagogical goal of improvement in the acquisition of early reading skills, this study sought to understand the principles related to the conditions that enhanced or inhibited the intervention's effectiveness. That is, this investigation was aimed at creating conditions that allowed the intervention to accomplish the pedagogical goal. In addition,

the investigation sought to understand the principles that supported those conditions that enhanced or inhibited the intervention's effectiveness. In this way, the pedagogical understandings derived from the investigation can be generalized beyond the specific instance of this study to specifically inform practitioners.

This investigation sought to select and integrate into one reading model evidence-based practices of successful reading programs that are intended to enhance the acquisition of early reading skills for ELL high school students. This model was based on the integration of Robert Slavin's model of cooperative learning (1995), Marie Clay's model of guided reading (1985), and theories of language acquisition for the use of computer assisted instruction (CAI) in teaching beginning reading to high school ELL students. This study employed a mixed methods research design using the methodology of a formative experiment (Reinking & Bradley, 2008) within the context of an entry level English Speakers for Other Languages (ESOL) Level 1 class taken by largely Hispanic high school students ranging in ages 14 to 19 in a small school district in the mid-Atlantic states 35 miles south of a large metropolitan area. Pseudonyms have been used for the teacher, students, school, and district described in this study.

Background

The relevant literature related to secondary reading programs and instructional methods that incorporated cooperative learning, small guided reading groups, and CAI into early literacy instruction for high school ELLs learning to read English was reviewed. Singularly, there is significant literature related to each of these methods as they are used independently within a variety of educational contexts at varying grade

levels. However, there is a gap in the literature with respect to the integration of these methods for teaching high school ELLs to read English. No single study utilizing an integrated approach of instruction as described in this investigation could be found for review. Given that nearly all eighth grade Hispanic ELLs scored only at the basic or below basic level of proficiency for reading in 2011 (NAEP, 2011) and that ELLs represent the fastest growing segment of the school-age population (Batalova et al., 2007), this investigation has the potential to add to a what appears to be a significant gap in existing scholarly literature.

The effectiveness of cooperative learning has been supported by a large body of research across different grade levels and subject areas in both the United States and numerous other countries (Abrami, Chambers, Lou, Poulsen, & Spence, 2000; Calderon, Hertz-Lazarowitz, & Slavin, 1998; Ghaith, 2003a, 2003b; Johnson & Johnson, 1989; Slavin, 1995; Vaughan, 2002). Having been implemented in classrooms throughout the United States for over a century, this pedagogy has begun to gain attention and interest from English as a second language (ESL) teachers in the United States where ESL instruction has been criticized as being largely whole-class and teacher-centered, relying on the use of rote memorization techniques, and often failing to motivate student learning (Lai, 2001; Su, 2003). Few efforts have been made to examine the effects of cooperative learning on high school ELLs beginning to read English; this pedagogy is significantly under-researched.

The history behind guided reading as an instructional framework, began with the theories and work of Marie Clay who noted that reading is a strategic process, that

reading and writing are interconnected, and that young children must be actively engaged in reading text that allows them to problem-solve (Clay, 1985). The result of Clay's work was Reading Recovery, a successful intervention program (Shanahan & Barr, 1995; Wasik & Slavin, 1993). Educators saw the value in the instructional framework of guided reading and began implementing the principles of Reading Recovery in classrooms with small groups. This resulted in guided reading as an instructional framework for children in kindergarten through third grade (Fountas & Pinnell, 1996). While guided reading shows positive benefits for students at the elementary level (Fountas & Pinnell, 1996), pedagogy related to beginning reading supports the idea that basic reading approaches used with younger children are also potentially effective with adolescents and adults (Chall, 1994; Greenberg, 1998; Kitz, 1988). Yet, few studies have explored guided reading as a method used to teach, remediate, or accelerate high school ELLs' reading ability. This study has the potential to add to that body of research.

The increased use of CAI to deliver instruction is a trend noted in research since the early 1990s (Najjar, 1996). Since that time, computer use in the classroom has been challenged by debate over whether or not CAI is an effective method for improving students' reading achievement. Advocates of CAI (Chang, 2002; Garcia & Arias, 2000) claim that using CAI enhances learning through the overall positive motivational factors associated with technology integration into the curriculum. These CAI supporters indicate that CAI improves achievement through increased motivation. The effectiveness of CAI continues to be extensively debated to this day. In a meta-analysis conducted by Kulik (1994) the research evidence produced mixed results for the support and use of

CAI in elementary and secondary reading, although Chambers (2003) came to a somewhat more positive conclusion in a meta-analysis for elementary and secondary students, giving a mean effect size of +0.25. While neither of these studies focused specifically on secondary reading for high school ELLs, they nevertheless provide context for understanding the effects of CAI on reading achievement for high school ELLs.

Most recently in a meta-analysis of effective reading programs for middle and high school students conducted by Slavin, Cheung, et al. (2008), patterns in the findings as they relate to this study are worthy of note. Most of the CAI reading programs with evidence of effectiveness have cooperative learning at their core. These programs all rely on a form of cooperative learning in which students work in small groups to help one another master reading skills and in which the success of the team depends on the individual learning of each team member. Based on these findings, it would seem that the present research study that integrates cooperative learning, small guided reading group instruction, and CAI would add to the body of research needed to more fully understand effective methods of teaching and learning for ELLs at the secondary level (see Figure 2).

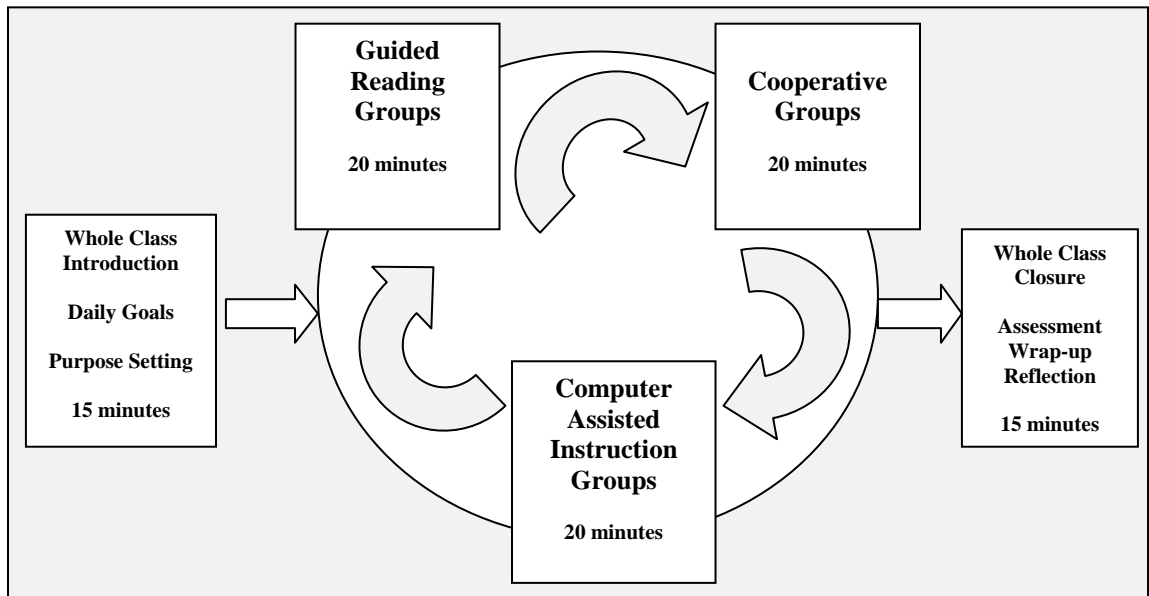


Figure 2. Instructional Intervention Reading Model for High School English language learners (ELLs).

Research Questions

This study sought to determine the factors that enhanced the effectiveness of an integrated model of reading instruction that incorporated cooperative learning, guided reading, and CAI. To achieve the pedagogical goal of improvement in the acquisition of early reading skills for ELLs who are learning to read in English, the framework for formative experiments devised by Reinking and Bradley (2008, pp. 74-76) was selected for this study. Unlike many other types of research that begin with specific research questions, formative experiments focus on achieving a valued pedagogical goal and are guided by broad questions that are aimed at revealing how an intervention can be implemented to achieve this goal.

While formative experiments do not have one specific protocol or set of procedures that must be followed, Reinking and Bradley (2008) have outlined a framework for formative experiments that include the refinement of an instructional method through modifications of the design. This is conducted in an iterative approach as changes to the intervention implementation are expected outcomes of the design. It was largely for this purpose that I selected Reinking's and Bradley's design. Researchers can more effectively achieve a desired goal if changes can be made during the course of an intervention rather than recording irregularities after a study is completed (Reeves, Herrington, & Oliver, 2005).

This study followed the six-phase methodology of formative experiments as devised by Reinking and Bradley (2008) and included the following questions that guided the researcher toward achieving the pedagogical goal:

1. What factors enhance or inhibit the effectiveness of the intervention, a multiconfigured instructional reading model?
2. How can the intervention be modified during the experiment to more effectively achieve the pedagogical goal?
3. How do students perform on pre- and posttest measures of early reading skills?
4. What unanticipated positive or negative effects does the intervention produce?
5. What changes in the instructional environment result from the intervention?

The following questions sought to provide a foundation for the conceptualization of the formative experiment as identified by Reinking and Bradley (2008):

- (a) What is the pedagogical goal and theoretical justification for its value?
- (b) What is the instructional intervention that has the potential to meet the pedagogical goal among high school English language learners who are beginning to read in English?

These questions provided the framework for the current investigation, guided its content and organization, and were used to direct the researcher toward achieving the pedagogical goal of improvement in the acquisition of early reading skills for high school ELLs who are learning to read in English. This study proposes that such an objective might be accomplished through the implementation of an instructional intervention that incorporates cooperative learning, guided reading, and CAI into one reading model for high school ELLs beginning to read English.

Operational Terms

For the purpose of this study the following terms have been defined as follows.

Computer Assisted Instruction (CAI): Computer assisted instruction (CAI) is the use of instructional material presented by a computer in an instructional format or in a tutorial role assessing the student for comprehension. By providing one-on-one interaction and producing immediate responses to input answers, CAI allows students to demonstrate mastery and learn new material at their own pace. It is noted that computerized instruction cannot extend the lesson beyond the limits that are prescribed by the program (Kulik, 2003a). The instructional components of the Scholastic *System 44* CAI program used in this study allowed students the following options in the selection of topics (content) in which to participate (a) the Code or letter-sound correspondence, (b)

Word Strategies or syllable strategies and word analysis, (c) Sight Words or automatic recognition of sight words, or (d) Success or reading and answering questions. While students could choose to work in any of the topics, they could in no way manipulate the information within the topic which was fixed.

Cooperative Learning: Cooperative learning is the instructional employment of a particular set of structured small group activities that are prescribed by the teacher. In cooperative learning, heterogeneous grouping, positive interdependence, and individual accountability are emphasized. Within a cooperative learning group, students work together and are formally accountable for their own and one another's learning. Teacher observation and intervention are important in cooperative learning (Adams, 2000; Bruffee, 1999). For the purposes of this study, the specific cooperative learning method will be Student Teams Achievement Divisions (STAD) as defined by Slavin (1996).

English Language Learner (ELL): Most English language learners (ELLs) in the United States are students with limited English proficiency but are not immigrants or recent arrivals, although all ELLs in this study were immigrants. Specifically, an ELL is an active learner of the English language who may benefit from various types of language support systems. English language learners are the fastest growing group of students in the United States today (National Clearinghouse for English Language Acquisition and Language Instruction Education Programs [NCELA], 2007). More than three-fourths of the ELL elementary students are native-born; more than half of secondary ELL students are native born. Nearly 8 out of 10 ELLs speak Spanish, but some districts have students who represent more than 100 different language groups (NCELA, 2007).

To better understand the participants in this study, the term English language learners will be defined and clarified. ELLs are students whose first language is other than English; as such, ELLs include students with a wide range of primary languages including Mandarin, Hindi-Urdu, Arabic, Bengali, Portuguese, Russian, and others. The term ELLs throughout this study refers primarily to Spanish speaking students who are learning English as their second language, although one Chinese student participated.

English as a Second Language (ESL): English as a second language is a term originally applied to describe English language programs at the postsecondary level, but it is increasingly used at the Pre-K-12 level to describe students whose first or native language is other than English.

English for Speakers of Other Languages (ESOL): ESOL refers to language development classes for ELLs in the Pre-K-12 system for students who do not possess sufficient English language skills deemed necessary for academic success.

Guided Reading. Guided reading is an instructional framework that enables the teacher to support learners in their constructive meaning-making processes (Fountas & Pinnell, 1996, 2001). The goal of guided reading is to help learners develop a self-extending system of literacy strategies that allow them to engage in independent reading tasks. This is achieved through direct instruction by the teacher in small reading groups and the scaffolding of strategy development that promotes reading for meaning through the use of authentic materials and includes the use of texts at each student's identified reading level.

Student Teams Achievement Divisions (STAD): Student teams achievement divisions (STAD) is a cooperative learning method for mixed ability groupings involving team recognition and group responsibility for individual learning developed by Robert Slavin (1995) that emphasizes group goals, individual accountability and equal opportunities for success. The method consists of five main steps: teacher presentation, teamwork, individual quizzes, individual improvement scores, and group recognition (Slavin, 1995). STAD was the model used for cooperative group work in this study.

Organization of the Report

This report is structured into five chapters. Chapter 1 has presented the introduction to the context of the study, the problem statement, the purpose of the study, the research questions, and operational terms. Chapter 2 presents an overview of related literature and research to establish and support the importance of the pedagogical goal and selection of the intervention. The methodology and procedures used to collect and analyze data for the study are presented in Chapter 3. The results of data analyses are presented in Chapter 4. The final chapter presents a summary of the key findings of the study, a discussion of findings, implications derived from the findings, the limitations of the study, and recommendations for further research.

2. REVIEW OF THE LITERATURE

The purpose of this chapter is to provide the theoretical framework and literature review for the study. The theoretical framework includes the underlying principles of social constructivist theory in the learning process that provides the foundation for the multiconfigured instructional intervention of this investigation. It is through examination of this theoretical perspective applied to a classroom context that the students are able to participate in the development of their own learning under the guidance of a teacher or as they work cooperatively with each other. The tenets of social constructivism as they relate to the instructional intervention of this study are presented largely through examination of social constructivist theorists Lev Vygotsky (1978), Jean Piaget (1932), and John Dewey (1916, 1963). While each presents ideas that support participation in social activity as critical to cognitive development, a review of each theorist provides a unique framework for understanding the complicated process of how children learn to read and understand. Each is reviewed as a method to introduce, substantiate, and build upon the ideas presented as a support for the instructional intervention for this study.

First introduced are the theories of Lev Vygotsky (1978) who held that social interaction was an integral part of learning. Vygotsky's theories are dually involved in social constructivism and language development. Understanding his theories facilitate the understanding of the instructional intervention that was developed to facilitate cognitive development in a classroom where social interaction is prominent and expected.

Next discussed is Jean Piaget's (Piaget, 2000) theory of child development. Recognizing that children develop cognitively within different stages over time, this process can be compared to the classroom's teacher's recognition that learning occurs within all students at different rates. Piaget (2000) stressed the importance of understanding that individuals learn at their own pace. Within a classroom context, asking questions of students and scaffolding instruction allows students to understand concepts within each student's own cognitive stage or range of ability. Piaget's (2000) theories support the instructional intervention of this study that is designed to focus on classroom methods that recognize the individual development of every student and instructional practices that promote each student's individual growth.

While the theories of Vygotsky (1978) and Piaget (2000) largely stress the importance of guided forms of teaching and facilitation for individual students within a learning context, the theories of John Dewey (1924, 1963) are directly related to the learning experiences of students working in classrooms. Like Vygotsky and Piaget, Dewey proposed that learners need to gain experience through activities in which they actively participate and cooperate with others; however, he is an advocate for teaching to be designed that addresses the individual differences of students (Dewey, 1963). Dewey also stressed the significance of a teacher's active role in the process of designing experiences for students that build on the knowledge and understanding of students' past experiences. The instructional intervention of this study focuses on designing instruction for students based on their prior experiences and is thus well supported by the theories of Dewey (1963).

Also described is the relevant literature related to critical considerations specific to adolescent ELLs in their literacy development that include characteristics of ELLs, effective reading programs for ELLs, oral language development in ELLs, and an understanding of the challenges ELLs face in the United States. Designing effective literacy programs for adolescent ELLs is essential for their success. The literature presented seeks to support the need for the development of appropriate interventions and programs to increase literacy levels of adolescent ELLs. The chapter concludes with a review of the relevant literature related to each of the three components of the instructional intervention: cooperative learning, guided reading, and CAI as a method to merge theory with practice. Each component of the instructional intervention is presented to demonstrate how social constructivist theory, an understanding of oral language development, and knowledge of effective reading programs for ELLs support the instructional intervention of this study.

Social Constructivist Theory and the Instructional Intervention

Social constructivist theory is based primarily on the works of Lev Vygotsky (1978), Jean Piaget (1932), and John Dewey (1916, 1963) and is the guiding theory of this study. This theory of learning and development emphasizes the social and contextual aspects of learning as well as the nature of cognitive processes as they occur within culturally mediated social activity (Adams, 2006; Bodrova & Leong, 2007; Marin, Benarroch, & Gomez, 2000). This theory provides the framework for understanding and explaining the process of how ELLs learn to read and understand in English. Aligning with a social constructivist framework, Gibson (1966) suggests that humans are not

simply passive processors of environmental information, but rather, humans actively seek information that provides structure and a sense of the world. From this stance, the theoretical perspective of social constructivism as a framework for this study supports the students within the social context of the English Speakers of Other Languages (ESOL) classroom. In this way, students can contribute to their own learning and decision making in reaching the pedagogical goal for increased acquisition of early reading skills. This occurs through oral language exchange and guidance from the teacher as students interact with each other. In this way, as is characteristic of formative design experiments, social constructivist theory or students working together to cooperatively create and share meaning, works in conjunction with the instructional intervention or the means to support the learning of the students.

Vygotsky

One of the most prominent social constructivist theorists who regarded social context as significant to cognitive development was Vygotsky who claimed that socialization is the foundation of cognition development (1978, pp. 57, 90). The internalization of knowledge, according to Vygotsky, is a progression that begins with an interpersonal process before it proceeds into an intrapersonal one; a learner's development first takes place on the social level (between people) before it moves on to the individual level (inside an individual) (p. 57).

Vygotsky (1978) proposed that learning is a process of the “internalization of higher psychological functions” (p. 53). Vygotsky held that learning occurs through the use of two key elements: tools and signs as mediation, and the social interaction of

individuals with a more capable individual within the zone of proximal development (ZPD). This part of a student's development controls how a student learns and refers to the "distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 211).

According to Raymond (2000), Vygotsky defined scaffolding instruction as the "role of teachers and others in supporting the learner's development and providing support structures to get to that next stage or level" (p. 176). Instructional scaffolding, one support used for enhancing cognitive development, assists students in moving to the next level of understanding with the assistance of teachers, peers, or other adults. During this process a student may be asked to perform a task that has meaning to the student. With assistance, the student will complete the task though it may be difficult to perform; there is a support system available, and the support system will ultimately allow the student to solve the problem (Vygotsky, 1978).

Based on review of "social constructivism" theory proposed by Vygotsky, the instructional intervention selected for this study is theoretically supported. This occurs through the integration of cooperative learning, guided reading instruction, and CAI where daily class work and instruction for ELLs comprises the opportunity to converse in English, receive feedback from peers, and learn from others while working in groups. Drawing heavily upon the work of Vygotsky, social constructivist theory postulates that knowledge is constructed within a contextual framework grounded in the learner's social

environment. Meaning has no relevance outside human's interaction with each other and their environment. Vygotsky proposed that socialization is the fundamental principle of cognitive development. He regarded the process of cooperation or collaboration with peers to benefit learners cognitively because it allows learners to interact within each other's ZPD. Through authentic classroom work in small groups, students' understandings can be scaffolded and supported by the teacher, by other students, and by the computer program with which students interact.

Piaget

Piaget is renowned for his theory of cognitive development that describes the intellectual capabilities of children at different stages of learning and the idea that children need to be active participants in their own acquisition of knowledge (Piaget & Inhelder, 1969). Piaget's sociological theory is less renowned than his theory of cognitive development, and he has been criticized for refuting the significance of the social aspect of intelligence and thus for having a solely "individualistic" theory of intelligence (Kitchener, 1991). However, a review of literature shows that Piaget (2000) recognized the significance of social interaction. One of Piaget's major contributions with this theory was that learning, or cognitive development, results from the active engagement of the child with his or her environment: "Knowledge . . . arises . . . from interactions between the subject and the objects. . . . It is only through action that these relations originate" (Piaget, 2000, p. 35). This theory creates an image of children as active thinkers and processors rather than passive instruments of reception.

Piaget's sociological theory (2000, p. 35) supports the rationale for this study's proposed instructional intervention in a similar way. Piaget held that individuals are amenable to cognitive growth only when they are in a condition where they can understand the concept—that is, their ZPD. Because this study's instructional intervention considers each student's ZPD within each instructional grouping, conditions for cognitive growth can be optimized for each student. This can be achieved as students work individually with the teacher and cooperatively with each other as explanations of misunderstandings can be clarified and solutions determined for all students daily.

In discussing social relations, Piaget (1932) condemned traditional schools that offer whole-class instruction, competitive examinations and individual homework. He criticized such procedures as seeming “to be contrary to the most obvious requirements of intellectual and moral development” (p. 412). He stated that working in groups can “correct” the problem and that “cooperation is . . . essential to intellectual progress” (p. 413). To Piaget, experience is an indispensable element of intellectual development, but he contended that exposure to experience alone is inadequate for learning to take place; the learner has to be “active” in the process (Duckworth, 1964; Piaget, 1964). The instructional intervention of this investigation relies on the daily active participation of all group members for intellectual development to occur.

Dewey

Dewey (1924, 1963) also deemed participation in a social environment as critical to learning. Echoing Piaget's critique of traditional whole-class instruction, Dewey found fault with traditional instruction for failing to “secure the active cooperation of the pupil

in construction of the purposes involved in his studying” (1963, p. 67). He emphasized that in a cooperative setting, “the individual appropriates the purpose which actuates it, becomes familiar with its methods and subject matters, acquires needed skills, and is saturated with its emotional spirit” (1916, p. 26). For Dewey, simply waiting passively for the instructor to hand-feed students knowledge does not amount to learning; learners need to gain experience through activities in which they actively participate and cooperate with others.

Although Dewey rejected teachers as authoritarian figures, he appeared to be in disagreement with the more extreme advocates of learner-centered progressivism. While Dewey’s view of experiential education calls for active (rather than passive) participation of learners, it is worth noting that Dewey (1963) also stressed the significance of a teacher’s active role in the process. According to Dewey (1963), experiential education does not mean that learners get unconstrained freedom in the classroom. The teacher needs to “observe” but not “humor” the interests of students: “To humor the interests is to substitute the transient for the permanent” (p. 179). Instead, the purpose of paying attention to learners’ interests is to link them with educative experiences and intellectual development so that essential relations between social experience and human knowledge can be taught and learned effectively. The role of the teacher as the facilitator for learning within each of the interventions’ groupings supports Dewey’s theory of experiential learning and the role of the teacher as the primary facilitator for learning.

Dewey (1963) emphasized that it is important for a teacher to keep “constant and careful observation of [learners’] interests” because those interests show “the state of

development which the [learner] has reached” (p. 178). Therefore, in experiential education a teacher does not “stand off and look on; the alternative to furnishing ready-made subject matter and listening to the accuracy with which it is reproduced is not quiescence, but participation, sharing, in an activity” (1924, p. 188). Like Vygotsky and Piaget, Dewey (1924, 1963) considered participation in social environments and interpersonal communication as key to cognitive development.

The instructional intervention in this study is supported by the ideas of Vygotsky, Piaget, and Dewey as they are related to participation and sharing in activities within the context of a classroom. Most supportive are theories related to students working with peers in cooperative groups and with the teacher in small guided reading groups. This procedure enables students to help each other move from one cognitive stage to the next through active learning as students interact with the teacher and their peers.

Critical Considerations for Adolescent English Language Learners (ELLs) Learning to Read

ELL enrollment in the United States has grown 57% since 1995, while the rate of enrollment growth for all students has been at less than 4%. Currently, there are 5.1 million ELL students in the United States, forming more than 10% of the country’s student population. Because of the rapid growth of this group, we need to accurately determine which ELL students require English language services, and then work to support all of their academic needs (Alliance for Excellent Education, 2009).

As noted previously, ELLs as a group, are among the lowest performing students in the United States, scoring far below the national average on the reading portion of the National Assessment of Educational Progress (NAEP, 2011). There has been a growing

awareness of the need for the development of instructional interventions and programs focused on increasing the literacy levels of adolescent ELLs who often enter the American educational system in high school. These students are required to not only master complex course content but are also expected to navigate through the complicated structure of the American school system. Additionally, they have fewer years to become proficient in English while working to complete requirements for high school graduation. Perhaps most challenging is that adolescent ELLs often enroll in school beyond an age that provides early literacy instruction, since they enroll as high school students. This problem is exacerbated when students enter school with below grade level literacy skills in their native language (Rueda & Garcia, 2001). Designing effective literacy programs for adolescent ELLs is essential for their success.

Special Needs of Adolescent English Language Learners

ELLs entering the United States today represent a diverse range of cultures, and some have had little or no formal education in their native countries (McDonnell & Hill, 1993). It is important to understand the special needs of these immigrant (subsequently referred to as ELLs) adolescents in designing interventions that address their academic, social, and family needs.

Landale and Oropesa (1995) have conducted extensive research on the origin and characteristics of America's ELLs, most of whom come from Central and South America and Asia. Half of the Latino population in the United States are first or second generation immigrants (Landale & Oropesa, 1995). In general, most groups of ELL children have higher rates of poverty than children born in the United States. According to Landale and

Oropesa (1995), the highest rates of poverty are among Puerto Rican, Dominican, and Mexican children, and this has increased as a result of high rates of single-parent households. While it has been documented that poverty alone does not explain the variation in educational outcomes or behavioral patterns among adolescent ELLs, (Fulgini, 1997) it is important to understand the diverse needs of adolescent ELLs.

Vernez and Abrahamse (1996) point out that upon entry into the United States, ELLs may face an array of unique educational needs and circumstances. In addition to poverty, these challenges include:

High residential mobility, coping with emotional stresses due to adjustments to new social norms and a new institutional environment, and/or traumas due to war, family disruptions or separations; and inadequate social support to compensate for broken community ties in their native countries and loss of support necessary for psychological well-being. (p. 3)

Adolescent ELLs in the United States today face complex challenges as they enter American school for the first time.

In general, children who immigrate often leave behind a familiar language, culture, community, and social system. They may also suffer from the trauma of losing a familiar place, leaving one or both parents, or enduring harsh travel conditions, having difficulty finding food and shelter. For those who enter the United States illegally, there may be the added fear of being discovered and deported (James, 1997).

Adolescent ELLs have been described as having to live within two cultures often without fully identifying with either group (Sam, 1992). They are often forced to make

sometimes difficult choices between their parents' culture and the mainstream norms that they are exposed to in school. According to Sam (1992), this can lead to the feeling of not belonging to either culture which can potentially impede positive adaptation to the mainstream culture.

The greatest struggles and problems adolescent ELLs face have been found to occur within the family unit (Castex, 1997; James, 1997). The intergenerational conflict between ELL adolescents and their parents may be a difficult problem (Gil, Vega, & Dimas, 1996). Because adolescents and their parents often acculturate at different rates, this can lead to differences between what adolescents may want for themselves in the United States and what their parents want for them (James, 1997). Parents' reliance on their children as interpreters often compounds family problems. Parents often resent having to rely on their children and may view this reliance as an erosion of parental authority. Further, by virtue of their superior language mastery, adolescent ELLs are often exposed to adult issues, crises, and responsibilities (Szapocznik & Kurtines, 1993).

As they adjust to a new life, school, language, and culture, adolescent ELLs often face unique challenges. The instructional intervention of this investigation was designed to consider the challenges ELLs may face in learning a new language and a new culture. Through daily work in diverse small groups, ELLs' adjustment to their evolving roles and relationships in the United States may be facilitated as they work toward acquiring the early literacy skills needed in learning to read in English.

Effective Reading Programs for English Language Learners

According to Short and Fitzsimmons (2007), the diverse backgrounds of ELLs must be considered in order to develop the most appropriate adolescent literacy programs for ELLs. This includes the understanding that ELLs enter school with varying levels of language proficiency in English and their native language. It is also necessary to recognize the variability in their knowledge of academic subject matter when entering school. Short and Fitzsimmons (2007) also point out that adolescent ELLs also differ in their expectations of the school experience, age of arrival in the United States, parents' educational levels, and proficiency in English. All of these factors have been shown to have effects on literacy development. Each of these factors has implications that should be considered for the instruction and the design of reading programs for adolescent ELLs who are learning to read English.

The National Reading Panel (National Institute of Child Health and Human Development [NICHD], 2000) highlighted effective reading programs that incorporated phonemic awareness, phonics, fluency, vocabulary, and comprehension instruction into daily classroom instruction. According to August and Shanahan (2006), instruction that provides emphasis on these key components has benefits for language-minority students: "Focusing on these key components of reading has a positive influence on the literacy development of language-minority students" (p. 3). Furthermore, August and Shanahan (2006) found that teaching the components of English literacy provides an advantage to ELLs in that teaching these components simultaneously was usually successful in improving literacy for ELLs.

In considering the development of effective reading programs for adolescent ELLs, it is important to consider the general characteristics of adolescent learners including both in and out of school literacies. According to Short and Fitzsimmons (2007), adolescent interest in computer use and Internet use may enhance in-school literacy performance with appropriate instruction. Instructional practices that make use of technology can be beneficial to the literacy learning of all adolescents including ELLs (Rance-Roney, 2010). Furthermore, adolescents tend to engage more with text that they have self-selected, and they generally view peer interaction and collaborative literacy positively. As well, personal goals are motivating factors for developing academic literacy among all adolescents (Short & Fitzsimmons, 2007). Consideration of ELLs interests and experience with computer technology, the use of the computer for early literacy skill instruction, self selection of texts, and working in cooperative groups appear to be significant components of appropriate instruction for adolescent ELLs.

In designing instructional reading programs for ELLs, Avalos (2003) pointed out that a whole group model of instruction is inadequate in meeting the needs of ELLs. Such whole group models assume that ELLs come to school with similar linguistic backgrounds, experiences, and cultural perspectives. Avalos (2003) contended that teachers were instrumental in determining the individual needs of ELLs in order to best prepare them for content classes that are largely taught using a whole group model of instruction. Avalos (2003) supported the idea that ELLs need gradual progressions toward a whole group model of instruction that assumes all students are at the same place in their academic ability. He also suggested that the transition to whole group instruction

can be made through individual and small group instruction as a precursor and preparation for whole group instruction. Avalos (2003) suggests that ELLs might benefit from daily small group configurations in preparation for the largely whole group content classes in which they will eventually participate.

According to research conducted over the past 25 years, the foundation of an effective early English literacy program for ELLs is similar to that of an effective literacy program for English speakers (August & Shanahan, 2006; Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Goldenberg, 2008). Many kinds of instruction can make contributions to ELLs' initial literacy development, including instruction to increase knowledge of phonemic awareness, phonics, and vocabulary, oral reading fluency, and reading comprehension. In the earliest stages of learning to read when the focus is on sounds, letters, and the combination of sounds and letters to form words, progress by ELLs is expected to be roughly comparable to that of English speakers (Goldenberg, 2008). If instruction is clear, focused, and systematic, it is plausible that at the earliest stage of explicit language instruction ELLs can make progress that is close to that of English speakers (Coleman & Goldenberg, 2010). However, while instruction in the key components of reading is necessary, such an emphasis in isolation is not sufficient for teaching ELLs to read and write proficiently in English. Oral proficiency in English is critical for learning to read (August & Shanahan, 2006). It is recommended that extensive oral English development must be incorporated into successful literacy instruction for ELLs.

Oral Language Development and English Language Learners

Oral language is one foundation for learning to read and to comprehend what is read. The background knowledge a student has contributes to using and understanding oral language and reading comprehension. According to Snow, Burns, and Griffin (1998), oral language and reading have a great deal in common. If the words in a text are to be recognized, it is generally because of the reader's oral language abilities. For ELLs to be successful in reading, students must be given the opportunity to express themselves socially and culturally (Krashen, 1981) through oral language exchange. Students learning English as a second language need opportunities to use their new language and to communicate with each other (Cummins, 2001). When second language acquisition is compared to first language acquisition, children develop second language proficiency in similar ways to children who develop their first language regardless of their native language or the new language being learned. First language acquisition is similar to second language acquisition (Krashen, 1981).

The levels of oral language proficiency for ELLs can create special learning situations for students and teachers especially during two key components of this investigation, guided reading and cooperative learning, when dialogue forms the basis for instruction. Cummins (2001) has identified two dimensions of language proficiency that are relevant for students whose first language is not English. The first is "basic interpersonal communication skills" (p. 45) or BICS, which includes the day-to-day skills necessary to communicate. These skills usually develop over one or two years for ELLs. The second dimension of language proficiency identified by Cummins (2001) is

“cognitive academic language proficiency” (p. 45) or CALP, which includes the more complex language used during content-area instruction in classrooms. The nature of CALP, which includes figurative language, idioms and content area vocabulary, takes longer to develop for ELLs, perhaps even five to seven years. The identification of these types of language proficiency adds an extra dimension to language and reading as instruction in oral language proficiency can intensify during guided and cooperative learning discussions within the instructional intervention groups.

An essential component of guided reading instruction is oral language exchange between student and teacher that allows teachers to encourage and facilitate dialogue during guided reading that enables teachers to support readers as they work with text. Allington (2002) observed that talk was controlled less by the teacher in exemplary elementary classrooms, thus providing students opportunities to talk with their peers and with the teacher while building oral language proficiency. From this perspective, oral language is seen as an integral aspect of classroom life because it occurs in all learning situations and is essential for learning. According to Hiebert and Fisher (1991), “all classroom events are embedded in oral language” (p. 143). Language provides the means for communicating the directions and expectations for the literacy task on one level, and provides the medium for structuring and restructuring meaning on a second and more profound level. Oral language enables the student to become an active participant in the making of meaning (Barnes, 1992).

Based on a review of the relevant literature related to the best practice in the reading instruction for ELLs, oral language proficiency development must be

incorporated into successful literacy instruction for ELLs. The instructional intervention for this study was designed to provide ELLs with instruction on key components of early reading instruction through cooperative learning, guided reading groups and CAI. In sum, it seems possible for ELLs to develop deep disciplinary knowledge and to engage in challenging academic activities if teachers know how to support them pedagogically to achieve their potential. From the perspective of social constructivist theory and the works of Vygotsky (1978), Piaget (1932), and Dewey (1916, 1963), the pedagogical goal of improvement in the acquisition of early reading skills for high school ELLs beginning to read English through the implementation of an instructional intervention that incorporates cooperative learning, guided reading groups and CAI into one reading program is well supported. Each of these three components of the instructional intervention is reviewed below.

The Nature of Cooperative Learning

Cooperative learning has been applied in classrooms around the world in a range of subject areas from elementary school through the university level (Kessler, 1992). It has been regarded as an effective teaching method in English as a Second Language (ESL) classrooms by educators across the world (Brown, 2007; Chien, 2004; Kagan, 1995). Cuseo (1992) identified cooperative learning as a

learner-centered instructional process in which small, intentionally selected groups of three to five students work interdependently on a well-defined learning task: individual students are held accountable for their own performance and the instructor serves as a facilitator/consultant in the group-learning process. (p. 1)

Johnson, Johnson, and Holubec (1993) described cooperative learning as “the instructional use of small groups so that students work together to maximize their own and each other’s learning” (p. 6).

Cooperative learning addresses both the changing nature of the classroom and a deep understanding of the learning process. Currently, schools are becoming increasingly diverse. According to some estimates, the academic variation within a typical classroom is as high as five grade levels (Antil, Jenkins, Wayne, & Vadsy, 1998). In addition to academic diversity, classrooms now have more ethnic diversity than ever before. Teachers now face the foundational challenge of integrating diverse cultural perspectives, norms of learning and interpersonal interactions into their classroom activities. Cooperative strategies can provide a method for ELLs to engage with each other that does not distract from instructional time and provides teachers with a means to maximize use of instructional time for reading instruction at all grade levels (Slavin, 1995).

Kagan (1995) emphasized that cooperative learning and communicative language, an approach to teaching a second language that emphasizes oral language interaction, is a compatible method in the teaching of a foreign language. Also, Kagan and McGroarty (1993) noted that cooperative learning provides students with more opportunities to discuss, to share and to verify the teaching content using the target language to communicate with their peers and teachers. Through group interaction, ELLs are able to produce meaningful output with one another. Language acquisition occurs after students receive feedback from their group and are thus able to produce meaningful output with

one another. Language acquisition occurs after repeated negotiating, discussing and sharing of language knowledge.

Cooperative learning comes in many forms. Among the most widely used and researched cooperative learning methods are student team learning methods, including Student Teams Achievement Divisions (STAD), Teams-Games-Tournament (TGT), Team Assisted Individualization (TAI), and Cooperative Integrated Reading and Composition (CIRC); Jigsaw methods, including Jigsaw and Jigsaw II; and group investigation (GI) methods, including Learning Together (LT), Co-op Co-op, and Group Investigation (GI). Many definitions of cooperative learning exist, and most share common themes. Olsen and Kagan (1992) have defined cooperative learning as

group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is accountable for his or her own learning and is motivated to increase the learning of others. (p. 8)

According to Johnson, Johnson, and Smith (1991), cooperative learning is “the instructional use of small groups so that students work together to maximize their own and each other’s learning. . . . To be cooperative, learning groups must be carefully structured” (p. 12). Supported by Vygotsky’s sociocultural theory and the notion of a ZPD as well as Cummins’ theory of language development (1994), cooperative learning enhances the level of student productivity and student interaction for ELLs as they learn to speak and read English.

Moreover, cooperative learning can be defined as working together to accomplish shared goals. Within cooperative situations, individuals seek outcomes that are beneficial to themselves and beneficial to all other group members (Johnson & Johnson, 1990). Cooperative learning may be contrasted with competitive learning when students work by themselves to accomplish learning goals unrelated to those of the other students (Johnson & Johnson, 1989). Through cooperative learning, students work with their peers to accomplish a shared or common goal. The goal is reached through interdependence among all group members rather than working alone. Following is an explanation of the elements of cooperative learning as presented by Johnson and Johnson (2009) that are included in this investigation.

Heterogeneous Grouping

The first step of cooperative learning is the formation of heterogeneous learning groups. According to Slavin (1986), there are two types of heterogeneous group formations. The first type is teacher-assigned grouping based on factors such as achievement level and gender. This type of grouping is often adopted by tutoring-oriented cooperative learning methods (also referred to as student team learning methods), including STAD, TGT, TAI, and CIRC. The second type is interest grouping, which is often adopted by project-oriented cooperative learning, including Group Investigation and Co-op Co-op. For purposes of this study, STAD (Slavin, 1986) will be used and will be described in Chapter 3, Methods.

Not all groups are cooperative (Johnson & Johnson, 2009). Placing people in the same room and seating them together and telling them they are a group does not mean

they will cooperate effectively. To be cooperative, five essential elements need to be carefully structured into the situation (see Figure 3): positive interdependence, individual and group accountability, promotive interaction, appropriate use of social skills, and group processing (Johnson & Johnson, 1989). Following is an explanation of each of these elements of cooperative learning according to Johnson and Johnson (2009) that will be considered in this investigation.

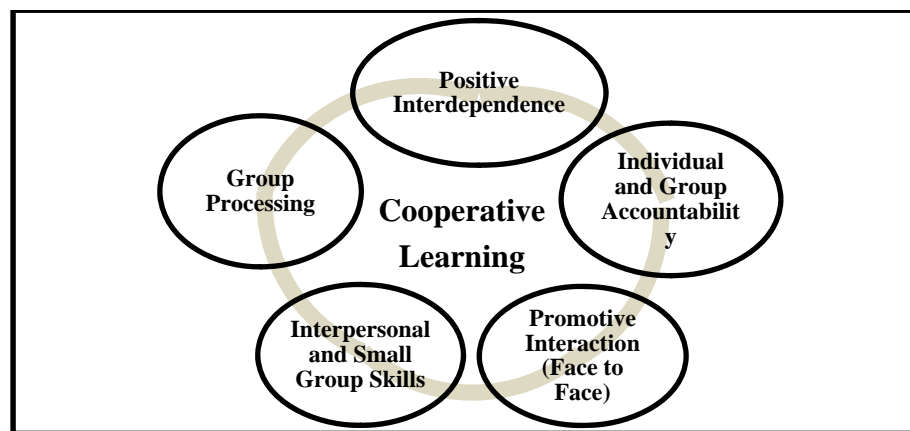


Figure 3. Five essential elements of cooperative learning. Adapted from *Cooperation and Competition: Theory and Research*, by D. W. Johnson and R. T. Johnson. Copyright 1989 by Interaction Book.

Positive Interdependence

According to Johnson and Johnson (2009), the most important element of cooperative learning is positive interdependence. Teachers must give a clear task and a group goal in order that students believe they “sink or swim together.” Positive interdependence exists when group members perceive that they are linked with each other in a way that one cannot succeed unless everyone succeeds. If one fails, all fail. Group

members come to realize that each person's efforts benefit not only him/herself, but all other group members as well. Positive interdependence creates a commitment to other people's success as well as one's own and is the core of cooperative learning. If there is no positive interdependence, there is no cooperation (Johnson & Johnson, 1989).

Individual and Group Accountability

The second essential element of cooperative learning is individual and group accountability. The group must be accountable for achieving its goals. Each member must be accountable for contributing his/her share of the work. The group has to be clear about its goals and be able to measure its progress in achieving them and the individual efforts of each of its members. Individual accountability exists when the performance of each individual student is assessed, and the results are given back to the group and the individual in order to ascertain who needs more assistance, support and encouragement in completing the assignment. In Slavin's meta-analyses of research on cooperative learning (1995, 1996), individual accountability was found to be pivotal to the success of cooperative learning performance. The simultaneous use of individual accountability and group goals substantially enhanced the effect of cooperative learning. The purpose of cooperative learning groups is to make each member a stronger individual. Students learn together so they can subsequently perform higher as individuals.

Promotive Interaction

The third essential component of cooperative learning is promotive interaction. Promotive interaction occurs when members share resources and help, support, encourage, and praise each other's efforts to learn (Johnson & Johnson, 2009).

Cooperative learning groups are an academic support system as every student has someone who is committed to helping him/her learn. It can also be viewed as a personal support system where every student has someone who is committed to the learning of another person. There are important cognitive activities and interpersonal dynamics that can only occur when students promote each other's learning. This includes orally explaining how to solve problems, discussing the nature of the concepts being learned, teaching one's knowledge to classmates, and connecting present with past learning. It is through the promotion of students' learning through daily interaction that students become personally committed to each other as well as to their mutual goals (Johnson & Johnson, 1989).

Interpersonal and Small Group Skills

The fourth essential element of cooperative learning is teaching students the required interpersonal and small group skills. In cooperative learning groups students are required to learn academic subject matter (taskwork) and the interpersonal and small group skills required to function as part of a group (teamwork). Cooperative learning is thus more complex than competitive or individualistic learning because students have to engage simultaneously in taskwork and teamwork. Group members must know how to provide effective leadership, decision-making, trust-building, communication, and conflict-management, and be motivated to use the prerequisite skills. According to Johnson and Johnson (2009), teachers have to teach teamwork skills just as purposefully and precisely as they teach academic skills.

Group Processing

The fifth essential component of cooperative learning is group processing. Group processing exists when group members discuss how well they are achieving their goals and maintaining effective working relationships. As part of the process, groups need to describe what member actions are helpful and unhelpful and make decisions about what behaviors to continue or modify (Johnson & Johnson, 2009).

Johnson, Johnson, and Smith (1991) agreed that "simply placing students in groups and telling them to work together does not in and of itself promote higher achievement" (p. 30). They maintained that in order for students to reap the benefits provided through cooperative learning, two conditions must be met. The first condition is clearly perceived positive interdependence. It exists "when one perceives that one is linked with others in a way so that one cannot succeed unless they do (and vice versa) and/or that one must coordinate one's efforts with the efforts of others to complete a task" (p. 31). When students work together without experiencing the feeling that everyone in their group either sinks or swims together, the learning situation is not cooperative. Cooperative learning has a distinct characteristic of being "carefully structured." For group learning to be truly cooperative, the activity has to be structured in a way that specific cooperative elements work in harmony with each other. Together they provide an integrated system for instructional organization and design. When using cooperative learning as described, any learning situation in any subject area with any age students with any curriculum can be structured cooperatively. For ELLs specifically, cooperative learning promotes language acquisition by providing comprehensible input in

developmentally appropriate ways and in a supportive environment (Kagan, 1995; Nunan, 1992; Wild, Mayeaux, & Edmonds, 2008). Following is a description of quantitative meta-analysis research findings on cooperative learning, the first component of the instructional intervention in this investigation.

Cooperative Learning Meta-Analysis Research Investigations

Research on cooperative learning is abundant, and several high-quality primary studies of cooperative learning instruction have been conducted. However, while many of these studies have produced potentially useful information on the effects of cooperative learning, results are often ambiguous because these studies were infrequently replications of one another. They differ in experimental design, execution, setting and type of cooperative learning investigated. In addition, many of the reviews are typically narrative and discursive in presentation, resulting in their multiplicity of findings making it difficult to be understood by the reader without quantitative methods (Kulik, Bangert, & Williams, 1983). Because of the shortcomings of the traditional approach of narrative reviews, attempts have been made to identify more promising methods of research investigation and evaluation. Glass (1976) was the first to deal with the problem by introducing a comprehensive method that allows one to estimate the average effect of treatment on outcome variables across numerous studies. Thus, the term “meta-analysis” evolved, and according to Glass (1976), the aim of meta-analysis is to integrate a large number of results with the focus on the size of treatment effects, not on statistical significance. Meta-analytic reviewers use objective procedures to locate as many studies of an issue as possible. They describe features and outcomes of the studies using

objective and quantitative methods. For the purpose of this research, and to avoid ambiguity given the vast number of studies related to cooperative learning, I will review previously conducted meta-analysis evaluation studies for cooperative learning. Conclusions presented from these studies are reported as those found by the authors of the meta-analyses.

The central feature of a meta-analysis is the calculation of a composite effect size. Size of effect can be measured in several ways, but the measure most often used is the standardized mean difference. This index gives the number of standard deviation units separating the outcome scores of experimental and control groups. Reviewers calculate effect sizes by subtracting the average outcome score for a control group from the average outcome score for an experimental group, and then dividing the remainder by the standard deviation of the outcome measure (Kulik, 2003a). Effect sizes can be negative or positive. They are positive when the experimental group outperforms the control group; they are negative when the control group outperforms the experimental group. Effect sizes can be large or small. Cohen (1977) suggested guidelines for classifying effect sizes. Effect sizes are small when they are approximately 0.2, medium when they are approximately 0.5, and large when they are approximately 0.8. Slavin (1990) suggested that effect sizes of +0.25 or more are large enough to be considered educationally meaningful.

A Meta-Analysis on Cooperative Learning

Igel (2010) most recently conducted a meta-analysis of empirical studies on the issue of cooperative learning that tested the relationship between cooperative learning

interventions and academic achievement. The principle question addressed by the meta-analysis asked, “What effect does properly specified cooperative instruction have on the individual academic achievement of K-12 students?” Igel’s study was designed to identify primarily quantitative studies on the impact of well-specified cooperative interventions on K-12 student learning and meta-analyze the results of those studies to provide an estimated magnitude of effect.

There are a number of cooperative learning instructional strategies that are incorporated into the utilization of cooperative learning in classrooms. Consequently, educational practitioners and researchers often confuse collaborative and cooperative instruction. According to Igel (2010), this has often led to the misspecification of the strategy within the classroom and in empirical work. For purposes of this meta-analysis, the presence of two features of cooperative learning, positive interdependence and individual accountability, distinguished true cooperative learning from collaborative learning and protected against the possible negative effects of group instruction. As previously described, both positive interdependence and individual accountability are two features of cooperative learning integral to the cooperative learning model as described by Slavin (1996). Thus, only studies that included positive interdependence and individual accountability were included in the meta-analysis.

Review methods. Igel (2010) identified 20 studies for inclusion in the meta-analysis, and 90% were published between 2003 and 2007. Only 2 studies were conducted within the United States while 18 were conducted internationally. Grade ranges across the sample were well represented with eight elementary, four middle

school, and eight high school studies. Subject areas were also well represented with nine science, five mathematics, five language arts, and one social studies study. Sample sizes across studies ranged from 22 to 384. The majority of the studies (18) reported dosage (duration of the study) from 1.75 hours to 80 hours.

Requirements for inclusion in the meta-analysis were specified. For a study to be included, evidence that the facilitator had experience with cooperative instruction was required. In addition, studies included in the meta-analysis met the following four criteria:

1. published in English between June 1998 and January 2009;
2. tested some form of cooperative learning on a sample of K-12 students;
3. used academic achievement as a measured outcome;
4. quantitative study using one of the following designs: (a) multigroup experimental, (b) multigroup quasi experimental, (c) single group pre/post, (d) rigorous correlational, (e) single subject, (f) meta-analysis or a narrative approach to reviewing a body of research.

Methodological criteria were also used to screen studies for inclusion. Single-group interrupted time series, rigorous correlational, experimental, and quasi-experimental designs met the inclusion criteria for study design. To protect against bias, only those studies that demonstrated equivalence or used statistical adjustments for non-equivalent groups were included. Only studies that included a measure of academic achievement as a dependent variable were included. Further, it was required that learning

assessments were administered proximal to the intervention, and it was necessary that the learning assessment demonstrated reliability.

According to Igel (2010), the calculated variance weights and individual effect sizes from each study were used in the calculation of a composite effect. A secondary analysis tested the influence of dosage (duration of the cooperative lesson), grade (elementary, middle, and high school), and subject (science, math, language arts and social studies) on cooperative learning interventions.

Findings. Final statistical analysis revealed that the overall effect size across all 20 studies was 0.44 with a 95% confidence interval between the range of 0.22 and 0.66 (Igel, 2010). Results from this meta-analysis provide evidence that specified cooperative instruction has a moderate positive impact on student achievement. According to Igel (2010), this effect size represents a 17-point percentile gain. In other words, a student scoring at the 50th percentile would see an average improvement to the 67th percentile when instructed under cooperative conditions. Effect sizes across grades were reported as + 0.23 for elementary, + 0.24 for middle school and + 0.85 for high school. In summary, moderate effects representing a substantively significant improvement in learning were identified across the full sample of studies.

Conclusions. According to Igel (2010), findings from the meta-analysis suggest that explicit instruction in cooperative group skills is a key component of effectiveness in students' reading achievement. The large effect report for high school students may be a result of older students' ability to engage in more high developed communication skills when compared to elementary and middle school students. This suggests that high school

students may benefit substantially from cooperative learning and thus supports the need for further research in this area in the ways proposed in this study.

Another Meta-Analysis on Cooperative Learning

Due in large part to the vast number of programs that focus on reading achievement, schools in the United States are providing instruction in reading to a large proportion of middle and high school students (Deshler et al., 2007). Yet, there is little empirical evidence that describes the types of reading programs that are effective for middle and high school students in grades 6-12. A systematic, comprehensive review of the research on middle and high school reading programs had not been conducted until Slavin, Cheung, et al.'s review of 2008. This review focused on large studies of reading programs that were completed over significant periods of time and that used standard measures. The review was intended to include a variety of approaches to reading instruction, and these approaches were grouped into four categories: (a) reading curricula, (b) mixed-method models, (c) computer assisted instruction and (d) instructional process programs. For purposes of this study, I will review the results of the fourth category, instructional process programs that relied primarily on professional development to give teachers effective strategies for teaching reading and included programs that focused on cooperative learning and strategy instruction as found by Slavin, Cheung, et al. (2008).

Review methods. A best-evidence synthesis method of review was used for analysis that sought to apply consistent, well-justified standards to identify unbiased, meaningful information from experimental studies that discussed each study to some detail and pooled effect sizes across studies in substantive categories. These methods are

similar to the methods used by the What Works Clearinghouse (2007). Criteria for inclusion of studies in the review follow:

1. Studies had to have evaluated reading programs for middle and high schools. Studies of variables such as the use of ability grouping, block scheduling, or single-sex classrooms were not reviewed.
2. Studies had to have involved middle and/or high school students in grades 7-12. Studies involving middle schools that began at grade 6 could also be included.
3. Studies had to have compared children in classes using a given reading program to those in control classes using an alternative program or standard methods.
4. Studies could have taken place in any country, but the report of the study had to be available in English.
5. Studies had to have used random assignment or matching with appropriate adjustments for any pretest differences. Studies without control groups were excluded.
6. Studies had to have provided pretest data, unless random assignment of at least 30 units (individuals, classes or schools) had been used and no indications of initial inequality had been found.
7. Studies' dependent measures had to have included quantitative measures of reading performance such as standardized reading measures. Studies involving experimenter-made measures were accepted if there were

comprehensive measures of reading that would have been fair to control groups.

8. Studies had to have had a minimum duration of 12 weeks.
9. Studies had to have had at least two teachers and 15 students in each treatment group.

Effect sizes were computed as the difference between the posttest scores for individual students in the experimental and control groups after adjustment for pretests and covariates, and then divided by the unadjusted standard deviation of the control group's posttest scores. If a standard deviation was not available for the control group, then a pooled standard deviation was used. Procedures described by Lipsey and Wilson (2001) and Sedlmeier and Gigerenzer (1989) were used to estimate effect sizes when unadjusted standard deviations were not available.

Findings. The following findings of the meta-analysis are reported by Slavin, Chamberlain, Daniels, and Madden (2008). Peer-Assisted Learning Strategies, or PALS, is a cooperative learning program in which students work in pairs and take turns reading aloud to one another while engaging in summarization and prediction activities. PALS has been used primarily in the early elementary grades. However, it is also used in remedial and special education programs in upper-elementary and secondary grades. Calhoon (2005) evaluated an application of PALS with students who were enrolled in two middle schools in the southwestern United States who were reading at or below the third-grade level. The 31-week treatment combined PALS with a training approach that emphasized linguistic skills in which students tutored each other on phonological and

spelling skills. This was a randomized quasi-experiment and included largely sixth graders, some seventh graders and one eighth grader. The mean effect size on letter-word identification (ES = +0.84), passage comprehension (ES = +0.66), word attack (ES = +0.46) and reading fluency (ES = -0.13) was +0.46.

Fuchs, Fuchs, and Kazdan (1999) evaluated PALS among special education and remedial classes in 10 high schools in the southeastern United States. The 16-week study included nonrandom assignment to a PALS or control class, and the PALS group used PALS procedures on alternating days. The mean effect size on comprehension (ES = +0.33) and words read correctly (ES + 0.04) was +0.19.

Hankinson and Myers (2000) evaluated PALS in a suburban middle school near Pittsburgh, Pennsylvania. Fifty-one eighth graders experienced PALS and 32 served as a matched control group in a 12-week study. PALS students gained more than controls on the Gates-MacGinitie Reading Test (GMRT) in vocabulary (ES = +0.10) and comprehension (ES = +0.44) for a mean effect size of +0.27. The weighted mean effect size across the three studies of PALS was +0.15. The randomized quasi-experiment had the strongest positive effects.

Student Team Reading (Stevens & Durkin, 1992) is a cooperative learning program for middle schools in which students work in four or five member teams to help one another build reading skills through partner reading, story retelling, story-related writing, word mastery and story structure activities. Students practice and then take individual assessments that form the basis for team scores. Instruction includes explicit teaching of metacognitive strategies.

Stevens and Durkin (1992) conducted a matched evaluation of Student Team Reading in five high-poverty, mostly African American middle schools in Baltimore, Maryland. Two Student Team Reading schools in grades 6-8 were matched with three control schools in grades 6-8. On reading measures, Student Team Reading classes scored significantly higher than the control classes on the California Achievement Test (CAT) reading vocabulary (+0.46) and reading comprehension (+0.34) for a mean effect size of +0.40.

A second study was conducted by Stevens and Durkin (1992) in Baltimore, Maryland. This study evaluated Student Team Reading in six high-poverty, mostly African American middle schools that consisted of sixth grade classes for both control and Student Team Reading groups. On the California Achievement Test (CAT) posttests, there were small but significant differences in reading comprehension (ES = + 0.13) and no differences on reading vocabulary (ES = -0.02). The mean effect size was +0.06. Separate analyses for students with special needs found larger impacts with effect sizes of = 0.60 for reading comprehension and = 0.28 for reading vocabulary for a mean effect size of 0.44.

The Reading Edge is an adaptation of Student Team Reading (Slavin, Daniels, & Madden, 2005) and was designed to serve as the reading component of the Success for All Middle School reading program. The Reading Edge uses cooperative learning structures and lessons designs similar to Student Team Reading but regroups students for reading instruction according to their reading levels across grades and classes.

An evaluation of The Reading Edge by Slavin, Chamberlain, et al. (2008) randomly assigned two successive cohorts of sixth graders within two high-poverty, largely White middle schools to treatment or control classes. One of the middle schools was located in a rural area of West Virginia, the other in a rural area of Florida. On the Gates-MacGinitie Reading Test (GMRT) posttests, students in The Reading Edge classes scored significantly higher than those in the control classes on total reading (ES = +0.15). On subtests, students in The Reading Edge classes scored significantly higher on vocabulary (ES = +0.15) and on comprehension (ES = +0.12).

A large-scale matched study of The Reading Edge was conducted by Slavin, Chamberlain, et al. (2008). Seven high-poverty schools in six U.S. states implemented The Reading Edge over three years. Each of the schools was matched on prior achievement and demographic factors with a control school in the same state, and state test scores were compared at pre- and posttest, and effect sizes were estimated for each pair of schools (Lipsey & Wilson, 2001). One of the schools in the state of Washington made gains from zero to a 96% passing rate on the Washington Assessment of Student Learning, while the control school, also on a reservation, gained 18 percentage points, for an effect size of +2.29. A median rather than a mean was computed across all seven school pairs on their respective state tests, yielding a median effect size of +0.33.

Conclusions. According to Slavin, Chamberlain, et al. (2008), across seven qualifying studies of cooperative learning approaches to middle and high school reading the weighted mean effect size was +0.28. The four studies of the similar Student Team Reading and The Reading Edge approaches had a weighted mean effect size of +0.29.

Each of the programs reviewed relied on a form of cooperative learning in which students worked in small groups to help one another master reading skills and/or in which the success of the team depended on the individual learning of each team member. The finding of positive effects for cooperative learning programs adds to a growing body of evidence regarding the effect that student reading achievement is positively impacted when cooperative learning is implemented within secondary reading classrooms.

In summarizing the results of these meta-analyses, it can be concluded that the effectiveness of cooperative learning has been supported by a large body of research across different grade levels and subject areas both within and outside of the United States (Abrami et al., 2000; Calderon et al., 1998; Ghaith, 2003a, 2003b; Johnson & Johnson, 1989; Slavin, 1995; Vaughan, 2002). Having been implemented in classrooms throughout the United States for over a century, this pedagogy has only recently begun to gain attention and interest from English as a second language (ESL) teachers in the United States where ESL instruction has been reported to be still largely based on whole-class, teacher-centered, and rote memorization methods and often fails to motivate student learning (Lai, 2001; Su, 2003). Few efforts have been made to examine the effects of cooperative learning on ELLs beginning to read English. While this pedagogy is significantly under-researched, this research investigation on which I report is intended to add to the growing body of evidence that supports cooperative learning as part of an instructional model designed to improve the acquisition of early reading skills of ELLs beginning to read English. I will next present a description of the literature and data based

research findings on guided reading, the second component of the multiconfigured instructional model of this research investigation.

The Nature of Guided Reading

Guided reading is an instructional model that is designed to help students become effective readers. The teacher provides support for small groups of readers, typically four to six students, as they learn to use various reading strategies designed to assist in reading and comprehending. Although guided reading has been traditionally associated with primary grades, it can be modified and used successfully in all grade levels (Fountas & Pinnell, 1996). For this study, guided reading was patterned after Fountas and Pinnell's *Guided Reading: Good First Teaching for All Children* (1996) and can be modified and used successfully with ELLs who can gain additional language-learning opportunities that native language speakers typically acquire implicitly (Avalos, Plasencia, Chavez, & Rascón, 2007).

The purpose of guided reading is to help students become independent, strategic readers who question and construct meaning from the text (Mooney, 1990). Typically, the teacher sets up the reading of the text with an introduction, and subsequently each student reads the book independently. During the reading of the text the teacher observes and notes which strategies are being employed by individual students, listens to individual students while they read, and offers support if a reader encounters difficulty identifying a word. After the text has been read, the teacher assesses students' comprehension of the text through dialogue and discussion. The teacher chooses the level of text difficulty with the students' needs in mind and gradually increases the level of

difficulty to ensure that students are working at an instructional level within their zone of proximal development (ZPD) (Antonacci, 2000). From a theoretical perspective, the practice of reading with students at their instructional level is meant to be consistent with Vygotsky's (1978) ZPD. The support of the teacher helps the student read a text that could not be read independently, and then to move from that text to a text of slightly greater difficulty.

After selecting an appropriate text for a particular group of students (one that is slightly beyond their independent reading level), the teacher notes beforehand aspects of the text that will provide support and challenges. Depending on the book and the students, challenges may include difficult words, concepts, or text structures, the plot and characters, or inferential thinking and analysis.

The teacher then tailors the introduction to the needs of the group, links the content of the book to prior knowledge, and sets a purpose for reading. The introduction of the book is the most important part of the guided reading lesson because it provides the scaffold for students to read the book successfully (Fountas & Pinnell, 1996). After the introduction, students are asked to read their individual copies to a certain point in the book. Students are invited to talk about the book after the book has been read by all students. The teacher may focus on reading strategies or revisit portions of the text. While students are reading or exploring the book independently, the teacher reads with each of the students individually, and this provides an opportunity to communicate informally and work diagnostically with that student. The session concludes with a short discussion

of students' responses or by focusing on words that may have proven difficult. The suggested time for guided reading is 20 to 25 minutes.

Fountas and Pinnell (1996) suggest two essential elements of guided reading: "First, the text must provide the right level of support and challenge for the children's current processing abilities . . . second, the text must be introduced in a way that gives children access to it while leaving some problem solving to do" (p. 135). The premises are that children make reading progress when they read with support at their instructional level, and that reading is a problem-solving activity. Guided reading draws on the work of Clay's (1985) Reading Recovery work which has shown that young readers make progress when they move through gradients of text that offer the right amount of challenge. Books used for guided reading are leveled so that students can gradually move through increasingly difficult text. In this way, whole classrooms can be accommodated, rather than instruction with one student as is the case in Reading Recovery.

Guided reading is not static and will vary over time as readers grow in knowledge, skill, and experience (Fountas & Pinnell, 1996). Similarly, the materials and instruction provided by teachers will also change depending of the instructional level of the students. According to Fountas and Pinnell (2007): "It is important for all students to receive guided reading instruction at a level that allows them to process texts successfully with teacher support" (p. 7). Therefore, it is possible that students in higher grades may require guided reading instruction that is similar to the instruction provided in earlier grades. In their continuum of literacy learning, Fountas and Pinnell (2007) identify curriculum goals and characteristics of texts, for grades 3 to 8 that could be used to

inform guided reading instruction with older students. There is little research on the effects of guided reading instruction in general and for high school ELLs specifically. This investigation has the potential to add to the needed body of research in this area as the improvement in the acquisition of early reading skills of ELLs is determined through the implementation of an instructional model that provides guided reading instruction to high school ELLs learning to read English.

Dynamic grouping is a component of guided reading instruction and is typically used in guided reading instruction to determine student placement in reading groups. Fountas and Pinnell (1996) describe several concerns about the dangers of grouping and note how dynamic groups differ from traditional ability groups. To ensure that the negative effects of traditional ability groups are not encountered, they proposed “combining groupings by similar reading processes and text level” (p. 98), but only for the purpose of guided reading. They advocated the use of heterogeneous grouping in other reading activities and content areas. Dynamic grouping in this context is based on ability.

For purposes of this research study, all of the students in the class were identified as English Speakers of Other Languages (ESOL as designated by the school district) Level 1 students, and this was determined by their performance on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) test. All of the students were designated at the lowest level of English language proficiency that ranges from Level I, “Entering,” to Level 6, “Reaching” as identified by the World-Class Instructional Design and Assessment

(WIDA), the assessment protocol required by the school district. In designing guided reading groups to maintain homogeneity, student age, linguistic and cultural background, and differences in life and educational experiences were considered. Further explanation related to grouping practices will be elaborated in Chapter 3.

The documented effects of traditional ability groupings are substantial. However, few studies have examined flexible or dynamic grouping as described by Fountas and Pinnell (1996), the guided reading method selected for this investigation. In a review of the extensive research on grouping for literacy instruction, Paratore and Indrisano (2003) listed several negative factors associated with traditional ability grouping. These factors included the lack of expected academic gains among low-performing students. In contrast, high achieving students were offered more effective instruction and materials that were challenging and interesting. Students in low groups experienced low self-esteem and often developed negative attitudes toward learning and reading. Paratore and Indrisano (2003) also found evidence that did not support the myth of higher ability groups making larger gains when compared to students working in groups with others of similar ability.

During guided reading groups, students have the opportunity to coproduce meaning by internalizing the ideas of others while expanding and adding their knowledge as a result of the dialogue (Peterson & Eeds, 1990). Understanding others and being understood by others are the goals of discussion (Graves, 2004). As described by Almasi (1996), the benefits of oral language discussion are extensive and include gains in the cognitive, affective, and social domains of learning. These include internalizing higher-

level thinking processes, developing social interaction skills, working within the students' ZPD and developing students' enjoyment of reading literature. Guided reading offers opportunities to engage ELLs in discussions that can result in these benefits.

Guided Reading Research for Adolescent English Language Learners

Many studies have been conducted to explore various aspects of guided reading. However, few have focused specifically on the effects of guided reading on the acquisition of early reading skills at the secondary level. Although many professional development resources currently exist on guided reading (Fountas & Pinnell, 1996; Schulman & Payne, 2000; Tyner, 2004), research on guided reading is notably missing within the scholarly literature. While other researchers have identified the need for more research on guided reading, particularly in the primary grades (McIntyre, Kyle, & Moore, 2006; Skidmore, Perez-Parent, & Arnfield, 2003), a gap in this field continues to exist. And too few studies have focused on the impact of guided reading on the acquisition of early reading skills of ELLs. The existing literature presents substantial information on characteristics of guided reading instruction, methods for teaching guided reading, the role of guided reading, perspectives of guided reading and instructional strategies taught within guided reading.

Furthermore, the National Reading Panel (NICHD, 2000) highlights how effective reading programs incorporate phonemic awareness, phonics, fluency, vocabulary, and comprehension instruction into daily classroom instruction, and guided reading incorporates elements of these components as students work in a small group format with the teacher for instruction in reading. Yet, few studies report findings of

these elements of reading as they are specifically presented in guided reading groups for ELLs at the secondary level. Consequently, the review of the related literature that follows will focus on a variety of guided reading research strategies and achievement outcomes of students in the elementary grades in order to provide a context for guided reading instruction for ELLs at the secondary level.

As noted previously, guided reading is a specific teaching technique that has become an important contemporary reading instructional practice in the United States (Fawson & Reutzel, 2000). One goal of guided reading is to develop reading strategies that enable the reader to learn about the process of reading while reading (Iaquinta, 2006). As children develop an understanding of the reading process, they self-monitor, search for cues, discover new things about text, confirm understanding, self-correct, and solve new words using multiple sources (Iaquinta, 2006). As teachers work with students in guided reading groups, students learn how to think about different strategies they can apply as they encounter increasingly difficult text. Following is a review of data-based guided reading research with an emphasis on strategy instruction related to the following topics: text selection, student assessment, teacher-pupil dialogue, fluency, thinking strategies, a modified guided reading approach, and teacher perspectives on guided reading.

Mesmer (2010) examined first graders' accuracy and reading rate in highly decodable and leveled texts. The study reviewed accuracy and rate according to practiced vs. unpracticed reading at different times during the year. In guided reading groups, 74 first graders read both leveled and decodable texts with and without practice and then

reread the same texts throughout the year. Final accuracy rates at the end of the year were inconclusive. Decodable texts were favored in one analysis and leveled texts were favored in a second analysis. However, it is important to note that students were more fluent (read more words per minute) in practiced readings of leveled texts. Across the first-grade year, first graders were more fluent in leveled texts, although differences decreased throughout the year.

Mesmer (2010) concluded that an understanding by the teacher of ways in which different texts can be used developmentally in guided reading is important. The study indicated that reading rate was enhanced through the use of decodable texts that contained many high frequency words. The study did not however, provide reliable results about the influence of text types on accuracy. Mesmer (2010) points out that texts should consist of various features including letter/sound complexity, high frequency words, and systematic introduction of vocabulary. She also concludes that in selecting texts for students, knowledge of the different advantages that texts provide is important.

Fawson, Reutzel, Smith, Ludlow, and Sudweeks (2006) present results of a study conducted to determine the reliability of running records, an assessment teachers often use to code, score, and analyze oral students' reading behaviors during guided reading. Two studies were conducted to determine the number of raters and passages necessary to obtain a reliable estimate of a student's reading ability. Ten teachers completed running record assessments of 10 first grade students on two leveled reading passages.

Findings from this study indicate that each student assessed with running records should read a minimum of three passages in order to produce a reliable score. Thus, using

only one running record does not produce a reliable score for appropriate group placement. Student scores that are generated through the use of running records by teachers with varying degrees of experience and expertise are reliable when at least three passages are administered, and scores are averaged.

Skidmore et al. (2003) conducted an investigation of the quality of teacher-pupil dialogue during guided reading sessions. The study was conducted in five schools among 10- and 11-year-old students during three visits to schools located in the south of England. This investigation was staggered over a six-month period. During each visit, the same group of students was recorded working with the class teacher during the guided reading session.

Major findings from the study revealed that during teacher-pupil dialogue, teacher behavior was characteristic of the following: (a) rarely asks authentic questions, (b) normally controls turn-taking by nominating the next speaker, (c) keeps a tight grip on the topic of conversation, and (d) does most of the talking. Skidmore et al. (2003) concluded that the results of the study suggest that talk within the context of guided reading can be teacher-dominated. Furthermore, the teacher's influence over discussion during guided reading groups should be relaxed in order to allow time for students to explore and interpret their own understandings of what they read. And this should be done by allowing students to use their own words.

McCurdy, Daly, Gortmaker, Bonfiglio, and Persampieri (2007) describe two studies that identify interventions that were applied to small group reading instruction. In both studies, individualized instructional trials that probed for skill and performance

deficits were carried out and results suggest that all students benefited from the instructional intervention. The intervention was next implemented in a small group format. In experiment two however, intervention implementation was carried out by the classroom teacher who delivered the instructional intervention to the small group. In both cases, results suggested that the small group intervention was effective at improving all participants' reading fluency.

Anderson, O'Leary, Schuler, and Wright (2002) developed a study to determine if guided reading increased the reading comprehension scores of first, second, and third graders in four elementary schools as determined by the Gates-MacGinitie Reading tests, end of selection tests, and the Qualitative Reading Inventory (Leslie & Caldwell, 1995). After receiving guided reading instruction over a period of five months, the students did show improvement in the area of reading comprehension. Researchers concluded that students in the lower reading groups who received guided reading instruction made significant gains when compared to students in the higher reading groups.

Whitehead (2002) describes an action research project conducted in New Zealand that relied on the teaching of perspective and imagery thinking strategies that were taught to 9- and 10-year-old students in New Zealand. Students received a 50-minute perspective thinking or imagery thinking lesson once a week for the duration of five weeks from a teacher. The use of the thinking strategies introduced initially was further reinforced by the teachers in the context of their regular instructional reading and writing programs.

At the conclusion of the study, teachers participating in the project reported that they believed the application of perspective and imagery thinking strategies in guided reading groups assisted students in becoming better thinkers. Whitehead (2002) concluded that because there is a dynamic association between language and thought, guided reading lessons are suited in helping students become better thinkers because of the dialogue that takes place between teacher and student during a guided reading lesson.

A study conducted by Avalos et al. (2007) described modified guided reading as an adapted approach to guided reading that can be used to enhance the reading achievement of ELLs. In this way, ELLs can gain additional opportunities for growth in language acquisition when compared to methods used for native speakers. Modifications to guided reading (MGR) include explicit and detailed vocabulary instruction, variables related to second language text structure (e.g. semantics, syntax, morphology), and cultural relevance. Avalos et al. (2007) report that MGR has been successfully used with ELLs in elementary, middle, and high schools. Reading gains for ELLs have been made when MGR is implemented. Grade level reading gains are reported as high as one to two years after only four months of MGR implementation.

The authors concluded that using the MGR approach in elementary and secondary classrooms increased student engagement when students worked in small groups. MGR also provided teachers with the opportunity to get to know students as conversations enabled the students to make connections between texts and their own lives. A final note from the authors reveals that more research needs to be conducted in order to determine the extent of the MGR approach when instructing ELLs.

Ford and Opitz (2008) present the results of a national survey of 1500 K-2 teachers that describe their understanding of guided reading. Results of the survey focused on five questions: (a) What is the purpose of guided reading groups? (b) What grouping techniques should be used? (c) What texts should be used? (d) How is instruction planned with and away from the teacher? (e) How are learners assessed during guided reading? These questions specifically address the purposes, techniques, texts, instruction, and assessment used in guided reading.

Response to the survey indicated that there was confusion about the purposes of guided reading, the variability in grouping techniques, static membership in groups, over reliance on narrative texts, inconsistent use of instructional level texts, extensive use of centers and independent seat work to engage learners away from the teacher, and frequent use of informal assessments. Based on the results of the survey, Ford and Opitz (2008) conclude by offering four critical areas to address when designing in-depth staff development programs for teachers: (a) helping educators develop a more clear understanding of the purposes of guided reading, (b) showing how to foster connections between guided reading and other components within the literacy program in order that guided reading be viewed as an integral component of the literacy program, (c) explaining and demonstrating different ways to respond to texts, and (d) shifting educators' focus from quantity issues related to guided reading to quality of instruction issues. The authors also suggest that the survey results can be used to create an evaluation of existing guided reading practices in order to make them stronger and more effective.

In summary, the body of literature on guided reading research reveals that from this review, teachers at the elementary level explicitly teach a variety of reading strategies at students' individual reading levels during small group instruction. It appears that the fundamental purposes of guided reading instruction have an array of interpretations that include and reach beyond those defined by Fountas and Pinnell (2001). While most of the studies reviewed show positive results in the reading achievement of students, a consistent approach to guided reading instruction among the studies was not detailed.

It can be concluded that the body of literature on guided reading demonstrates that more research is needed to target the guided reading instructional practices of teachers at the elementary and particularly at the secondary level who are working with ELLs. Several of the instructional areas discussed provided few research findings that targeted guided reading specifically in relation to ninth grade ELLs. Much of the research presented in this chapter is positive yet inconclusive. It appears that guided reading is included as a component of effective literacy instruction and identified as a component for elementary-aged students, yet no conclusive research has been conducted related to guided reading practice for ninth grade ELLs learning to read English. I will next present a description of the literature on CAI, the third component of the multiconfigured instructional model of this research investigation.

The Nature of Computer Assisted Instruction

Computer assisted instruction (CAI) is one strategy that is used to improve student achievement in a variety of school subjects, and CAI has been used in classrooms that range from kindergarten through postsecondary education. Since the advent of CAI

nearly two decades ago, these programs have utilized computers to tutor and provide repetitive practice for students, diagnose problems, keep records of student progress and present material in print. It is believed that CAI is a reflection of what teachers do in the classroom (Kulik et al., 1983). It is expected that students benefit from CAI instruction as they learn at their own pace, have opportunities to work with a variety of materials that present sophisticated problems, experience personalized tutoring and receive automatic measurements of progress. Teachers too can benefit from CAI as they experience less repetition, ease in updating instructional materials, more accurate appraisal and documentation of student progress and more time to work directly with students (Kulik, 2003a).

Learning from computers encompasses approaches to computer assisted instruction (CAI) in which the computer is used as a means for transmitting specific subject matter, such as in learning to read. The flow of information is from the computer to the student, with the computer presenting learning material or activities for student responses. The computer retains records of the student's progress through the course of study. Based on the degree of interaction between the student and the computer, three levels of CAI have been identified (Soe, Koki, & Chang, 2000). First, drill and practice, a term used by Soe et al. (2000), utilizes the computer as a method to provide the student with exercises that reinforce the learning of specific skills taught in the classroom and supplies immediate feedback on the correctness of the response. In this way, CAI functions as a supplement to regular classroom instruction and is useful when a teacher does not have the time to work individually with each student. It is suggested that drill

and practice on the computer may also motivate students more than traditional workbook exercises (Soe et al., 2000). Second, tutorial CAI provides information or clarifies concepts in addition to providing the student with practice exercises. Thus, the computer takes over instructional functions that are tailored to the student's individual level of achievement. Finally, dialogue CAI allows the student to take an active role in interacting with the computer, as the computer gives instructions in the form of a computer language in order to structure a personalized curriculum for the student. The computer provides information, exercises and feedback. Dialogue CAI is believed to come closest to substituting for regular instruction (Gourgey, Azumi, Madhere, & Walker, 1984).

The increased use of computer technologies to deliver instruction is a trend noted in research since the 1990s (Najjar, 1996). Since that time, computer use in the classroom has frequently been the subject of many debates. CAI has been challenged as an effective method for improving students' reading achievement. Advocates of CAI (Chang, 2002; Garcia & Arias, 2000) claimed that using CAI enhanced learning through the overall positive motivational factors associated with technology integration into the curriculum. These CAI supporters indicated that CAI improved achievement through increased motivation. The effectiveness of CAI continued to be extensively debated during this time. In a meta-analysis conducted by Kulik (2003a) the research evidence did not support use of CAI in elementary or secondary reading, although Chambers (2003) came to a somewhat more positive conclusion giving a mean effect size of +0.25. A large study of technology immersion, in which Texas middle schools received laptops for every student, extensive software, and significant amounts of professional development, found

no significant effects on reading achievement in comparison to schools with ordinary levels of technology (Texas Center for Educational Research, 2007). A large randomized evaluation of various computer software programs by Dynarski et al. (2007) found no effects on the reading achievement of first and fourth graders. While none of these studies focused specifically on secondary reading for high school ELL students, they nevertheless provide context for the effects of CAI on the reading achievement of students in high schools.

As a specialized term for second language Computer assisted instruction (CAI), Computer Assisted Language Learning (CALL) was adopted at the 1983 Teachers of English to Speakers of Other Languages (TESOL) conference in Toronto, Canada to refer to the applications of computer technologies to second language acquisition (Chapelle, 2001). The development and innovation of CALL brought more possibilities for success in language acquisition and reading achievement for ELLs. Bral (2006) summarized the advantages of CALL in second language teaching in the dissertation *ESL Teacher Perceptions and Attitudes Toward Using CALL* as being "individualized instruction, exposure to more authentic materials and communicative opportunities, self-paced instruction, feedback, lower anxiety levels, student positive perceptions of CALL, and experiential learning and interaction" (pp. 26-27).

During the early years of CAI in the 1960s and 1970s, which coincided with the initial introduction of computers into classrooms, developers began evaluating programs of CALL, but interest in pursuing research in this area waned. A comprehensive review of CALL published in 1996, however sought to clarify the lack of consensus upon

research in this area. Until this time, CALL research was regarded as a series of unrelated studies of different topics, and it was difficult for reviewers to draw firm conclusions on CALL effectiveness from the diverse studies (Kulik, 2003b).

The advent of the 21st century brought to the field of CALL its own organizations, journals and newly published books, and in 2003 Kulik conducted a meta-analysis of seven controlled quantitative evaluations that met the meta-analysis criteria of CALL programs that examined the effects of using instructional technology in colleges and universities. The studies do not provide a sound basis for conclusions about CALL effects. Each of the studies examined its own approach to improving language instruction with technology. Avent's (1993) study examined effects of computer assisted instruction in a beginning course in German at the University of Georgia. Despain (1997) evaluated performance of students who worked on Spanish listening comprehension exercises in a computer-based laboratory. Liou (1997) examined effects of World Wide Web exercises on students in a third-year English composition course given at National Tsing Hua University in Taiwan. Stenson, Downing, Smith, and Smith (1992) evaluated a program in which international teaching assistants working on their English speaking skills were able to see visual representations of their English language speech. These studies lack a consensus of a research agenda that validates the earlier efforts made by researchers in 1996 (Kulik, 2003b). Only seven evaluations of CALL programs carried out during the past decade were located for Kulik's (2003b) review, and these studies were extremely varied in focus. Each of the studies examined its own approach to improving language

instruction with technology, and so the studies do not provide a sound basis for conclusions about overall CALL effects.

A Meta-Analysis on Computer Assisted Instruction

As noted previously, a systematic, comprehensive review of the research on middle and high school reading programs had not been conducted until Slavin, Cheung, et al.'s review of 2008. The review was intended to include a variety of approaches to reading instruction, and these approaches were grouped into four categories: reading curricula, mixed-method models, computer assisted instruction, and instructional process programs. For purposes of this study, I will review the results of studies from the third category of this meta-analysis, computer assisted instruction reading programs as found by Slavin, Cheung, et al. (2008), that relied primarily on CAI programs that were divided into two categories: supplemental CAI reading programs and computer-managed learning systems for middle and high school students.

Review methods. A best-evidence synthesis method of review was used for analysis that sought to apply consistent, well-justified standards to identify unbiased, meaningful information from experimental studies that discussed each study to some detail and pooled effect sizes across studies in substantive categories. These methods are similar to the methods used by the What Works Clearinghouse (2007). Criteria for inclusion of studies in the review follow:

1. Studies had to have evaluated reading programs for middle and high schools. Studies of variables such as the use of ability grouping, block scheduling, or single-sex classrooms were not reviewed.

2. Studies had to have involved middle and/or high school students in grades 7-12. Studies involving middle schools that began at grade 6 could also be included.
3. Studies had to have compared children in classes using a given reading program to those in control classes using an alternative program or standard methods.
4. Studies could have taken place in any country, but the report of the study had to be available in English.
5. Studies had to have used random assignment or matching with appropriate adjustments for any pretest differences. Studies without control groups were excluded.
6. Studies had to have provided pretest data, unless random assignment of at least 30 units (individuals, classes or schools) had been used and no indications of initial inequality had been found.
7. Studies' dependent measures had to have included quantitative measures of reading performance such as standardized reading measures. Studies involving experimenter-made measures were accepted if there were comprehensive measures of reading that would have been fair to control groups.
8. Studies had to have had a minimum duration of 12 weeks.
9. Studies had to have had at least two teachers and 15 students in each treatment group.

Effect sizes were computed as the difference between the posttest scores for individual students in the experimental and control groups after adjustment for pretests and covariates, and then divided by the unadjusted standard deviation of the control group's posttest scores. If a standard deviation was not available for the control group, then a pooled standard deviation was used. Procedures described by Lipsey and Wilson (2001) and Sedlmeier and Gigerenzer (1989) were used to estimate effect sizes when unadjusted standard deviations were not available.

Findings. According to Slavin, Cheung, et al. (2008), results from a review of the supplemental CAI programs such as Jostens and the Computer Curriculum Corporation's (CCC) integrated learning systems are designed to supplement traditional classroom instruction by providing additional instruction at students' assessed levels of need. Jostens, now referred to as Compass Learning, provides a set of assessments that places students in an individualized instructional sequence, and students work individually on exercises designed to fill in gaps in their skills. Jostens is typically used for 15-30 minutes, two to five days per week.

Two studies in rural schools evaluated the Jostens integrated learning system. Roy (1993), according to Slavin, Cheung, et al. (2008), evaluated the program in a junior high and a middle school located in different rural areas of Texas. Both schools served primarily Anglo populations. At Midway Junior High, there were 54 sixth graders using Jostens matched with 54 control students. Adjusting for the Norm-Referenced Assessment Program for Texas (NAPT) pretests, there were significantly positive effects on NAPT Reading ($ES = +0.38, p < .05$). At Hallsville Middle School, 150 seventh and

eighth graders using Jostens were matched with a control group of 150 students. There were insignificant effects on the NAFT among seventh ($ES = +0.10, p > .05$) and eighth graders ($ES = +0.04, p > .05$), for a mean effect size of +0.07. The weighted mean effect size across the two schools was +0.15.

Hunter (1994), as reviewed by Slavin, Cheung, et al. (2008), evaluated Jostens's effect on second through eighth graders' performance in reading and math in rural Jefferson County, Georgia, USA. The reading evaluation in grades 6-8 is described here. Students participating in Title I, a program providing financial assistance to high-poverty schools and districts, engaged with Jostens for 30 minutes each day for a total of 28 weeks. These students were compared with a control group that did not receive CAI. Three experimental and three control schools were compared. Fifteen students at each grade level from each of the six schools were randomly selected for measurement. Effect sizes were estimated at +0.37 for sixth grade, +0.37 for seventh grade, and +0.19 for eighth grade, for a mean of +0.31. Across the two studies of Jostens, the weighted mean effect size was +0.21.

The Computer Curriculum Corporation (CCC) integrated learning system has students work individually on computers to learn and practice skills appropriate to their assessed needs. In a study by Liston (1991), as reviewed by Slavin, Cheung, et al. (2008), remedial 10th graders used CCC materials focused on four courses of study: reader's workshop and reading for comprehension, practical reading skills, critical reading skills and survival skills. After an initial assessment, the students were placed at the appropriate points in the individualized curriculum. The Liston (1991) study involved 10th graders

across the state of South Carolina who had been identified as being in need of remedial instruction according to state standards. Overall, 72% of the students were African American, and 28% were White. Twenty-six CCC high schools were compared with 23 control schools matched on the Comprehensive Test of Basic Skills (CTBS) pretests and ethnicity in a matched posthoc design. Two cohorts were studied during the 1988-1989 and 1989-1990 school years, respectively. There were 2,278 students (1,161 treatment students and 1,117 control students) in Cohort 1 and 2,319 students (1,127 treatment students and 1,192 control students) in Cohort 2. CTBS pretests were nearly identical in CCC and control schools. South Carolina exit exams, which are given each spring, showed differences that were not significant for the first cohort ($ES = +0.02, p > .05$) and small but significant differences for the second cohort ($ES = +0.10, p < .01$), using analyses of covariance. Effect sizes were +0.09 and +0.02 for African American and White students, respectively. The overall mean effect size was +0.06.

The category of computer-managed learning systems included only one program, Accelerated Reader (AR), a supplemental program that assesses students' reading levels using a computer that prints out suggestions for reading materials at students' reading levels. Students read books or other materials and then take tests on the computer to show their comprehension of what they have read. Students can earn recognition or rewards based on the number of tests that they have passed. A small matched study by Hagerman (2003), as reviewed by Slavin, Cheung, et al. (2008), evaluated Accelerated Reader with sixth graders in a suburban middle school near Portland, Oregon, USA. After using Accelerated Reader for 12 weeks, the treatment students ($n = 64$) were compared with

matched students who were enrolled in another middle school in the same district ($n = 57$). Students were pre- and posttested on the Test of Reading Comprehension, third edition. On posttests adjusted for pretests, the Accelerated Reader group scored significantly higher ($ES = +0.53, p < .001$).

The largest evaluations of Accelerated Reader in grades 6-8 were carried out in two school districts, Pascagoula and Biloxi, in the state of Mississippi. Data on two cohorts of students were analyzed by third party evaluators working under contract to the program's publisher. During the 2002-2003 school year, Ross and Nunnery (2005) compared one-year gains for schools using Accelerated Reader ($n = 2,106$ students) to those in matched schools using traditional methods ($n = 1,124$ students). The schools using Accelerated Reader were also using Accelerated Math. During the 2003-2004 school year, the same comparisons were made in the same schools by Ross, Nunnery, Avis, and Borek (2005) with 2,419 students using the Accelerated Reader program and 1,666 students in the control group. Some students were of course in the treatment groups for both years, but the data are presented as two cross-sectional studies, not as a longitudinal study. Effect sizes for the 2002–2003 cohort on the reading portion of the Mississippi Curriculum Test, adjusted for pretests, were +0.11 for sixth grade, +0.16 for seventh grade, and +0.12 for eighth grade, for a mean of +0.13, $p < .05$. For the 2003-2004 cohort, effect sizes were -0.04 for sixth grade, +0.04 for seventh grade, and +0.10 for eighth grade, for a mean of +0.03, $p > .05$. Combining across both cohorts, the mean effect size was +0.08. The weighted mean effect size across all three qualifying studies of Accelerated Reader was +0.09.

Conclusions. According to Slavin, Cheung, et al. (2008), a total of eight qualifying studies evaluated various forms of CAI. The studies involved a total of 12,984 students. Overall, the weighted mean effect size was +0.10. This is in accord with the conclusions drawn from a review of research on CAI by Kulik (2003b). Consistent with previous research is the finding that forms of CAI generally produce small effects in reading achievement for middle and high school students (Slavin, Cheung, et al., 2008).

The overall findings of the research presented report that CAI has a small positive impact on reading achievement. However, it is noted that there is a wide range in the foci, procedures, materials and findings among the studies included in this review. The lack of sufficient numbers of studies that examined the effect of CAI on the reading achievement of ninth grade ELLs beginning to read is noteworthy and could be a barrier to the systematic assessment of the impact of CAI on the teaching of reading to high school ELLs beginning to read in English. While findings indicate that computer applications can play a significant role in teaching and learning, the precise nature of that role is in need of further research with greater depth and precision. It appears that the use of CAI alone may be insufficient in the teaching of reading and that while CAI as an instructional tool has been somewhat effective in raising reading achievement when used to supplement classroom instruction, other variables need to be considered in the teaching of reading.

Literature Review Summary

In view of the positive results provided by studies that utilized forms of cooperative learning in which students worked in small groups to help one another master

reading skills, it can be concluded that student reading achievement can be positively impacted when cooperative learning is implemented within secondary reading classrooms. However, it is noted that this pedagogy has only recently begun to gain attention and interest from English as a second language (ESL) teachers in the United States where ESL instruction is reported still largely whole-class and teacher-centered (Lai, 2001; Su, 2003). Few efforts have been made to examine the effects of cooperative learning on high school ELLs beginning to read English. While this pedagogy is significantly under-researched for ELLs, this research investigation is intended to add to the growing body of evidence that supports cooperative learning as part of an instructional model designed to improve the reading achievement of ELLs beginning to read English.

The body of literature on guided reading demonstrates that more research is needed to target the guided reading instructional practices of teachers particularly at the secondary level who are working with ELLs. Several of the instructional areas discussed revealed few research findings that targeted guided reading specifically in relation to ninth grade ELLs. Much of the research presented in this chapter is positive yet inconclusive. Few studies have examined guided reading at the secondary level with a focus on guided reading practices for ELLs. Indeed, guided reading is included as a component of effective literacy instruction and identified as a component for elementary-aged students, yet no conclusive research has been conducted related to guided reading practice for ninth grade ELLs learning to read English.

The overall findings of the research presented are that CAI, in the classrooms studied, had a small positive impact on reading achievement. However, it is noted that there is a wide range in the foci, procedures, materials and findings among the studies included in this review. The insufficient number of studies that examined the effect of CAI on the reading achievement of ninth grade ELLs beginning to read is noteworthy and could be a barrier to the systematic assessment of the impact of CAI on the teaching of reading to high school ELLs beginning to read in English. While findings indicate that computer applications can play a significant role in teaching and learning, the precise nature of that role is in need of further research with greater depth and precision. It appears that the use of CAI alone may be insufficient in the teaching of reading, and that while CAI as an instructional tool has been somewhat effective in raising reading achievement when used to supplement classroom instruction, other variables need to be considered in the teaching of reading. This research investigation has the potential to add to the needed CAI body of evidence needed to assist ELLs in their initial reading of English.

In this chapter the pedagogical goal and the selection of the instructional intervention of this study have been justified through discussion of the related literature. I first provided the theoretical framework for this study that included a review of the related literature that described the underlying principles of social constructivist theory. I next reviewed the relevant literature in support of critical considerations specific to adolescent ELLs in their literacy development that included characteristics of effective reading programs for ELLs, oral language development among ELLs, and the challenges

ELLs face in the United States. The chapter concluded with a review of the literature related to each of the three components of the instructional intervention, cooperative learning, guided reading, and CAI. In Chapter 3, I will present the methodology for the study.

3. METHODOLOGY

This study sought to determine the factors that enhanced the effectiveness of an integrated model of reading instruction that incorporated cooperative learning, guided reading, and computer assisted instruction (CAI) into one reading model for ninth grade English language learners (ELLs) learning to read. To achieve the pedagogical goal of improvement in the acquisition of early reading skills for ELLs who are learning to read in English, the framework for formative experiments devised by Reinking and Bradley (2008, pp. 74-76) was selected for this study. As noted earlier, unlike many other types of research that begin with specific research questions, formative experiments focus on achieving a valued pedagogical goal and are guided by broad research questions aimed at revealing how an intervention can be implemented to achieve them. This study followed the methodology of formative experiments and included the following research questions that guided me toward achieving the pedagogical goal:

1. What factors enhance or inhibit the effectiveness of the intervention, a multiconfigured instructional reading model?
2. How can the intervention be modified during the experiment to more effectively achieve the pedagogical goal?
3. How do students perform on pre- and posttest measures of early reading skills?
4. What unanticipated positive or negative effects does the intervention produce?

5. What changes in the instructional environment result from the intervention?

The following questions sought to provide a foundation for the formative experiment as identified by Reinking and Bradley (2008):

(a.) What is the pedagogical goal and theoretical justification for its value?

(b.) What is the instructional intervention that has the potential to meet the pedagogical goal among high school English language learners who are beginning to read in English?

These questions provided the framework for the current investigation, guiding its content and organization and were used to guide me toward achieving the pedagogical goal of improvement in the acquisition of early reading skills for high school ELLs who are learning to read. The study was based on the assumption that this might be achieved through the implementation of an instructional intervention that incorporates cooperative learning, guided reading, and CAI into one reading model for high school ELLs beginning to read English.

Design

As previously noted in Chapter 1, a fundamental challenge facing high school ELLs entering schools in the United States for the first time is learning how to read. Increasing numbers of ELLs come from homes in which English is not the primary language spoken. Although many children of immigrant families succeed in reading, many do not as evidenced in the eighth grade 2011 National Assessment of Educational Progress (NAEP) reading assessment results (see Figure 1). This study sought to begin to create a body of evidence that supports successful reading instruction for high school

ELLs learning to read English through the implementation of a formative design study. Multiple factors in selecting formative design as the method for this investigation were considered. An explanation of these factors follows.

First, the methodology of formative design as an approach to this research study was well suited in that formative design methods allowed me to address the complexities of implementing an instructional intervention that could be shaped and modified to meet the pedagogical goal during the investigation. As noted earlier, researchers can more effectively achieve a desired goal if changes can be made during the course of the intervention rather than noting what went wrong after a study is completed (Baumann, Dillon, Shockley, Alvermann, & Reinking, 1996). In this way future research does not rely on new studies that seek to make modifications to the intervention in a new context with new students.

Second, cooperative learning, guided reading, and CAI groups encouraged daily variability in instruction based on the needs of the students. This variability suggests that implementation of the intervention with fidelity across time and context would be not only be difficult to control utilizing a different method, but would be difficult to understand and counter intuitive to the social constructivist theory and theories of language development for ELLs upon which the intervention was founded. More specifically, variability was a natural and necessary part of each of the instructional groupings as students worked with peers in cooperative groups, with the teacher in small guided reading groups, and with the computer and each other. These groupings and the

variability within each enabled students to help each other move from one cognitive stage to the next through active learning as students interacted with the teacher and their peers.

Third, central to this study and all formative experiments was an explicit pedagogical goal, the acquisition of early reading skills, which guided the research in addition to a set of research questions. In this way, the focus of the investigation was explicitly and directly related to improving the acquisition of early reading skills of ELLs within an authentic educational setting. This is due to the fundamental challenge facing high school ELLs entering schools in the United States for the first time who are learning to read English. The pedagogical goal became a daily reference point for collecting and analyzing data, for making modifications to the intervention, and for determining the extent to which progress had been made. As is characteristic of formative experiments, this investigation was aimed at improving practice, and the rationale for the goal's importance was inherent to establishing the rationale for the investigation (Reinking & Bradley, 2008).

Simply stated, formative design research is related to instructional practice in that this approach is designed to address a practical problem, to develop a workable solution, and to accomplish a valued goal. Given the challenge facing high school ELLs who are entering schools in the United States for the first time and learning how to read in English, the methodology of formative design was selected for this investigation. It is important to note that formative experiments have been used by many researchers in the field of literacy (Baumann, Ware, & Edwards, 2007; Fisher, Frey, & Lapp, 2009; Ivey & Broaddus, 2007; Jiménez, 1997; Neuman, 1999; Palincsear, Magnusson, Collins, &

Cutter, 2001; Reinking & Watkins, 2000; Taboada & Rutherford, 2011). Specifically, formative experiments have been used to study engagement in reading of beginning ELLs (Ivey & Broaddus, 2007), the use of computers to affect reading and writing (Reinking & Pickle, 1993), and the effectiveness of cognitive strategy instruction for Latina/o readers (Jiménez, 1997). These studies assist in describing the strength of formative experiments, particularly the way in which multiple and interacting variables are used as a means of managing the complexity of classrooms rather than trying to control them statistically or through an experimental design. These investigations also exemplify the use of mixed methods methodology in carrying out formative experiments in literacy that have been published in highly regarded journals that demand the use of rigorous methods.

Characteristics of Formative Experiments

Reinking and Bradley (2008) offer a list of defining characteristics of formative experiments that intersected with and supported the rationale for this study (see Table 1). The central focus for study in formative experiments is the instructional intervention. The intervention seeks to address a needed area of instruction that can be positively changed during its implementation. Important to the design is that the intervention must be studied in an authentic instructional environment where variation is permitted and not constrained by other factors (Reinking & Bradley, 2008).

Table 1

Conceptual Overview of Formative Design

Characteristics of Formative Design Studies	Current Study
Instructional Intervention	Multiconfigured and adaptive reading model within the classroom context
Guided by Theory	Social Constructivist Theory: Theory of English language learners' oral language development
Goal Oriented	To improve early reading skills among high school English language learners
Pragmatic	Classroom variation is expected; adaptive intervention
Methodologically Flexible	Quantitative and qualitative methods

Note. Adapted from *Formative and Design Experiments: Approaches to Language and Literacy Research*, by D. Reinking and B. Bradley, 2008, pp. 17-22. Copyright 2008 by Teachers College Press.

Formative experiments are guided by theory, and theory in a formative experiment is used to justify the importance of the inquiry, to provide a rationale for the intervention, to interpret findings, and to contextualize conclusions (Reinking & Bradley, 2004, p. 159). Cobb, Confrey, diSessa, Lehrer, and Schauble (2003) offer the idea that the purpose of design experiments is “to develop a class of theories about both the *process* of learning and the *means* that are designed to support learning” (p. 9). Thus, a researcher using this method is focused on discovering pedagogical theories that identify factors that enhance or inhibit the effectiveness of the instructional intervention in achieving its goal.

Formative experiments are goal oriented. They explicitly investigate how to improve education and learning in authentic educational settings (Reinking & Bradley, 2008). The goal must be accompanied by an explanation of why it is worthy of

investigation in conjunction with a planned intervention that is believed to have the potential to make progress toward achieving the goal. The intervention must be justified by theory and practice.

Fidelity for purposes of establishing internal validity is the antithesis of formative experiments (Reinking & Bradley, 2008). As noted by Reinking and Bradley,

A researcher using this approach begins with the assumption that the intervention that is implemented at the beginning of an investigation may be substantially different by the end of the investigation because the main goal of the research is to adapt the intervention to make it work better in response to the inherent variability within the classrooms. (2008, p. 20)

In a formative experiment, rather than making efforts to control variation, the researcher accepts classroom variation as part of the context of the research.

According to Reinking and Bradley (2008), formative experiments are methodologically flexible. They state:

Any approach to data collection and analysis may be appropriate to formative and design experiments if a researcher can justify how it furthers understanding about the effects of the intervention, and how it might be implemented more effectively; or how it might help refine theory. (p. 21)

From this stance, it is important to note the pragmatic nature of formative experiments. They are not defined by the data collection and analysis methods as quantitative and qualitative studies are, yet formative experiments are held to the required standards of rigor for both quantitative and qualitative methods (Cherryholmes, 1992). A researcher

uses the methodology that aligns with the pedagogical goal, and because context is critical to the effectiveness of the intervention, formative experiments require the collection and analysis of qualitative data (Salomon, 1991). For purposes of this study, a mixed methods approach was used for data collection and analysis. Qualitative data were collected throughout the study to generate authentic descriptions (Creswell, 2009; Maxwell, 2005), and quantitative data were collected before and after the intervention to establish a baseline of achievement and to measure progress toward achieving the pedagogical goal. A mixed methods approach is characteristic of formative experiments (Reinking & Bradley, 2008; Tashakkori & Teddlie, 1998).

Formative Design Phases

Reinking and Bradley (2008) outline six phases for conducting formative experiments, and this investigation consisted of six distinct phases over a 14-week period that align with the questions posed above for designing and conducting formative experiments. Phase one is the preliminary phase during which the goals of the project are determined, plans for implementing the intervention are developed, and all participants are selected and finalized. Phase two consists of gathering demographic data using ethnographic methods (information gathered within the context of the classroom setting) to create “thick descriptions” (Reinking & Bradley, 2008) of the school environment. Baseline data are collected in phase three to establish where participants are in relation to the pedagogical goal prior to the implementation of the intervention. Phase four is characterized as the “heart of the investigation” (Reinking & Bradley, 2008), and this involves the implementation of the intervention, gathering of data, and making

modifications to the intervention to better reach the pedagogical goal. During phase five a postassessment is conducted to provide a point of comparison with the baseline data.

Phase six consists of consolidating findings and writing and reporting of the results.

Table 2 illustrates the mixed methods design within the framework of the six phases of this formative design study.

Table 2

Mixed Methods Design and Six Phases of the Formative Study

Phase One	Phase Two	Phase Three	Phase Four	Phase Five	Phase Six
Articulation of goals, plans and participants	Demographic data collection	Baseline data collection	Intervention implementation and modifications to the intervention	Postassessment	Consolidation of findings and writing of results
Qualitative Data	Qualitative Data	Quantitative Data	Qualitative Data	Quantitative Data	Quantitative and Qualitative Data
Preintervention			Intervention	Postintervention	
Qualitative and Quantitative Data			Qualitative Data	Qualitative and Quantitative Data	

Note. Adapted from *Formative and Design Experiments: Approaches to Language and Literacy Research*, by D. Reinking and B. Bradley, 2008, pp. 77-78. Copyright 2008 by Teachers College Press.

The Pedagogical Goal and its Justification

ELLs who are expected to develop academic literacy skills in English while still developing oral English proficiency are at heightened risk for low literacy achievement.

The literacy achievement of ELLs is especially noteworthy when taking into account that

ELLs represent the fastest growing segment of the school-age population, having

increased from 6.8% of the total K-12 school population in 1995-96 to 10.3% just one decade later (Batalova et al., 2007).

The pedagogical goal of this study was improved acquisition of early reading skills for ELLs who were learning to read in English. The framework for formative experiments described by Reinking and Bradley (2008, pp. 74-76) was selected for this study. This investigation is based on the theory and relevant literature related to secondary reading programs and instructional methods that incorporate cooperative learning, small guided reading groups, and CAI into early literacy instruction for high school ELLs learning to read English.

For ELLs, the need to provide flexible and alternative methods to study classroom interventions is essential (Ivey & Broaddus, 2007) in order to fully explore the complexity of teaching ELLs. Formative experiments allow for a deep understanding of the reasons a specific intervention works for a particular group of students under certain conditions (Reinking & Bradley, 2008). According to Ivey and Broaddus: “For struggling adolescent readers and ELLs in particular, the need for alternative ways to study focused interventions is apparent” (2007, p. 515). Furthermore, utilizing a formative design experiment in an intact classroom allows for the close collaboration of the teacher and the researcher that is directed at refining an instructional method through modifications of the design in an iterative approach for developing reading skill with high school ELLs learning English.

Specific to formative design experiments is the idea that the instructional intervention can be implemented to achieve a valued instructional goal (Reinking &

Bradley, 2008). The intervention can be one that can be an innovative attempt, grounded in theory, to address urgent instructional goals (Reinking & Bradley, 2008). In summary, the multiconfigured instructional intervention that supports the pedagogical goal used in this study is grounded in social constructivist theory that postulates that knowledge is constructed within a contextual framework grounded in the learner's social environment; meaning has no relevance outside human's interaction with each other and their environment (Dewey, 1963; Vygotsky, 1978). Rationale for the justification of the pedagogical goal of increased reading achievement through the implementation of a multiconfigured reading intervention is well supported in the scholarly literature.

The Development of the Intervention

My position in the school division was as a district literacy specialist, and a large part of my responsibility as such was to oversee K-12 literacy initiatives within schools and classrooms. My supervisor, with whom I directly worked, is the district's deputy superintendent who had been aware and supportive of my doctoral studies and plans to conduct research within the district utilizing a formative design and multiconfigured instructional reading intervention. Throughout the 2010-2011 school year, we met regularly to review and discuss the proposed intervention, and these discussions included the identification of a school and classroom that could potentially benefit from the study with full consideration of the school district's past performance in reading achievement and demographics.

Discussion with the deputy superintendent included a review of the progress of an existing computer based reading program that focused on the development of

foundational reading skills and included phonics instruction, word recognition, and vocabulary development. The program had been implemented in a high school English Speakers of Other Languages (ESOL), the term designated by the school district, ninth grade classroom during the 2009-2010 school year.

The 2009-2010 ESOL Level 1 class consisted of ELLs who had scored at the lowest proficiency level on the state's Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) test. A review of students' progress after the first year of the program's implementation during the 2009-2010 school year, revealed minimal success for students as determined by the ACCESS for ELLs test. Most of the participating students scored at the lowest proficiency level on the ACCESS for ELLs test both at the beginning and end of the school year and were thus placed in the same ESOL Level 1 classroom utilizing the same computer-based reading program for the 2010-2011 school year.

Student progress during the 2010-2011 school year was difficult to ascertain as many of the students either dropped out of school or withdrew from the school district prior to the final reading achievement assessment administered at the end of the school year. Eight students of the original 16 passed the ACCESS for ELLs, test which allowed these eight students to be placed in an ESOL Level 2 class for the 2011-2012 school year.

In light of the performance of the ESOL Level 1 students in learning to read in English over the preceding two years combined with my interest in social constructivist theory of learning, I developed a multiconfigured model for reading instruction that incorporated guided reading, cooperative learning groups, and CAI into one reading

model for ninth grade ELLs learning to read English. In this way, the instructional framework included an introduction to the lesson, three 20-minute rotations (guided reading, cooperative learning, and CAI) and a time to provide closure to the lesson. The teacher in this investigation did not participate in the development of the multiconfigured model for reading because she had not been designated as the teacher for the class until shortly before the school year had begun.

With the approval of the deputy superintendent, it was agreed that the study utilizing a multiconfigured instructional intervention (see Figure 2) would be implemented in the ESOL Level 1 classroom for ninth grade ELLs within the district's only high school during the 2011-2012 school year. University Human Subject Review Board (HSRB) approval was granted in July 2011 (see Appendix A) and the district's School Board approval to conduct research was granted in August 2011 (see Appendix B).

Research Site

The research site for this study was selected largely due to my employment within the school district where this study was conducted and my residence within the city over the past 25 years. In order to provide a rich context for the site selection as is characteristic of formative design studies, the city within which the school is located, the school district, and the school site are described below as they were prior to the study and the intervention implementation.

The City of Marville

Over the past decade the demographics of Marville City have changed significantly. According to the Marville City 2000 census (obtained on the City website), 35,135 residents were reported living in the City. When compared to the 2010 census of 37,821 residents, this growth rate seems inconsequential. Perhaps most significant is the growth in the Hispanic population reported at 5,316 in 2000 and 11,876 in 2010. The Hispanic population growth for Marville has increased by over 100% in the past 10 years, and this is reflected in the school district's population. Within the City, 12.8% of the population aged 25 or older have completed education levels less than ninth grade; the highest level of education for 22.78% is high school graduation, while 18.52% hold bachelor's degrees and 9.53% hold graduate or professional degrees. The City is located near one of the nation's busiest economies, and the median household income is \$71,382. Nearly 80% of the population aged 16 or older is privately employed with 19% of the workforce employed as government workers at the federal, state or local levels (source: City website).

Marville City Schools

In a speech to According to the Marville City School Board and City Council at the beginning of the 2011-2012 school year, the school district's superintendent identified the single greatest challenge facing Marville City Schools as the impact of the increased limited English proficient (LEP as designated by the state department of education) population. The total district enrollment for the 2011-2012 school year was reported at 7,197 in January 2012, and 33% of the students within the school district were classified

as LEP. Of the total LEP population, 60% were Hispanic and 32% were Asian/Pacific Islander, 4% were White, 3% were Black, and 1% was reported as Other (source: school website). The school district included one high school, one middle school, one intermediate school, five elementary schools, and one alternative education center.

All school divisions within the state are rated according to the progress toward the goals of the No Child Left Behind Act (NCLB) of 2001 (NCLB, 2001). This federal law requires states to set annual benchmarks for achievement in reading and mathematics leading to 100% proficiency by 2014. Schools, school divisions, and states that meet or exceed all annual benchmarks toward this goal are rated as having made adequate yearly progress (AYP). Schools, school divisions and states must test at least 95% of students overall, and 95% of students in each of the following subgroups: White, Black, Hispanic, students with disabilities, limited English proficient (LEP) students, and students identified as disadvantaged. Annual accountability ratings are based on achievement during the previous academic year or combined achievement from the three most recent years. The annual measurable objective (AMO) in English as designated by the state was set at 86% for the 2010-2011 school year. Marville City School district did not meet the requirements for AYP in the following subgroups: Black, Hispanic, students with disabilities, economically disadvantaged, and LEP. In calculating school accreditation, NCLB requires schools, school divisions and states to make progress in additional areas such as science, history, writing, attendance, and graduation. Of the eight schools in Marville City, seven were fully accredited and one, the district's high school, was provisionally accredited.

Isaac Newton High School

Isaac Newton High School (INHS) is the only high school in Marville City, and as of September 2011 included 2,021 students in grades 9-12. Nearly 19% of Newton's student body was classified as LEP, and 55% of the total district LEP population attended Newton. During the 2010-2011 school year Newton received a provisional accreditation rating due to failure to meet graduation rate requirements. Only 45% of the students classified as LEP earned a standard or advanced studies diploma in four years as compared to 82% of all White students, 64% of all Black students, and 47% of all Hispanic students. Performance on the state's required proficiency test in English revealed the following pass rates: (a) 94% for White students, (b) 87% for Black students, (c) 78% for Hispanic students, and (c) 46% for LEP students with an overall school 79% pass rate. It is noted that only those students classified as 11th grade qualify to take the state's required test in English. Thus, students who have not accumulated the number of credits needed to achieve 11th grade status, do not take the state English proficiency test until the status is achieved. The test is then administered during the year 11th grade status is achieved.

This investigation was conducted at Isaac Newton High School in an ESOL Level 1 classroom, and because I had been employed in the school system for 25 years, I was familiar with the school, many of the teachers within the school, and the previous ESOL Level 1 classrooms. In general, the school is open and inviting and visually depicts pride in its athletic achievements. The school logo and mascot are painted on various walls throughout the building and trophy cases depicting a history of past athletic achievements

line the halls. Student recognition for outstanding achievement in all areas of academics is posted on medal plaques throughout the building, and the school's Mission Statement, "INHS Empowers All Students To Achieve Personal Excellence," is clearly visible upon entrance to the building. During the time students travel from class to class, the *Jeopardy* television show theme song is played over the intercom indicating that students have one minute before their next class begins. Students and teachers can be seen talking informally with each other before clearing the halls upon entrance to their next class.

Participants

Participants in this study included the classroom students and teacher. All of the students were identified by the Marville City school district as ninth graders. The classroom teacher was the only designated teacher for the class, and both the students and the teacher are described below.

Students

The English Speakers of Other Languages (ESOL) Level 1 classroom included nine students at the beginning of the school year, five males and four females, and all of these students participated in the study. By the end of the study in late December, three additional students were enrolled in the class, but due to their later entry into the classroom; they were not included in the study. Of the participating students, eight were Hispanic, and one was Chinese. All of these students were born outside of the United States in El Salvador, Honduras, and China. During the first and second weeks of school, initially for purposes of collecting demographic data and gathering descriptive information regarding the students during Phase 2 of the study, the interview protocol

used as described previously was the *Motivation to Read Conversational Interview for English Language Learners* (Sturtevant & Kim, 2010). See Table 3 for further description of the ESOL Level 1 students.

Table 3

Participant Demographic and Descriptive Information

Name	Age	Country of Birth	Ethnicity	Reading Disposition	Goals for the Future	Outside Interests
Rodrigo	15	El Salvador	Hispanic	Reads a little in Spanish only; does not enjoy reading	Join the U.S. Army	Enjoys drawing highly technical works
Jorge	17	El Salvador	Hispanic	Enjoys reading in Spanish; believes his current reading skills are basic. Reads few words in English	Study to get to college	Playing soccer; viewing Internet websites in Spanish
Jose	15	El Salvador	Hispanic	Enjoys reading in English, but reads only in school in his classes	Become a police officer	Cycling (bike riding)
Benjamin	16	Honduras	Hispanic	Does not enjoy reading but feels successful in math	Unsure at this time	Watching T.V. in English and Spanish
Chong	15	China	Chinese	Practices reading in English every day in and out of school; enjoys reading English	Would like to travel around the world	Little time for recreation; watches football when permitted
Marisol	15	El Salvador	Hispanic	Enjoys looking at English cartoons in newspapers	Would like to work for the FBI	Watches T.V. in English (Nickelodeon)
Dariana	19	El Salvador	Hispanic	Enjoys reading fiction stories in Spanish; does not read much in English	Would like to work in the rescue department of a major airline or industry	Little time for recreation as she works and takes care of her one-year-old son
Jacquelin	16	El Salvador	Hispanic	Enjoys reading simple books in English about various aspects of world history	Would like to become a doctor	Enjoys outdoor activities including running and swimming
Alyssa	17	Honduras	Hispanic	Enjoys reading the books in the ESOL Level 1 class	Hopes to become a dentist	Enjoys exploring Spanish and English websites

Two of the participating students in this study were assessed for academic placement using the Assessing Comprehension and Communication in English State-to-State (ACCESS) for ELLs placement test in May 2011 prior to the study. This is a state-required English language proficiency assessment given annually to students in kindergarten through grade 12 who have been identified as ELLs. The test is used as a screening assessment to determine the English language proficiency level of students for placement in classes and was administered to the participants by the school's ESOL coordinator. Both of the students were classified as Level 1, "Entering," or at the lowest English proficiency level and were placed in an English ESOL Level 1 ninth grade English class in May 2011 and again in a new English ESOL Level 1 ninth grade English class in September 2011 where this study was conducted.

The WIDA-ACCESS Placement Test (W-APT) is administered to all new ELLs in the Marville City School District who enter the school system prior to the spring administration of the state ACCESS for ELLs test. The W-APT measures the English language proficiency of ELLs and is used as a screening assessment to determine a student's English language proficiency level and need for English language instructional services. The W-APT is aligned to the WIDA English Language Proficiency (ELP) standards and the ACCESS for ELLs and is designed to provide baseline information. Seven of the nine students in the ESOL Level 1 classroom had taken the W-APT during the first week of school. All were classified at the lowest proficiency level, "Entering," and thus were placed in the ESOL Level 1 classroom.

The Classroom Teacher

The 2011-2012 school year marked Ms. Adams' second year of teaching. Her experience working with ELLs included her prior year of teaching at Newton as a ninth grade ELL resource teacher. In this capacity, Ms. Adams worked with small groups of ELLs identified as Level 2 and Level 3 students as determined by their performance on the ACCESS for ELLs test required by the school district. Ms. Adams had worked with ELLs that were classified as "Beginning" and "Developing," but had never worked with Level 1 "Entering" students prior to the 2011-2012 school year. Ms. Adams was in the final year of completing her ESOL endorsement and master's degree at a nearby university and readily accepted the new position for the 2011-2012 school year. The collaborative roles in which Ms. Adams and I participated during the study are explained below.

Data Collection

Central to formative experiments and data collection is the idea that the methods employed allow theory to simultaneously work to inform practice and to refine or generate new theory that is grounded in practice. The validity and rigor of the methods in formative experiments is established by creating the alignment between theory and practice (Reinking & Bradley, 2008). As might be characteristic of many formative experiments, this study considered an array of relevant and interacting variables and factors that are difficult to manage using only quantitative methods. According to Reinking and Bradley, "Thus it is inconceivable that a formative and design experiment could be conducted without qualitative data. However, quantitative data may be quite

useful, particularly in establishing a baseline of performance related to a pedagogical goal” (2008, p. 46). Qualitative data were collected throughout the study to generate information that included rich descriptions of the classroom environment (Patton, 2002) in order to help the researcher better understand the factors that enhance and/or inhibit reading achievement, identify necessary modifications in light of those factors, describe the instructional environment, and describe unanticipated effects of the intervention. Quantitative data were used to establish a baseline in measuring progress toward achieving the pedagogical goal of improved reading skills. Thus, this study employed both qualitative and quantitative methods using a mixed methods approach. Qualitative data were collected throughout the study, and quantitative data were collected before and after the implementation of the instructional intervention. A description of the qualitative and quantitative data collection and data analysis procedures follow (see Table 4 for the intersection of phases, data sources and research questions).

Table 4

The Intersection of Phases, Data Sources, and Research Questions

Phases of the Formative Study	Data Sources		Response to Research Questions (RQ)
	Quantitative Data	Qualitative Data	
Phase 1 8/15/11-8/31/11			RQ a. RQ b.
Goals, planning the intervention, and participant recruitment			
Phase 2 9/7/11-9/14/11		Teacher interview	
Demographic data collection		Student conversational interviews	
		Classroom observations and field notes	
Phase 3 9/15/11	ACCESS for ELLs Scores	Informal discussions with the teacher	
Baseline data collection	W-APT Scores		
	Scholastic Phonics Inventory		
Phase 4 9/19/11-12/14/11		Classroom observations and field notes	RQ 1 RQ 2
Intervention implementation and modifications to the intervention		Informal discussions with the teacher	
		Student artifacts	
Phase 5 12/15/11	Scholastic Phonics Inventory	Informal discussions with the teacher	
Postassessment			
Phase 6 Winter/Spring 2012			RQ 3 RQ 4 RQ 5
Consolidation of findings			

Qualitative Data

Qualitative data were collected throughout the study and divided into three categories:

1. Preintervention implementation during Phases 1, 2 and Phase 3 of the study.
2. Intervention implementation during which modifications to the intervention were made during Phase 4 of the study.
3. Postassessment and consolidation of findings during Phases 5 and 6 of the study.

Utilizing a teacher interview and informal discussions with the teacher, classroom observations and field notes, student conversational interviews, and student artifacts, I collected and reviewed qualitative data after each class session twice weekly to find patterns, recurring categories, and themes that emerged during the study in order to determine progress toward the pedagogical goal. The instruments used for qualitative data collection are described below.

Teacher Interview and Informal Discussions With the Teacher

Prior to the beginning of the school year and throughout the intervention implementation of the study, I met with the classroom teacher, Ms. Adams, to discuss her overall impression of the study and the instructional intervention during pre- and postintervention utilizing a teacher interview questions protocol (see Appendix C). In this way, throughout the study I was able to determine the teacher's impressions related to factors that enhanced or inhibited progress toward the pedagogical goal, as well as modifications needed for the intervention that might effectively work toward the

achievement of the pedagogical goal. These conversations were conducted in person and allowed me to better understand the teacher's perspective on the students' progress which informed modifications made to the intervention. Furthermore, these conversations added deeper insights that might have otherwise gone unnoticed as I did not have deep knowledge of the daily occurrences that impacted students' lives and thus their classroom performance.

Throughout the 14-week study, my efforts were aimed toward providing collaborative support to the teacher and maintaining a professional and productive relationship. After each meeting with the teacher and throughout all phases of the study, I used a laptop computer to type reflective notes in which I attempted to recount an accurate portrayal of the incidents that occurred. The outcomes of these meetings within each phase of the study are reported in Chapter 4, Results.

Classroom Observations and Field Notes

The primary purposes of the second phase of this study were to generate a thick description of the classroom environment and to collect demographic data in order to gain an understanding of the classroom context (Reinking & Bradley, 2008). I began observing in Ms. Adams' ESOL Level 1 classroom on the second day of school during the 2011-2012 school year. Initiating visits to the classroom at the start of the school year allowed the students to become familiar with my presence and my role at the onset of the year. Because most of the students were new to the country and to the school, I was aware of the possible consequences of disruption to their daily schedules. From the start, I wanted to avoid undue influence to the ecology of the classroom (Reinking & Bradley,

2008) and to clearly define my role as the researcher/observer and Ms. Adams' role as the teacher. It was during our second meeting together that Ms. Adams and I agreed that I would visit the ESOL Level 1 classroom twice weekly (Tuesdays and Wednesdays) commencing September 7, 2011 (see Table 5).

Table 5

Classroom Observation Schedule

14 Weeks: September 7, 2011 to December 15, 2011	Monday	Tuesday	Wednesday	Thursday	Friday
11:00-11:15	Whole class introduction; class not observed	Whole class introduction; whole class observed	Whole class introduction; whole class observed	Whole class introduction; class not observed	Whole class introduction; class not observed
11:15-11:35	Group 1; class not observed	Group 1 observed	Group 2 observed	Group 1; class not observed	Group 1; class not observed
11:35-11:55	Group 2; class not observed	Group 2 observed	Group 3 observed	Group 2; class not observed	Group 2; class not observed
11:55-12:25	Lunch	Lunch	Meeting with the teacher	Lunch	Lunch
12:25-12:45	Group 3; class not observed	Group 3 observed	Group 1 observed	Group 3; class not observed	Group 3; class not observed
12:45-1:00	Whole class closure; class not observed	Whole class closure; class observed	Whole class closure; class observed	Whole class closure; class not observed	Whole class closure; class not observed

The class met for a total of 90 minutes daily; students began at 11:00 A.M. and worked until 11:55 A.M. and then left for lunch from 11:55 A.M. to 12:25 P.M. and returned to class from 12:25 P.M. to 1:00 P.M. It was agreed that I would meet with Ms. Adams on Wednesdays from 11:55 A.M. to 12:25 P.M. to (a) discuss specific factors that enhanced or inhibited the effectiveness of the intervention with regard to improvement of the acquisition of early reading skills, (b) review how the intervention could be modified toward the achievement of improved reading, (c) discuss the unanticipated positive and negative effects that the intervention produced and (d) review how the instructional environment changed as a result of the intervention. Over the course of the 14-week study, I visited Ms. Adams' class twice weekly for a total of 28 visits that included approximately 42 hours of observation. On four occasions my own schedule conflicts and Ms. Adams' absence from the classroom required a change in the originally scheduled observation day of the week.

In order to best characterize the classroom and the students prior to the intervention implementation, I developed questions in advance to serve as a guideline for observations during Phase 2, demographic data collection:

- What constitutes the physical environment (bulletin boards, classroom library, arrangement of desks)?
- Describe the number of students, their gender and ethnicity.
- How do the students engage with each other? Are they speaking English or Spanish or Chinese to each other?

- How does the teacher engage with the students and how do the students respond to the teacher?
- Do students have opportunities to work in groups? If so, what does this look like?
- What technology is available in the classroom? Computers? Smart Board? Tape recorders? Cameras?
- Do students seem cooperative? Enthusiastic? Bored? Engaged? Uninterested?
- What else is/is not noticeable about the classroom and the students?

These questions guided my observations as I recorded field notes. Later, during Phase 4, intervention implementation and modifications to the intervention, my classroom observations and field notes focused on student and teacher interactions in their cooperative learning, guided reading and CAI groups.

Because five distinct activities were taking place during the ESOL Level 1, 90-minute class period during Phase 4 of the study, observations were organized in a way that allowed me to see each of the five activities as the teacher interacted with the students and the students interacted with each other during one class period. Twice weekly over the 12 weeks of intervention implementation, I would observe each component of the instructional intervention adhering to the following sequence as much as possible: 15-minute whole class introduction, 20-minute guided reading group, 20-minute collaborative group, 20-minute computer assisted instruction group and 15-minute whole class wrap up. This was conducted throughout the intervention and during each adaptation to the intervention. Weekly, I would meet with Ms. Adams on Wednesdays for

30 minutes during her lunch to discuss the intervention. In order to best characterize the classroom and the students during intervention implementation, I developed questions in advance to serve as a guideline for observations to address activities within each of the groupings during Phase 4 of the study. These questions guided my observations as I recorded field notes (see Table 6).

Table 6

Observation Questions Within Components of the Instructional Intervention

	Whole Class Introduction	Guided Reading Groups	Cooperative Groups	Computer Assisted Instruction Groups	Whole Class Closure	
Questions Posed for Observations	How does the teacher engage with the students?	As students are working in groups, what does this look like?	As students are working in groups, what does this look like?	As students are working in groups, what does this look like?	How does the teacher engage with the students?	
	How are the teacher and students situated?	How does the teacher engage the students?	What external factors influence students' work in the group?	What external factors influence students' work in the group?	How are the teacher and students situated?	
	How do the students respond to the teacher?	How do the students engage with each other?	How do the students engage with each other?	How do the students engage with each other?	How do the students respond to the teacher?	
	How do the students respond to each other?	What language are the students speaking?	What language are the students speaking?	What language are the students speaking?	How do the students respond to each other?	
	Do students seem enthusiastic? bored? engaged? uninterested?	How do the students interact with the teacher?	Do the students interact with the teacher?	Do the students interact with the teacher?	Do students seem enthusiastic? bored? engaged? uninterested?	
	What else is/is not noticeable about the classroom and the students?	Do students seem enthusiastic? bored? engaged? uninterested? To what extent do the students stay on task? What else is/is not noticeable about the classroom and the students?	Do students seem enthusiastic? bored? engaged? uninterested? To what extent do the students stay on task? What else is/is not noticeable about the classroom and the students?	Do students seem enthusiastic? bored? engaged? uninterested? To what extent do the students stay on task? What else is/is not noticeable about the classroom and the students?	Do students seem enthusiastic? bored? engaged? uninterested? To what extent do the students stay on task? What else is/is not noticeable about the classroom and the students?	What else is/is not noticeable about the classroom and the students?

During the implementation of the intervention I recorded answers to the above questions to determine whether students were speaking to each other, responding to teacher directed questions, working cooperatively or independently, were self directed, bored, engaged, or indifferent. I also made note of how the teacher conducted instruction within each component of the instructional intervention. After each class session, I read the written field notes and wrote reflective notes that attempted to recount an accurate portrayal of the incidents that occurred (see Table 7).

Table 7

An Example of Observation Question Response Notes and Reflective Notes for a Guided Reading Group

Guided Reading Group 10/6/11 Dariana, Jorge, Marisol Book Title: <i>Cool Jobs in Basketball</i>	Reflective Notes for Guided Reading 10/6/11 Dariana, Jorge, Marisol Book Title: <i>Cool Jobs in Basketball</i>
As students are working in groups, what does this look like? <ul style="list-style-type: none">• Students are all focused on the teacher as she talks.• Jorge is smiling as he looks at the book. He is not reading aloud.• Marisol is reading the words softly.• Dariana is reading alone with the teacher. She repeats the words she pronounces incorrectly.	During guided reading groups today, Ms. Adams began the lesson by talking about the sport of basketball as a method to introduce the text <i>Cool Jobs in Basketball</i> . The students seemed interested in the sport and the book, and Jorge admitted that he liked playing the game, but had not played much since his arrival in the United States. Marisol added that her boyfriend played basketball on the weekends at one of the outside courts next to her apartment complex but that she did not have much interest in the game. Dariana was quiet during this exchange.
How does the teacher engage the students? <ul style="list-style-type: none">• Ms. Adams asked the students to talk about their favorite sport.• Ms. Adams asked the students why this was their favorite sport.• Ms. Adams talks about her own experience playing basketball.• Jorge asks if she still plays and encourages her to play soccer.	Ms. Adams directed the conversation toward the title of the book, <i>Cool Jobs in Basketball</i> and asked the group if they could think of different types of jobs that might emerge from association with the sport. All of the students were quiet for some time before Ms. Adams repeated the question.
How do the students engage with each other? <ul style="list-style-type: none">• Students communicate with each other in Spanish.• Marisol repeats directions for students in Spanish.• Marisol shows Jorge where to begin reading in English.	Marisol began the discussion by asking Ms. Adams if she meant something like being a coach for the team. Ms. Adams responded that Marisol had given a good example of a job related to basketball. Marisol then interpreted the exchange in Spanish for Dariana and Jorge.
What language are the students speaking? <ul style="list-style-type: none">• Students respond to the teacher in English.• Students speak Spanish with each other.• Marisol uses both Spanish and English as she tries to explain the duties of a “Retail Operations” manager.	Jorge responded back to Marisol quickly in Spanish. Marisol said that Jorge thought a job might be to sell all of the equipment and clothing related to the sport. Ms. Adams praised Jorge for his response and asked him if he would like to work in a retail store that sold basketball related items. Jorge smiled and said, “No, I want to make money. I want to have the store.” Ms. Adams laughed and agreed that owning a retail sports store suited Jorge.

(continued)

Table 7. An Example of Observation Question Response Notes and Reflective Notes for a Guided Reading Group (continued)

Guided Reading Group 10/6/11 Dariana, Jorge, Marisol Book Title: <i>Cool Jobs in Basketball</i>	Reflective Notes for Guided Reading 10/6/11 Dariana, Jorge, Marisol Book Title: <i>Cool Jobs in Basketball</i>
<p>How do the students interact with the teacher?</p> <ul style="list-style-type: none"> • Dariana responds to the teacher’s questions with direct answers in English. • Marisol interprets for the group as she listens to the teacher. • Jorge is attentive and quiet. His responses to teacher questions are short and in English. 	<p>Students were then asked to read the book aloud while Ms. Adams worked with Marisol as she read aloud. As Marisol read, Ms. Adams corrected and assisted with vocabulary. For example, Marisol mispronounced “activity” and was corrected.</p>
<p>Do students seem enthusiastic? bored? engaged? uninterested?</p> <ul style="list-style-type: none"> • Dariana appears interested and focused on the teacher and the book. • Marisol is looking primarily at the book. • Jorge appears engaged with both the teacher and the book. 	<p>Ms. Adams next introduced six vocabulary words to the students: athlete, business, experience, hire, intern, rely. The words were presented and discussed individually. Most of this discussion was conducted by Ms. Adams as Marisol interpreted for the group. Students responded in Spanish to Marisol, and she in turn relayed the information to Ms. Adams in English. Ms. Adams said things like, “An intern is someone who works for little or no pay,” or “Have you heard of how trainers help athletes work out?”</p>
<p>To what extent do the students stay on task?</p> <ul style="list-style-type: none"> • Marisol’s interpretations often divert the attention of the group, but this also serves to clarify what the teacher has said. e.g. Ms. Adams asked for the definition of “entrepreneur.” Marisol interpreted, and the students laughed, and began speaking in Spanish. Ms. Adams then gave a definition of the word, and Marisol interpreted for the group. 	<p>As the discussion took place, Ms. Adams asked individual students to read aloud passages from the book that contained the vocabulary words introduced. Ms. Adams would stop and then discuss the meaning of the words within the context of the text. During this exchange, the students were quiet, but often nodded or looked at Ms. Adams indicating that they did not have questions. All students appeared on task during this final portion of the guided reading group.</p>
<p>What else is/is not noticeable about the classroom and the students?</p> <ul style="list-style-type: none"> • Students in other groups appear to be working on their assigned tasks. 	

Student Conversational Interviews

During the first and second weeks of school, for purposes of collecting demographic data and to gather descriptive information regarding the students during Phase 2 of the study, I used the interview protocol, *Motivation to Read Conversational Interview for English Language Learners* (Sturtevant & Kim, 2010) (see Appendix D), an adapted version of the *Adolescent Motivation to Read: Conversational Interview* (Pitcher et al., 2007) that had been adapted earlier for use with adolescent learners from the *Motivation to Read: Conversational Interview* developed by Gambrell, Palmer, Codling, and Mazzoni (1996). According to Sturtevant and Kim, “teachers would benefit from having instruments available that they could use to help them better understand these [ELLs] students’ strengths and needs” (2010, p. 71). This instrument was developed specifically for use with ELLs.

Because I do not speak Spanish or Chinese, at the recommendation of a colleague who knew Spanish speaking and Chinese speaking parents of students she had taught, I contacted these two parents and engaged their assistance as interpreters in administering the *Motivation to Read Conversational Interview for English Language Learners* (Sturtevant & Kim, 2010). Both of the parents, Ms. Gonzalez and Ms. Xie, had adolescent children enrolled at the district’s middle school. I met with both parents prior to the interviews, and because both had previous experience with adolescents and had lived and studied English in the United States for over 10 years, I asked them to assist me in administering the interviews. Ms. Gonzalez and Ms. Xie agreed to assist, and before leaving, I gave them copies of the interview protocol to practice before meeting with the

students. I informed Ms. Adams that the interpreters would be in the classroom, and we agreed on the dates that the interviews would be conducted.

All of the nine students who participated in the study also participated in the student interviews. The order of student selection for the interviews was based on the order of the student assent and parent consent forms that were returned by the students in English and Spanish (see Appendices E and F). The Chinese student's guardians were fluent in English thus translation of the documents in Chinese was not needed. (Ms. Xie translated and read aloud the content of the student assent form to the Chinese student in Chinese.) During the interviews, Ms. Gonzalez or Ms. Xie would read questions to the students in Spanish or Chinese, and the students would respond to the questions in their native language. Ms. Gonzalez or Ms. Xie then translated the student responses to me in English. Using a copy of the interview protocol in English for each student interview that had been loaded onto my laptop, I wrote the English responses to the questions. Thus, I had a copy of the interview with student responses in English for all nine students. Each interview took approximately 40 to 50 minutes to administer, and all interviews were conducted over a period of five days during the first two weeks of school.

Student Artifacts

Merriam (1998) explained that artifacts are an important source of data because they are not dependent on the researcher as are observations and interviewing, nor are they intrusive. Artifacts for this study consisted of student work and were used for the purpose of triangulation (Merriam, 1998). If I noted something in my observations and field notes and the teacher also noted it in our weekly conversations, I could go to the

student work to look for supporting evidence. For example, in mid-November, I noted that Marisol was not participating in guided reading or cooperative groups as readily as she had at the beginning of the intervention. Ms. Adams confirmed this observation during one of our weekly conversations. We both examined Marisol's student work folder and found that much of her work in November was missing or incomplete. In this way, student artifacts were used to confirm observations and informal discussions with Ms. Adams.

Qualitative Data Analysis

As noted previously, in order to best characterize the classroom and the students during all phases of the study, I developed questions in advance to serve as a guideline for observations to address activities within each of the groupings of the study. These questions guided my classroom observations as I recorded notes using a laptop computer. After each class session over the 14-week study, I would type reflective notes that attempted to recount an accurate portrayal of the incidents that occurred.

It is not uncommon for researchers to analyze and code qualitative data deductively, beginning with the data while looking for commonalities, patterns and themes moving toward the formation of a hypothesis. Similarly, researchers may analyze and code qualitative data inductively beginning with the hypothesis and coding the data for specific recurring themes. I used both deductive and inductive forms of analysis (Creswell & Clark, 2007) conducting two forms of analyses of the qualitative data. This method is often referred to as an abductive coding procedure (Morgan, 2007), which combines both deductive and inductive approaches.

Initially, I reviewed all of the qualitative data from the measures described above to find evidence of word repetitions (D'Andrade, 1995). Next, using a Microsoft Word Excel spreadsheet, I would cut and paste to sort these words and phrases (Strauss & Corbin, 1990) from my notes into initial categories that began to develop. Later, data were coded more broadly as I looked for commonalities, categories, and themes in reviewing events that enhanced or inhibited the intervention, modifications and unanticipated effects of the intervention, and changes in the environment. The original codes that were produced from the baseline data resulted in a system to determine progress toward the pedagogical goal (see Table 8).

Table 8

Initial Categories and Codes: An Inductive Approach

Code	Behavior at baseline data collection	Behavior representative of initial progress toward the pedagogical goal	Behavior representative of progress toward the pedagogical goal	Behavior representative of significant progress toward the pedagogical goal
Code	TS	SI	SI	SI
Code	TP	TS	TS	TS
Code	SOT	TP	TP	TP
Code	STSOL/S	ST/CT	ST/CT	ST/CT
Code	STTOL/E	ST/CU	ST/CU	ST/CU
Code	WIC	SS	SS	SS
Code		PAP	PAP	PAP
Code		SGVQ	ROWA	ROWA
Code		STSOL/S	RSWIC	ROI
Code		STSOL/E	EWIR	RSWIC
Code		WIC	AQRR	EWIR
Code		SOT	SGVQ	AQRR
Code			SGGQ	SGVQ
Code			DUW	SGGQ
Code			DV	RF
Code			STSOL/S	DUW
Code			STSOL/E	DV
Code			WIC	STSOL/S
Code				STSOL/E
Code				WIC
Code				SOT/NO

Note. Codes are detailed in Table 9.

A total of 23 codes were generated during the study (see Table 9). To determine reliability, 10% of the field notes were given to an independent rater with the codes and an explanation of the codes. Inter-rater reliability was 94%.

Table 9

Explanation of Codes

Code	Meaning	Explanation
SI	Student interprets	Student interprets in Spanish to clarify meaning for another student
TS	Teacher scaffolds	Teacher scaffolds understanding through questioning or with background knowledge
TP	Teacher praises	Teacher praises student for correct answer (e.g. excellent, that was good)
SOT	Student is off task	Student is observed doing something unrelated to the given task (e.g. daydreaming, unrelated talk, leaves to use the restroom)
SOT/NO	Student is not observed off task	Student is not observed doing something unrelated to the given task (e.g. daydreaming, unrelated talk, leaves to use the restroom)
ST/CT	Students talk to each other to complete tasks	Students work together talking to each other to complete tasks
ST/CU	Students talk to each other to clarify understanding	Students talk together to solve a specific problem
SS	Student scaffolds another student's understanding	A student provides an explanation to another student acting as a teacher
PAP	Student applies knowledge of phonemic awareness and/or phonics	Student applies knowledge of phonemic awareness and phonics to decode words.
ROWA	Reads orally with assistance	Student needs teacher assistance to decode unfamiliar words
ROI	Reads orally independently	Student can read orally without assistance
RSWIC	Recognizes sight words in context	Student is able to read sight words in context without assistance
EWIR	Explains what is read	Student is able to summarize what is read
AQRR	Answers questions related to reading	Student is able to respond correctly to questions about the text
SGVQ	Student generates questions related to vocabulary	Student poses questions about text vocabulary
SGGQ	Student generates questions related to elements of grammar	Student poses questions about assignments related to grammar
RF	Reads fluently	Reads with automaticity
DUW	Decodes unfamiliar words	Student is able to decode words using reading comprehension strategies (e.g. rereading)
DV	Defines vocabulary	Student is able to define vocabulary introduced in previous text

I also hand coded the data for specific recurring themes in reviewing all events that occurred and specifically those events that enhanced or inhibited the intervention, modifications and unanticipated effects of the intervention, and changes in the environment as these events were integral to this formative design investigation. I noted several recurring themes and developed broad categories that seemed to impact ELLs acquisition of early reading skills using behavior representative of initial progress toward the pedagogical goal as these broad categories initially. These included: (a) problem solving, (b) vocabulary development, (c) oral language use, (d) independent work at the computer, (e) active learning, (f) teacher and student scaffolding, (g) reciprocal teaching. As I gathered data, categories were added, deleted or modified. For example, “oral language use” became “oral language interaction” combined with “active learning.” Subsequently, “reciprocal teaching” was integrated into “scaffolding” which became a method students used to solve problems. As data were collected both analyses were conducted simultaneously as I compared similar statements to allow meanings to emerge. Finally, I looked at the overlap across the data between both analyses to develop themes that emerged (see Table 10), and these themes are reported in detail in Chapter 4, Results.

Table 10

Emerging Themes and Categories

Emerging Themes	Understanding facilitated through problem solving	Demonstration of enhanced skills in reading and vocabulary	Oral language interaction between students creates active learning	Works independently at the computer
Code	SI	PAP	ST/CT	WIC
Code	TS	ROWA	ST/CU	PAP
Code	TP	ROI	SGVQ	ROI
Code	SS	RSWIC	SGGQ	RSWIC
Code	DV	EWIR	STSOL/S	AQRR
Code		AQRR	STSOL/E	RF
Code		RF	STTOL/E	DUW
Code		DUW		SOT/NO

Note. Codes are detailed in Table 9.

Quantitative Data

Quantitative data for this study were used for the purpose of establishing a baseline of performance related to the pedagogical goal and in determining whether progress toward the goal had been made at the conclusion of the study. Quantitative data were collected at preintervention during Phase 3 of the study and at the conclusion of the intervention implementation during Phase 5 of the study. A description of the Scholastic *System 44*, CAI reading program in which all students participated is presented below. The Scholastic Phonics Inventory (SPI), the assessment instrument that was designed specifically to be used with the Scholastic *System 44* reading program is also described below.

Scholastic *System 44*

All students participating in this study used the Scholastic *System 44* computer reading program during CAI groups. *System 44* focused on the development of foundational reading skills and included phonics instruction through letter sound practice, word recognition, and vocabulary development. Students were prompted to respond to letter and word tasks by selecting the correct answer on the computer. If correctly answered, the program adjusted to provide further sequential instruction for the acquisition of literacy skills. If incorrectly answered, the program provided a new set of tasks at the same level.

System 44 was organized into four instructional strands. The Code strand allowed students to practice letter-sound correspondence through fluent word recognition. The program focused on the spellings of the 44 sounds of English. The Word Strategies strand presented instruction and practice in syllable strategies and word analysis. Students were taught to use morphological and orthographical strategies to read and understand multisyllabic words. Instruction in this strand included prefixes, suffixes, roots, endings, and syllable types. The Sight Words strand required automatic recognition of high frequency sight words. Each lesson began with an assessment that was used to adapt instruction for each student. In the Success strand students began by watching a short video to help them build background knowledge. Students were then provided with instructional level connected text to answer short questions about what they had seen.

The *System 44* program regularly checked for mastery and adapted instruction within each of the four strands. Students worked through each of the four strands as

guided by the computer. In this way, students were assured of equal practice time within each strand. As students completed a cycle of instruction, the software measured a student's mastery automatically and either promoted the student to the next instructional topic or guided the student through additional instruction and practice with new content.

Quantitative Data Analysis

The SPI, the assessment instrument that was designed specifically to be used with the Scholastic *System 44* reading program, was used as the pre- and postintervention assessment to place students into *System 44*. The SPI was administered individually via a computer in approximately 10 minutes and contained 92 non-word items. Each item consisted of a target and three distracters. The items were chosen to represent the full range of decoding skills taught in *System 44*. All targets and distracters were non-words or obscure English words that were unlikely to be known. The targets and distracters were chosen to avoid Spanish words, slang, and non-words that sounded like real words. The SPI also contained 37 sight word items. Each consisted of a target and three distracters. The target words were chosen from Fry, Kress, and Fountoukidis' *300 Instant Sight Words* (2000). The distracters were common words orthographically similar to the target words.

The SPI was administered at pre- and postintervention as one measure to determine the extent to which the instructional intervention impacted aspects of students' acquisition of early reading skills. The SPI was analyzed by total percentage of accuracy and fluency on five SPI subtests that included letter names accuracy, sight words accuracy, sight words fluency, nonsense words accuracy, and nonsense words fluency.

A Wilcoxon signed-rank test was conducted at postintervention to evaluate whether students performed better on each of the five SPI subtest posttests compared to the SPI pretests. The Wilcoxon is often used on a single small sample to assess whether their population mean ranks differ and when the population cannot be assumed to be normally distributed. SPI test results for each of the SPI subtests are reported in Chapter 4, Results.

Procedure

As described previously, this study occurred in six phases. Phase 1 was the preliminary phase during which the goals of the project were determined and plans for implementing the intervention were developed. Following is a description of the planning procedures followed prior to the intervention implementation during Phase 1 of the study.

Throughout the investigation, the roles in which Ms. Adams and I participated can be defined as teacher development partnership research which, according to Cole and Knowles (1993), is consistent with formative experiments. They stated:

True collaboration is more likely to result when the aim is *not* for *equal* involvement in all aspects of the research; but, rather, for *negotiated and mutually agreed upon* involvement where strengths and available time commitments to process are honored. (p. 486, emphasis in original)

Ms. Adams' primary role included the identification of information sources and the implementation of appropriate strategies. My primary role was in the articulation of the purpose, procedures, and coordination of the research. Mutually, we worked within these roles and interpreted events that occurred that led to a final analysis in the same manner.

On the second day of school during her lunch period, I interviewed Ms. Adams. This 30-minute time period was selected for our weekly Wednesday meetings as Ms. Adams was always available during this time because the ESOL Level 1 class was taught both before and after lunch. All meetings were conducted in Ms. Adams' classroom, and she seldom ate during this time preferring to wait until her planning period at the end of the day. The interview protocol was divided into three sections (see Appendix C): (a) preintervention, (b) during, and (c) postintervention questions. Ms. Adams' response to the interview protocol during all phases of the study will be discussed in Chapter 4, Results.

The instructional intervention for this study was based on social constructivist theory and the relevant literature (see Chapter 2) related to secondary reading programs and instructional methods that incorporated cooperative learning, small guided reading groups and CAI into early literacy instruction for high school ELLs learning to read English (see Figure 2). The instructional intervention was designed to be incorporated into a daily 90-minute class session over a period of 14 weeks and was divided into three distinct timeframes within the class session Table 11 provides a sample of a typical class period during Phase 4 of the study, intervention implementation.

Table 11

Example of the Instructional Intervention Within a 90-Minute Class Period

Instructional Intervention According to Time of Day During Class		
Whole Class Introduction 11:00 A.M.-11:15 A.M. Building Background Knowledge, Establishing a Purpose, Clarifying Instructions		
Guided Reading Wednesday, 10/27/11	Cooperative Learning Wednesday, 10/27/11	Computer Assisted Instruction Wednesday, 10/27/11
Group 1 11:15 A.M.-11:35 A.M.	Group 1 11:15 A.M.-11:35 A.M.	Group 1 11:15 A.M.-11:35 A.M.
WIDA Standard 1—Social and Instructional Language Reading— <i>Skywalkers</i> Consonants Rodrigo—Blends (s blends) Alyssa—Blends (two and three letter blends) Chong—Blends (l blends) Jacuelin—Digraphs (sh) Dariana—Single Consonants (v, z, q)	Vocabulary Focus l blends—block, cliff, club, flag, glad r blends—brag, brim, crop, cross, frog Sight Words already, be, there, you, friend, one, two, live, see, we Jorge, Marisol	The Code Strand or Word Strategies Strand or Sight Words Strand or Success Strand Benjamin, Jose
Group 2 11:35 A.M.-11:55 A.M.	Group 2 11:35 A.M.-11:55 A.M.	Group 2 11:35 A.M.-11:55 A.M.
WIDA Standard 1—Social and Instructional Language Reading— <i>Fast</i> Vowels Benjamin—Short Vowels (short u) Jorge—Short Vowels (short u)	Vocabulary Focus l blends—block, cliff, club, flag, glad r blends—brag, brim, crop, cross, frog Sight Words already, be, there, you, friend, one, two, live, see, we Dariana, Jose, Alyssa, Rodrigo	The Code Strand or Word Strategies Strand or Sight Words Strand or Success Strand Marisol, Chong, Jacuelin

(continued)

Table 11. Example of the Instructional Intervention Within a 90-Minute Class Period (continued)

Instructional Intervention According to Time of Day During Class		
Group 3 12:25 P.M.-12:45 P.M.	Group 3 12:25 P.M.-12:45 P.M.	Group 3 12:25 P.M.-12:45 P.M.
WIDA Standard 1—Social and Instructional Language Reading— <i>Heroes</i>	Vocabulary Focus l blends—block, cliff, club, flag, glad r blends—brag, brim, crop, cross, frog Sight Words already, be, there, you, friend, one, two, live, see, we	The Code Strand or Word Strategies Strand or Sight Words Strand or Success Strand
Syllables Marisol—Unstressed Closed Syllables (i, o, u) Jose—Unstressed Closed Syllables (i, o, u)	Chong, Jacquelin, Benjamin	Dariana, Jorge, Alyssa, Rodrigo
<hr/> Whole Class Wrap Up 12:45 P.M.-1:00 P.M. Providing Closure, Answering Questions, Sharing Experiences		

During the first portion of each class, the teacher directed instruction in a whole class format. The purpose of the day’s lesson was introduced, and daily goals were identified. This was also a time when students could pose questions related to the daily goals and purposes of the day’s lesson. Students then moved to each of three 20-minute rotations subsequently completing each rotation that included small guided reading groups with the teacher, cooperative learning groups, or computer assisted instruction groups. The maximum group constituency for all of the groups was five students. The class concluded with a 15-minute whole class time directed by the teacher for assessment of progress, wrap-up, and reflection. In this way, every day each student participated in a

whole class introduction, a guided reading group, a cooperative group, a CAI group, and whole class wrap-up. The format for instruction within each of the small group rotations is described below.

Computer Assisted Instruction

CAI consisted of a group of no more than five students independently using the Scholastic *System 44* reading intervention computer program that was part of the classroom protocol. For purposes of grouping initially, heterogeneity occurred according to students' performance on the SPI, gender, country of birth, and prior educational experience in the student's home country. Because all students had scored at the "Beginning" decoding level of the SPI during baseline data collection, demographic data was used initially to form groups. Later, as students progressed, skill progress reports from *System 44* were used in forming heterogeneous groups as had been originally and mutually planned.

Each student sat at his/her own computer equipped with a headset and microphone to use the *System 44* computer program. Students were prompted to respond to letter and word tasks by selecting the correct answer on the computer. If correctly answered, the program adjusted to provide further sequential instruction for the acquisition of literacy skills. If incorrectly answered, the program provided a new set of tasks at the same level. Students worked independently with the software which automatically collected data on student performance and adjusted to their progress accordingly.

In using the *System 44* program, students were frequently required to tape their voices reading words, phrases and sentences. The teacher was able to access the students' tape recordings to make instructional decisions regarding students' oral reading fluency and further plan instruction based on these results.

Growth reports, reading progress reports, and summary progress reports generated by the *System 44* program were also used by the teacher to monitor progress and to plan coordinated skill instruction for students in guided reading and cooperative learning groups. For example, if students were identifying specific sight word vocabulary in *System 44*, Ms. Adams reinforced sight word recognition by using the same words for vocabulary instruction in guided reading groups. In cooperative groups, students would again work with sight words to complete worksheets emphasizing the use of sight words. As a result of this effort, students often practiced one specific skill focus in three separate groups. This allowed students extended practice in different formats.

Permission to include the Scholastic *System 44* reading intervention computer technology program in this research study was received by Scholastic Inc. (see Appendix G). While the school district purchased licenses for the program implementation two years ago, using *System 44* in the instructional format described in this research study was not part of the *System 44* program.

Guided Reading Groups

As described in Chapter 2, guided reading instruction is an approach that enables a teacher and a group of students to talk, read, and purposefully think about the texts they read at their appropriate reading level. Each component of the guided reading group

works together to form a unified whole that builds a foundation from which to acquire early reading skills (Fountas & Pinnell, 2007). Each of the sequential components of the guided reading process followed in this study is described below (see Figure 4).

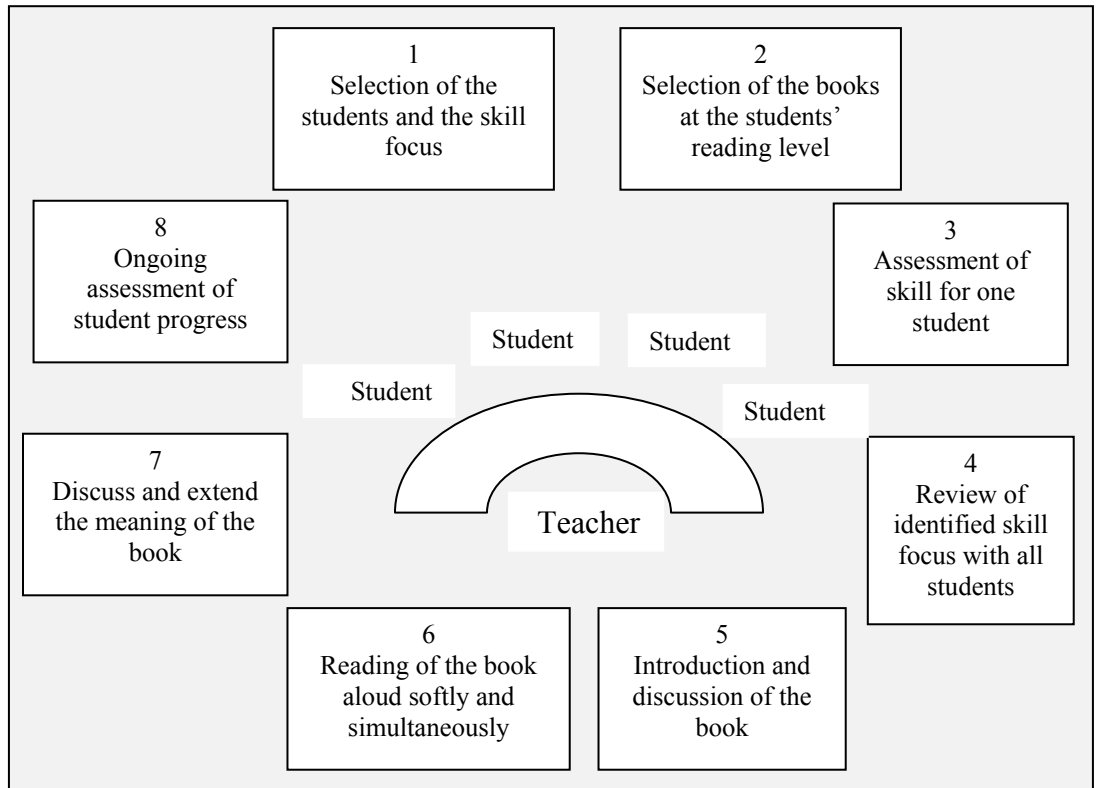


Figure 4. Twenty-minute guided reading group lesson.

For this study, the teacher began by selecting flexible groups of students (groups were expected to change) of no more than five students who were demonstrating early reading skills at about the same level. Because all ESOL Level 1 students began the school year at the lowest proficiency level in reading as designated by their entry-level language proficiency scores, it was necessary to further differentiate reading level for

purposes of grouping. This was done through the computer administered SPI assessment taken by all students in their ESOL Level 1 classroom. Using results from the SPI, students were electronically placed in the computer technology reading intervention *System 44* according to their entry level proficiency scores.

The teacher used the results of student work in *System 44* to create flexible student groups for guided reading. For example, in late September 2011 student progress in *System 44* revealed that Rodrigo, Dariana, Alyssa, and Chong were working on two and three letter “blends” while Benjamin, Jorge, and Jacquelin were working on short vowels. After viewing this report at the end of the week, the teacher planned instruction for the following week by homogenously grouping Rodrigo, Dariana, Alyssa, and Chong in one guided reading group rotation to emphasize reading skills in the identification of words with “blends,” and Jorge and Jacquelin were grouped similarly in the second rotation of guided reading to emphasize reading skills in working with words that used short vowels. As students progressed through *System 44*, groups became dynamic and flexible as the teacher continuously changed guided reading groups based on skill progress in *System 44*. Every guided reading lesson was different because each group of students had different strengths and needs.

During guided group instruction, after the teacher identified the skill focus for each group of students, each student was given a book to read that had not been previously viewed. The Scholastic *System 44* reading intervention provided 36 different books at the lowest proficiency level of reading (200L-400L) and included five copies of each title. These books featured high interest topics and numerous photographs and

pictures that were designed for high school-aged students and included topics that were relevant to them. Because none of the students were proficient in reading initially, book selection focused on the lowest Lexile level book and typically coordinated with the World Class Instructional Design and Assessment (WIDA) standards, the designated curriculum for the class. For example, the identified focus skill for a guided reading group might focus on short vowels. The book may be titled *Yes!* (200L), and the content of the book might address WIDA Standard 1, social and instructional language.

Typically, instruction within a guided reading group began as the teacher made a formal assessment of a student's reading ability by working with the student individually as the other students softly read the book aloud independently. Because students could not read independently initially, the teacher asked the group to look through the book at the pictures, words, and text features while she worked individually with one student on the skill focus identified previously offering immediate feedback to the student's responses. This portion of the lesson took five to seven minutes.

Next, with the entire group, the teacher reviewed the skill element students needed to learn. This may have been vocabulary that focused on short vowel sounds or sight word identification or phonics elements that students had not yet mastered. The teacher may have used a white board, manipulatives, or games for demonstration of the skill focus. This portion of the lesson took five to seven minutes.

The book was next introduced to the students formally. Both teacher and students discussed the cover, the title, the author, and made predictions about the content of the book. Students were then directed to browse through the book again looking at the

pictures as the teacher scaffolded this process in an effort to activate background knowledge and to engage students in discussion. During the discussion, the teacher established a purpose for reading the book. This portion of the lesson took five to seven minutes.

Because the students could not read independently initially, the teacher read the book or passage out loud as students followed along. Later in the term when they became more skilled in identifying vocabulary, all students softly read the book or passage aloud independently at the same time. After reading, the teacher encouraged the students to retell the story, to share their favorite parts, to discuss the story as it related to their own experiences, and/or to discuss some of the strategies for reading that they used. This portion of the lesson took 5 to 10 minutes.

As the guided reading lesson took place, the teacher took mental or written notes of students' progress. Ongoing assessment took the form of observational check lists, anecdotal notes, retellings, comprehension questions, and written or visual responses. One or more of these assessments was a daily part of the guided reading lesson that Ms. Adams created for administration to the students.

Cooperative Groups

As described in Chapter Two, cooperative learning groups enhance the level of student productivity and student interaction for ELLs as they learn to speak and read English (Cummins, 1994). Working toward that end and the achievement of the pedagogical goal of the improvement in the acquisition of early reading skills, the cooperative learning technique Student Teams Achievement Divisions (STAD)

developed by Slavin (1994) was selected for this study. In STAD, Slavin (1994) identified four concepts that were fundamental to all members of the STAD cooperative group:

- Students are rewarded as a team, but they are graded individually.
- The team's success is not conditionally based on individual performance of one student.
- All students must help each other to achieve learning goals.
- All students are expected to improve based on their own previous performance.

For purposes of grouping initially, heterogeneity occurred in grouping of no more than five students according to students' performance on the SPI, gender, country of birth, and prior educational experience in the student's home country. Because all students had scored at the "Beginning" decoding level of the SPI during baseline data collection, demographic data was used initially to form groups. Later, as they progressed, skill progress reports from *System 44* were used in forming groups. These reports served two purposes. First, as noted, these reports served to assure that groups were constituted heterogeneously based on students' skill levels. Second, using the reports students set weekly, monthly, or semester individual goals for improvement. For example, a typical STAD group might include two males and two females who had completed varying levels of education in their home countries. (Because eight of the nine students were Hispanic, heterogeneity according to home country could not be achieved in every group.) Students were assigned worksheets to complete by the teacher based on the skill

focus for the day introduced in whole class format at the beginning of class. As suggested by Vygotsky's (1978) sociocultural theory and ZPD as well as Cummins' (1994) theory of language development, students assisted each other to complete the work that was assigned at their instructional level or a level slightly beyond their ability to complete the work independently.

As described in Chapter 2, positive interdependence was a key feature of all cooperative group work and a key component of the STAD model. All students in the group worked together and were responsible for each other's learning. Ms. Adams explained to all students that in order for individual members of the group to succeed, all group members needed to succeed. Explicitly stated was that if one group member failed, all group members failed. Ms. Adams also stressed that commitment to team members' success was as important as commitment to each group members' personal success.

As students took individual quizzes and tests, results were shared with all group members in order to determine areas of weakness among individual students. This form of individual and group accountability enabled group members to determine the students who needed more assistance with specific skills. Students shared class work, quizzes, and tests with each other in order to determine skills that needed to be reviewed and reinforced within each group. Students then worked together to assure that each member of the group understood the material and the reasons errors had occurred.

However, all students took individual tests on the material, and they could not help one another on the tests. Students' test scores were compared with their own past progress, and points were awarded based on the degree to which students could meet or

exceed their own earlier performance. Five points were awarded if the student exceeded his/her prior test score; three points were awarded if the student met his/her prior test score; no points are awarded if a student fell below his/her prior test score. Following team practice, individual tests were administered at the discretion of the teacher. Points were then added to form team scores, and the team scoring the most points was awarded recognition. As part of this process, all groups discussed the achievement of their goals continuously working toward setting new goals. The whole cycle of activities from whole group presentation to team practice to individual quiz took approximately four weeks.

As this process occurred, students helped each other through oral language support and encouragement previously described as promotive interaction. Each member of the group had a personal support because each student was committed to another person. While this process took more time for newcomers, each member of the group contributed personal strengths that supported all members of the group. For example, new students may have contributed less in terms of content knowledge but contributed more in unifying the group through reminders that all members were working to help each other.

Summary

Over the course of 14 weeks, I sought to determine the effects of a multifaceted instructional intervention that incorporated guided reading, cooperative learning, and CAI into one reading model for ELLs beginning to read English. Quantitative and qualitative data were collected and reviewed in four phases to try to better understand the factors that enhanced and inhibited the intervention and included modifications made to the

intervention through a formative design experiment. The intervention implementation, modifications to the intervention, and consolidation of qualitative and quantitative findings are discussed in Chapter 4, Results.

4. RESULTS

The purpose of this study was to determine how an integrated model of reading instruction that incorporated cooperative learning, guided reading, and computer assisted instruction (CAI) can achieve the pedagogical goal of improved acquisition of early reading skills for ninth grade English language learners (ELLs) who are learning to read in English. In Chapter 1, I outlined a rationale for the reading intervention based on the overall trend of literacy achievement among adolescent ELLs. Chapter 2 described underlying principles of social constructivist theory in the learning process that provided the foundation for the multiconfigured instructional intervention. I also reviewed the literature relevant to critical considerations for ELLs in learning to read. Chapter 2 concluded with a review of the relevant literature related to guided reading, cooperative learning, and CAI and described reading programs that incorporated these elements into instructional designs. In Chapter 3, I described the research design, data collection, and analysis methods used in this study. In this chapter, I present the results of the study and answer the research questions that follow, in order to fully describe the processes at work throughout the intervention:

1. What factors enhance or inhibit the effectiveness of the intervention, a multiconfigured instructional reading model?
2. How can the intervention be modified during the experiment to more effectively achieve the pedagogical goal?

3. How do students perform on pre- and posttest measures of early reading skills?

This chapter is organized chronologically within the first five phases for conducting formative experiments (Reinking & Bradley, 2008) as described in Chapter 3. First reviewed is Phase 1, in which the goals of the project were determined, plans for implementing the intervention were developed, and participant selection was finalized. I next present Phase 2 of the study in which demographic data were gathered in order to provide a description of the school environment. In Phase 3, I describe the collection of baseline data to establish where the students were in relation to the pedagogical goal prior to the implementation of the intervention. Next, I answer research questions one and two through a review the implementation of the intervention during Phase 4 of the study. The chapter concludes with a description of Phase 5, a review of the quantitative data through presentation of pre- and postassessment findings. Here I answer research question three that addresses student performance on pre- and posttest measures of early reading skills.

Phase 1: Planning the Intervention

Phase 1 is the preliminary phase during which the goals of the project are determined, plans for implementing the intervention are developed, and all participants are selected and finalized. Following is a description of the events that occurred during Phase 1 of the study.

During late June 2011 at the close of the 2010-2011 school year principal Dr. Carter, of the school district's only high school, was newly designated. Shortly after Dr. Carter's appointment, I met with him to review and discuss plans for this research study.

At that time and throughout the course of the study, Dr. Carter was fully supportive of my work within the high school including the English for Speakers of Other Languages (ESOL) Level 1 classroom where the research was conducted.

In mid-August 2011, the district's high school ESOL Level 1 ninth grade classroom teacher was designated for the 2011-2012 school year. The preceding teachers of the ESOL Level 1 class for the 2009-2010 and 2010-2011 school years had resigned, and Ms. Adams was recruited to teach the class by the school district's ESOL coordinator, Ms. Martin, and high school ESOL department chair, Ms. Perez, in early August 2011. Ms. Adams was beginning her second year of teaching and had worked as an ESOL Level 2 teacher at the high school the preceding year. Ms. Adams was in the final year of completing her ESOL endorsement and Master's degree at a nearby university and readily accepted the new position for the 2011-2012 school year.

During the third week of August, I met with both Ms. Martin and Ms. Perez to review the study and the timeline for its implementation. Both were familiar with and positively receptive to the instructional intervention as I had introduced the multiconfigured reading model to them during the previous school year as a method that might be used with ESOL Level 1 students. It was agreed that I would schedule a meeting with Ms. Adams to introduce her to the study during following week.

Ms. Adams first met with me during the fourth week of August prior to the beginning of school to review aspects of the study and a schedule of professional development training for the computer CAI program. Without hesitation Ms. Adams agreed to all aspects of the required CAI training to be conducted later that month by a

Scholastic representative (this was the district's protocol) and appeared enthusiastic in reviewing the multiconfigured reading model. Early in the meeting, I reviewed the goal of the study and to some degree the guiding theory for the study. Ms. Adams stated that she would be entering her second year of teaching, and that she believed small group instruction was beneficial for students. She was familiar with guided reading from work completed in her Master's program. We reviewed aspects of guided reading as proposed in this study, and Ms. Adams noted that she was eager to begin teaching and shared lesson plans that she had planned to use during the first week of school. In fact, much of the discussion focused on methods to incorporate classroom lessons within the instructional intervention. However, when I explained to Ms. Adams that I would be conducting the research *in* the classroom, she became quiet and appeared distressed. With some probing, she admitted that she was unaware that I would be present in the classroom and requested that I visit additional ESOL classrooms throughout the semester. Without question I agreed and noted Ms. Adams' discomfort. I believed that she may have felt my role in her classroom could be viewed by other teachers as evaluative. Before leaving, I scheduled a second meeting with Ms. Adams for later that week.

During the interim between meetings with Ms. Adams, I contacted Dr. Carter and Ms. Martin to relay the content of the meeting with Ms. Adams. Both agreed to meet with Ms. Adams in an effort to allay any fears that she might have regarding my work in the classroom. As the school district's literacy specialist, while my role in working with teachers is not supervisory, my presence is at times regarded cautiously by some teachers who are unaware of my primary role as facilitator of literacy programs within

the district. I do not evaluate teachers, although I do understand that my responsibilities can be misconstrued as evaluative. I shared this information with Dr. Carter and Ms. Martin prior to their meeting with Ms. Adams who both suggested that Ms. Adams' lack of experience may be the cause of misconceptions regarding my role in the classroom.

Later that week, and after Ms. Adams' meeting with Dr. Carter and Ms. Martin, I again met with Ms. Adams who appeared amiable, relaxed and ready to begin work. Breen (2003) argues that true collaboration between researcher and teacher can only be realized if there is sharing of control and decision-making between participants. As a researcher, I understood my role and the need to enter deeply into the classroom ecology (Reinking & Bradley, 2008). To best serve that role, I was aware of the importance of working closely with the teacher in order to implement the instructional intervention.

Reinking and Bradley (2008) suggest that the most realistic role for a researcher conducting a formative design experiment follows Creswell (2002) as that of a participant-observer. Working toward that end, Ms. Adams and I agreed that we would work collaboratively following Cole and Knowles's (1993) model of teacher development partnership research consistent with formative experiments as described in Chapter 3. Never did I work with students one-to-one as each component of the instructional intervention required some type of group work. I was careful to avoid allowing my participation to influence the ecology of the classroom or the effects of the intervention (Reinking & Bradley, 2008). Throughout the 14-week study, my efforts were aimed toward providing collaborative, negotiated, and mutually agreed upon support to Ms. Adams while maintaining a professional and productive relationship.

On the second day of school during her lunch period, I interviewed Ms. Adams. This 30-minute time period was selected for our weekly Wednesday meetings as Ms. Adams was always available during this time because the ESOL Level 1 class was taught both before and after lunch. All meetings were conducted in Ms. Adams' classroom, and she seldom ate during this time preferring to wait until her planning period at the end of the day. The interview protocol was divided into three sections (see Appendix C): pre-, during, and postintervention questions. Ms. Adams' response to the initial interview discussion and to the initial intervention implementation will be discussed here. Ms. Adams' response to modifications to the intervention and postassessment will be discussed during the Phases in which they occurred.

The 2011-2012 school year marked Ms. Adams' second year of teaching. Her experience working with ELLs included her prior year of teaching at Newton as a ninth grade ELL resource teacher. In this capacity, Ms. Adams worked with small groups of ELLs identified as Level 2 and Level 3 students as determined by their performance on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) test required by the school district. The ACCESS for ELLs test assesses the World-Class Instructional Design and Assessment (WIDA) English language proficiency standards that establishes levels of English proficiency levels ranging from Level 1 "Entering," to Level 6 "Reaching," within the domains of writing, reading, speaking and listening. Ms. Adams had worked with ELLs that were classified as "Beginning" and "Developing," and had never worked with Level 1 Entering students prior to the 2011-2012 school year.

During the interview, Ms. Adams expressed that she positively anticipated working with the ESOL Level 1 students. She was in the process of completing her Master's degree in ESOL education and indicated that she felt prepared to take on this new challenge given her past experience in teaching and her coursework in ESOL education. Ms. Adams expressed interest in beginning the school year utilizing the intervention. Having received professional development in the CAI component of the intervention combined with her past experience working with small groups, Ms. Adams' support of the instructional intervention was maximal. We agreed that she would use the first two weeks of school to familiarize herself with the students working toward building a sound relationship between teacher and student and then move to intervention implementation during the beginning of the third week of school. It was also agreed that we would meet the following day after school in order for me to provide Ms. Adams with professional development in guided reading and cooperative groups as they pertained to the instructional intervention. Given Ms. Adams' enthusiasm for the intervention, her experience in working with small groups, and my perception of the need to maintain a positive and collaborative working relationship, I readily agreed.

The following day after school, I met with Ms. Adams in her room to review aspects of the three components of the instructional intervention: cooperative groups, guided reading groups, and CAI groups. During the meeting, Ms. Adams' expressed concern that there was no prescribed curriculum for the ESOL Level 1 classroom.

While she had discussed the absence of a curriculum with the ESOL department coordinator who had been recently appointed to the position, no clear guidelines as to

curriculum expectations had been outlined. While Ms. Adams had an abundance of instructional materials in her classroom—including introductory language textbooks, word and letter manipulatives, high interest and low level reading books and word games, newspapers and magazines—harnessing an effective method to develop curriculum utilizing the materials appeared overwhelming for Ms. Adams who candidly admitted that she “didn’t know where to begin.”

While she shared with me lesson plans that she had created to begin the school year, Ms. Adams felt that a curriculum for instruction for the entire year was needed to assure that student needs were met. With the later approval of the district ESOL director Ms. Martin, Ms. Adams and I decided that she would develop daily instructional plans utilizing the WIDA English language proficiency standards with a focus on WIDA standard one, “Social and Instructional Language,” for the first 14 weeks of school. In this way, Ms. Adams could develop lessons that focused on the following topics included in WIDA standard one: classroom routines, personal and business communication, personal preferences, points of view, recommendations and suggestions, school life, social and cultural traditions and values, study skills and strategies, information gathering and workplace readiness. Lessons would be developed that incorporated reading, listening, speaking and writing through the teaching of the standard topics within the cooperative and guided reading groups. (Curriculum for the CAI group was prescribed by the CAI program used for early instruction in language acquisition.) Ms. Adams and I agreed that she would use the materials in her classroom to implement the lessons within the cooperative learning and guided reading groups. For example, in the cooperative

learning group, using magazines and newspapers, students would identify words and phrases associated with the workplace from visually supported material. It seemed that working together to develop lesson plans for the ESOL Level 1 students strengthened Ms. Adams' and my roles as collaborators.

At the close of our session together, I asked Ms. Adams if she had any anxiety related to the study, and particularly to my being in the classroom. She replied that she did not have any anxiety related to the study, and that it was fine that I would be in her classroom twice a week. While no further discussion regarding my role in the classroom took place, with the permission of the Deputy Superintendent and school's principal, I fulfilled my commitment to visit other ESOL classrooms throughout the 14-week study. While these visits were never discussed with Ms. Adams as the subject never surfaced, they were part of my ongoing responsibility as the district's literacy specialist. During our conversations together, Ms. Adams had expressed her belief that the instructional intervention would help her students in learning to read English. Together throughout the study, we worked toward that end.

Phase 2: Demographic Data Collection

During the two weeks prior to the intervention in Phase 2 of the study, I collected demographic data within the context of the classroom to create a rich description of the classroom setting through classroom observations and field notes. Collection of demographic data was intended to determine where the participants were in relation to the pedagogical goal prior to the implementation of the intervention.

My initial observation of Ms. Adams' classroom revealed it to be open and cheerful. Evidence that this was a classroom where students might learn to read in English was supported by large pictures of the alphabet on the walls representing both upper and lower case letters. Books lined the perimeter of the classroom in showcase displays and on bookshelves around the room. Toward the back of the room was a round table display of standing picture books. Various objects in the classroom were labeled indicating a cross match between object and word. For example, there was a card with the words "pencil sharpener" taped to the pencil sharpener. There was a card with the word "boxes" taped to boxes that were stacked in the back of the room. One large poster depicting long vowels, short vowels, adverb usage, words to express time, contractions, the simple past of "to be," and preposition use was hanging in the center of a side wall. Surrounding Ms. Adams' desk at the front of the room were two additional bookcases filled with professional books related to reading. Word walls for each letter of the alphabet were taped to three walls of the room and appeared to be a remnant of the prior year's classroom work.

Twenty-four desks facing the blackboard at the front of the room were arranged in five straight rows spanning the width of the room. During the first two weeks of school, students were seated in this configuration with Ms. Adams' delivering instruction generally from the front of the room and often circulating among the desks throughout the room. Because the classroom was longer than it was wide, two additional round tables surrounded with rocking chairs, and one long rectangular table with boxes and papers were located in the back of the room. To the side of the room was a large rolling

whiteboard that I never observed being used. In the front of the room was a smaller standing flip white board filled with upper and lowercase colored letters of the alphabet. Occasionally these letters were configured into words and short sentences such as “Today is Thursday, September 8,” or “My name is Marisol.”

Technology was abundant in the classroom. Lining the back of the classroom were seven computers each marked with a number. Free-standing chairs were located at each computer station that was equipped with a headset and individual microphone. At the front of the room was a newly installed Smart Board that frequently substituted for the blackboard. Ms. Adams often conducted her lessons writing on the Smart Board rather than the blackboard although co-construction of knowledge that included student input using the Smart Board was never observed. While all students had access to the Internet, students were never observed using the Internet as a distraction from class work or an enhancement to work in the classroom. CD players with books on CDs were also available for student use although these were never observed as being used by the students.

While Ms. Adams had earlier expressed interest in implementing the instructional intervention at the beginning of the school year, we agreed that at least two weeks of instruction to establish classroom protocol and rules were needed to orient the students to their new surroundings. This protocol was consistent with the design of the study in which demographic data were collected during Phase 2 prior to intervention implementation. During the first two weeks of school prior to the intervention implementation, I observed Ms. Adams’ method of instruction to be conducted largely

from the front of the room in whole class format. Minimal student response was elicited. For example, Ms. Adams once asked the class to talk about their outside interests, and no one volunteered to respond. When Ms. Adams moved toward a student and directly called the student's name, an answer was generally given. In this manner, Jacquelin said that she, "like to run." Jose reported that he "rides bike."

After whole class delivery of instructions for seat-work, Ms. Adams would circulate among the desks checking to make sure students understood directions and could complete the assigned worksheet tasks. Folders of student work were placed on top of the desks, and students were observed working independently on papers in these folders. During this time Ms. Adams was supportive and helpful and often offered continuous words of encouragement such as "excellent," "good job," and "well done" to the students.

During the first two weeks of school, Ms. Adams completed necessary bookkeeping tasks after students had been assigned seatwork. For example, each student was assigned a student username and password for later use of the *System 44* technology program. Ms. Adams sat at a computer with each student to assure that the program could be accessed. She then offered a brief description of how to initiate and navigate the program, allowed the student to practice accessing the program, and the student returned to his/her desk to complete independent work originally assigned.

Overall, during the first two weeks, Ms. Adams' interaction with students was direct, polite, and encouraging. Students generally reciprocated through courteous and respectful demeanor and responses, usually referring to both Ms. Adams and to me as

“Miss.” Whatever the task, they worked at completing it. My field notes reflect this: “Students have been quietly working for nearly an hour. No one has said a word, but everyone seems to be on task” (September 8, 2011). Occasionally students would turn to one another to ask a question, but no superfluous conversation was noted nor did students ask for permission to leave the room.

With the exception of Chong, who only spoke Chinese, all students spoke to each other in Spanish only. Because Marville City School District followed the guidelines of the state, no instruction in any language other than English was permitted. While students may have spoken to each other in their native language, instruction in English only was required. Conversations among students were noted at the beginning and end of class. Students infrequently spoke to each other during class, and most of the time, they worked silently.

During one particular lesson in the second week of school, students were sitting at their desks as Ms. Adams introduced a whole class lesson on the conjugation of the verb “to be.” While student attention was directed toward Ms. Adams at the front of the room, two students had their eyes closed, and another was holding his head up with his hand. Students were cooperative although they appeared bored or uninterested or did not understand. As reflected in my field notes: “Students appeared mechanical in performance of tasks although the legitimacy of the task was never disputed” (September 14, 2011).

Ms. Adams and I met during lunch two days prior to the intervention implementation shortly after baseline data collection. My notes reflect her demeanor:

“She was calm and professional and asked for help with grouping” (September 17, 2011). Mrs. Adams had reviewed reports from the Scholastic Phonics Inventory (SPI) and was planning for grouping using the new data from the SPI. At her request, I offered suggestions for grouping, and she was appreciative and shared her first week’s lesson plan for the following week. She admitted: “I can’t wait to get started. I could be doing so much more” (September 17, 2011). Before leaving I asked Ms. Adams if she thought the prior professional development training was adequate in getting her started with the intervention. She agreed that it was, and I left.

I recount this incident for a specific reason. Because Ms. Adams appeared proud that she had completed the lesson plan and was anticipating the intervention implementation, and because she asked for my opinion regarding grouping, I was unsure as to the interpretation of these actions. Reinking and Bradley (2008, p. 81) hold that, “A teacher’s participation in the research process can become a source of professional self-esteem.” My notes reflect this: “Ms. Adams seemed confident today” (September 17, 2011). Whatever the cause, I believed that our collaboration was strengthening, and this was important (Reinking & Bradley, 2008).

Over the course of the study, weekly informal discussions with Ms. Adams served as member checks for my observations in the classroom. In order to confirm the interpretation of my observations, I would share these observations and pose questions to Ms. Adams who thoughtfully commented on the authenticity of my findings. This process produced two key outcomes. First, this method allowed me to correct errors in my interpretations. While irregularity was not a common occurrence, Ms. Adams often

added detail about the students' lives that enhanced my understanding for the reasons students might have performed as they did. Second, these conversations stimulated further conversation which often led to deeper understanding of the effects of the instructional intervention and advancement toward the pedagogical goal.

Phase 3: Baseline Data Collection

The primary purpose of the third phase was to collect baseline data to understand where participants were in relation to the pedagogical goal of improved acquisition of early reading skills prior to the intervention (Reinking & Bradley, 2008). Quantitative data were analyzed through comparison of pre- and postintervention data. Consistent with a mixed-methods approach, pre- and postintervention quantitative comparisons were not conducted to establish causal relationships; instead, I used quantitative analysis to complement the qualitative data. Using the Wilcoxon signed rank test for pre- and posttest comparison, I analyzed the scores on the SPI before and after the intervention phase as one indicator of students' improvement in early reading skills. A report of the findings of a pre/postcomparison for each component of student performance on the SPI is reported in Phase 5 below.

Phase 4: Intervention Implementation

Phase 4 is characterized as the "heart of the investigation" (Reinking & Bradley, 2008, p. 78), and this involves the implementation of the intervention, gathering of data, and making modifications to the intervention to better reach the pedagogical goal. Here, I will address the first research question through a description of factors that enhanced and inhibited the effectiveness of the intervention throughout the study. These factors are

largely presented chronologically as evidence of themes that emerged over time and were interwoven throughout the intervention implementation. Next, I address research question two through an account of modifications that were made to the intervention in light of the inhibiting factors. This is followed by description of postmodification observations and includes a summary of the qualitative data and emerging themes. The chapter concludes with a review of the quantitative data and answers the final research question that addresses student performance on pre- and posttest measures of early reading skills.

Factors That Enhance the Effectiveness of the Intervention

In addressing research question one, my analysis of the qualitative data strongly suggests that four themes emerged relative to factors that enhanced the effectiveness of the multiconfigured reading intervention and its impact on the acquisition of early reading skills of ninth grade ELLS learning to read English. Each theme is illustrated below.

Creating a classroom environment that encourages oral language interaction enhances ELLs' progression from passive to active learning. Students were provided with and encouraged to participate in ongoing opportunities to engage in oral language exchange through work in guided reading and cooperative groups. In this manner, students became active participants in their own learning.

Working in small groups plays an important role in the ability of ELLs to facilitate understanding through problem solving. Working in small groups allowed students to work together to clarify meaning and understanding. In this way, students worked cooperatively to complete assignments and to respond to teacher questions by

assisting each other in comprehending the task, the question, or the skill required. This often took the form of students assisting each other in providing definitions, clarifying directions, or building prior knowledge to scaffold understanding. Important to this process was that the small groups allowed the students to work in this manner and thus find solutions to problems that might otherwise have been ignored or determined too difficult to complete alone as was observed during whole class instruction prior to the intervention implementation.

Participation in a variety of groups coordinated for skill instruction may enhance ELLs' early reading skills and progress toward the pedagogical goal. Each of the three group configurations focused on a similar early reading or vocabulary skill. In this way, daily work within each group was coordinated for instruction. For example, if the skill focus for the day in guided reading related to the recognition of sight words, work in both the cooperative and CAI groups consisted of work related to similar or related sight words.

Computer assisted instruction (CAI) groups for early reading instruction seemed to enhance ELLs' engagement in class work. Throughout the intervention, students were observed working consistently at the computers in the CAI group without interruption. With intense concentration, students worked only within the prescribed early reading program, *System 44*. Never throughout the 12-week intervention implementation, were students observed working outside the range of the *System 44* program or engaged in conversations unrelated to CAI work.

Chronology of Phase 4

Following is a largely chronological account of many of the incidents that occurred in the classroom during Phase 4 of the study. This includes factors that enhanced and inhibited the intervention and modifications to the intervention. I report these occurrences as evidence of themes that emerged throughout the study over time. At the end of the chapter, I will summarize these emerging themes.

The qualitative data strongly suggest that throughout the intervention within each of the three groupings, guided reading, cooperative groups, and CAI, students worked together to solve problems that led to the achievement of the pedagogical goal. Two key factors are here noted. First, as explained previously, because Marville City School District followed the guidelines of the state, no instruction within the ESOL Level 1 classroom in any language other than English was permitted. While students could speak to each other in their native language, instruction in English only was required. Second, while the school district required an educational endorsement in ESOL in order to teach the ESOL Level 1 class, no requirement for proficiency in any language was needed to teach the class. Ms. Adams spoke and understood little Spanish and no Chinese. When students spoke to her in Spanish as they frequently did, she replied in English and encouraged them to speak to her in English. With the exception of Chong (who spoke only Chinese), Ms. Adams was glad that students supported each other in their own language. In this way, throughout the intervention implementation, students clarified their understandings by speaking to each other in Spanish. As this occurred, all group members could benefit from the questions and answers provided by the teacher as they interpreted for each other when they could not understand Ms. Adams' English questions

and explanations. Having the opportunity to work together within the small group offered an ongoing format for the facilitation of understanding as students worked with each other and the teacher. This phenomenon was not observed during whole class instruction prior to the intervention implementation when students were observed as passive recipients of information during whole class instruction as they were not permitted to speak spontaneously.

Throughout the intervention implementation students worked together during cooperative groups to complete skill work related to early reading instruction coordinated to instruction in guided reading and CAI groups. The expectation that students would work together in pairs to facilitate understanding in completing work required that tasks be completed together. As a result, students were expected to review their teammates' work to the same degree that they would review their own work. In this way, discrepancies were discussed, problems were solved, and understanding was enhanced through cooperative work.

Initially, this process required continuous supervision by Ms. Adams as students appeared reluctant to share answers with each other, and this was reflected in my interview notes with Ms. Adams as she noted: "They're programmed to work alone. I'm constantly telling them to work together, but they do the work alone and then compare answers" (September 21, 2011). With practice and patience from both teacher and student, by late September, cooperative groups had begun to take the form of true cooperation as described previously. For example, I observed students reviewing and discussing errors on their quizzes together. I also observed students comparing their

grades on tests that had been returned. As each student kept a personal record of quiz and test scores, students were required to set new goals for achievement based on past performance. As students recorded these new goals, they talked amongst each other in what appeared to be agreement on reaching a group goal of 100% accuracy on future quizzes and tests.

It appeared that students began to view their teammates' successes as their own. As skills progressed in difficulty, so too did students' abilities to complete work together checking for errors and misunderstandings in an effort to solve academic problems. And as this process continued, errors in skill work lessened among all students as their skills strengthened. As one example representative of each student's work, Jose's independent tests throughout the 14-week intervention illustrate the effects of this occurrence (see Figure 5).

Jose

September 2011

Skill Focus: Short vowels 'a' and 'i'

Unscramble the sentences. Write them on the line.

1. Bit I bad rib a: *I bit a bad rid.*
2. sad not Dad is: *Dad is not Sad.*
3. has pan lid The a: *The lid has a Pan.*
4. pan in fits the It: *It fits in the pan.*
5. cat My fat is: *My fat is Cat.*
6. tip fan The can: *The fan can tip.*

Jose
October 2011
Skill Focus: Consonant-vowel-consonant patterns

Unscramble each word to match a word in the word bank.

jet	slip	gap	yet	stuck
quit	her	from	bun	

1. n b u: <u>b u n</u>	6. p g a: <u>g a p</u>
2. h e r: <u>h e r</u>	7. p l s i: <u>s l i p</u>
3. v t e: <u>v e t</u>	8. e t j: <u>j e t</u>
4. t c u s k: <u>t u s c k</u>	9. t q i u: <u>q u i t</u>
5. r o f m: <u>f r o m</u>	

Jose
November 2011
Skill Focus: r controlled vowels; sentence writing

curb	hurt	herself	stir	verb
bird	germ	dirt		

Choose four words from above. Use each word in a sentence.

1. My bike hit the curb.
2. The bird is in the tree.
3. This cup has a germ.
4. My leg hurt today.

Jose
December 2011
Skill focus: Writing sentences with two, three, and four syllable words
Separate each word into syllables.

1. <u>cor</u> <u>ner</u>	5. <u>ex</u> <u>pl</u> <u>ore</u>	9. <u>re</u> <u>store</u>
2. <u>ig</u> <u>nore</u>	6. <u>im</u> <u>por</u> <u>tant</u>	10. <u>nor</u> <u>mal</u>
3. <u>or</u> <u>gan</u> <u>ize</u>	7. <u>pre</u> <u>re</u> <u>cord</u> <u>ing</u>	11. <u>a</u> <u>dore</u>
4. <u>por</u> <u>tion</u>	8. <u>per</u> <u>form</u> <u>ed</u>	12. <u>in</u> <u>cor</u> <u>rect</u> <u>ly</u>

Choose two of the three syllable words. Use each one in a sentence.

1. I organize my notebook.
2. The president is important.

Figure 5. Progression of student skills. Student responses are highlighted. Student errors are highlighted and underlined.

Throughout the study Ms. Adams would methodically work with groups of three to four students in guided reading as she introduced a new book, identified a skill focus, allowed students to peruse the book, and then discussed the purpose of the book before

reading it orally with students. During the initial phase of the intervention, dialogue between teacher and student was used as the primary method of instruction. For example, Ms. Adams asked questions and waited for responses prior to students' mastery of independent reading when instruction could rely on a combination of discussion and independent reading. Late in September 2011, students were reviewing a beginning reader leveled book (BRL) titled *Explore*. Ms. Adams asked Benjamin to define the word, "goal." He stared blankly at Ms. Adams, and Marisol repeated the directions to Benjamin in Spanish. With no response from anyone in the group, Ms. Adams then directed students to use dictionaries to find the definition. As seen in the dialogue below, consistently, Marisol provided scaffolds for understanding as she took on the role of interpreter for the group. While Ms. Adams was not permitted to provide instruction in Spanish, Marisol who had been in the country longer than the other students was able to provide clarifications and explanations that the students understood through group problem solving. In this way, most members of the group benefitted from Marisol's problem solving technique. The following dialogue on September 27, 2011 represents the conversation that ensued:

Ms. Adams: What does the word goal mean? What would be the goal of an explorer? (In Spanish, Marisol appears to repeat the directions to the group.)

Rodrigo: I make goal in soccer. (Students laugh.)

Ms. Adams: That's a different kind of goal. Look up the word achieve. (In Spanish, Marisol appears to repeat the directions to the group.)

Ms. Adams: Are your goals to achieve? Are your goals to graduate? (In Spanish, Marisol appears to translate for the group.)

Rodrigo: I make “A” in mathematics. (In Spanish, Marisol responds to him and the students laugh.)

Benjamin: My goal to make “A” in reading.

Ms. Adams: Yes, and the explorer’s goal was to find a new place to live. (In Spanish, Marisol appears to repeat what has been said.)

While this method appeared beneficial to most members of the group, Marisol’s problem solving technique may have served the Chinese-speaking student in a different way. Initially, as Marisol interpreted for the group, Chong sat quietly observing both the students and the teacher seldom participating in any of the group’s activities. Ms. Adams often prodded the group to ask questions when their understanding of vocabulary, her instructions, or the content focus of the lesson was unclear. By early October, Chong began to demonstrate involvement in the group through what appeared to be the desire to not only solve his lack of understanding but moreover, to be an active participant in the group as he had witnessed other students’ participation. This is reflected in my field notes of October 4:

Ms. Adams: Who can think of a word that begins with the letter “m?”

Chong: Mom, me, milk.

Ms. Adams: Can you make a sentence using those words?

Chong: Mom and me drink milk.

Ms. Adams: Good Chong, anyone else?

Chong: Me and mom drink milk on Monday.

Ms. Adams: Good Chong, can anyone else think of a word beginning with “m?”

Chong: Me and mom drink milk on Monday in Maryland. (The group laughs.)

Ms. Adams: Let’s move on to the letter “s.”

By early October, Chong was quick to participate in small group work not only to clarify his own understanding but what also may have been the desire to be an active group participant. As his knowledge of English expanded, so too did his confidence in sharing that knowledge. For Chong, the need to participate orally in guided reading appeared to be as much of a problem to solve in order to gain entry into the group of Spanish speaking students as may have been the need to learn English. With the open and oral exchange environment in guided reading, it appeared that Chong was able to solve his academic problems in a way unique to his needs.

Teaching phonemic awareness and phonics, the beginning components of reading, and adding daily vocabulary instruction were ongoing instructional processes utilized by Ms. Adams. My field notes reflect these events:

The lesson focus for the day centered on the consonants ‘m’ and ‘s.’ Students worked on distinguishing words with ‘m’ and ‘s,’ and identifying, blending and reading words with ‘m’ and ‘s.’ Students practiced these skills while reading with the teacher in guided reading groups and as they worked in cooperative groups.

Ms. Adams also noted that some of the students were working on the ‘m’ and ‘s’ sounds on the computer (October 4, 2011).

Ms. Adams approach to teaching was to target specific phonemes weekly and reinforce practice through work in cooperative groups. At the same time, new vocabulary was practiced using the newly learned phonemes in guided reading groups. This was observed in my notes the following day:

In guided reading groups students again focused on the letters ‘m’ and ‘s.’ Students began by practicing orally: “Who makes movies on Monday?” and “Who sings songs on Saturday?” Ms. Adams then modeled answering the questions using a word that begins with ‘m’ or ‘s.’ Students responded as follows: “Mom makes movies on Mondays,” and “Sasha sings songs on Saturday.” Students chorally and individually repeated the sentences. Next, students were given two blank index cards and directed to write ‘m’ on one card and ‘s’ on the second card. Ms. Adams explained that when she said a word that began with ‘m,’ students were to hold up the card with the letter sound ‘m’ written on it. They were instructed to do the same with ‘s.’ Words that Ms. Adams used were messy, silly, microphone, mine, sticky, mirror and super. Next Ms. Adams read short sentences using the target words and asked students to repeat the sentences. Students were engaged and laughed frequently. They seemed to be doing well with the activity (October 5, 2011).

Ms. Adams made significant effort to coordinate the focus of lessons within both the guided reading and cooperative groups. Because she often checked *System 44* student reading reports, further attempts to coordinate lessons to include work in the CAI group were made. Because Ms. Adams had a *System 44* teacher manual, she was aware of the

progression of the lessons within CAI and further worked to integrate and target skills presented in *System 44* with the same skills presented in guided reading and cooperative learning groups.

Throughout the intervention implementation, Ms. Adams planned guided reading and cooperative learning group instruction that included focus on vocabulary development. During informal discussions with Ms. Adams, she often referred favorably to these lessons as evidenced in a conversation in mid-October:

Tomorrow we're [Ms. Adams and the students] going to use WIDA Standard 1 to create a Venn diagram as a strategy to gather and break down information about the weather and weather words. I'm using the Newcomer book in guided reading for vocabulary instruction. I think the students will like this activity because I'm going to relate the weather to their home countries (October 12, 2011).

The following day, Ms. Adams' lesson unfolded before the students. Both Ms. Adams' lesson and Alyssa's work are represented below (see Figure 6). My field notes record the students as "animated" during both guided reading and cooperative learning groups. The introduction, reinforcement, and coordination of skills between both groups allowed students to first process the new vocabulary then practically apply what they had learned. In this manner, students had the opportunity to make progress toward the pedagogical goal.

Guided Reading Lesson

Skill Focus: Vocabulary and Strategy Instruction

WIDA Standard 1: Weather/Breaking down Information

Lesson:

1. Orally read about the seasons (“What Season Is It?”)
2. Discuss words related to the weather and the seasons
3. Practice oral vocabulary comparing weather in Virginia to weather in Alaska
4. Oral practice completing a Venn diagram contrasting weather in Virginia to weather in Alaska

Vocabulary: fall, winter, spring, summer, cool, fresh, cold, snowy, windy, warm, rainy, hot, sunny, dry

Cooperative Learning Group

Skill Focus: Vocabulary and Strategy Instruction

WIDA Standard 1: Weather/Breaking down Information

Student Artifact/Alyssa: Venn diagram comparing weather in home country to weather in Virginia

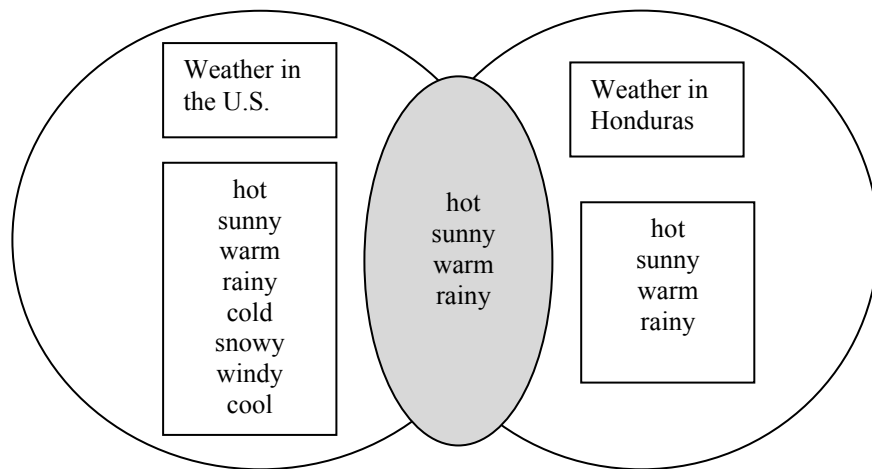


Figure 6. Coordinated guided reading and cooperative learning lessons.

Prior to the intervention implementation, the ESOL Level 1 class was characterized in my field notes of September 8, 2011 as quiet and hard working:

“Students have been quietly working for nearly an hour. No one has said a word, but everyone seems to be on task.” This observation is in sharp contrast to my field notes of October 12, 2011:

There is a great deal of talking going on today. Students are talking in the guided reading group with the teacher and in the cooperative group with each other.

They’re even talking at the computers, but everyone seems on task. It looks like productive talk. Students are smiling and helping each other; they appear happy.

Through oral language exchange in small groups, students were able to produce meaningful output with one another in their completion of tasks. Actively working together provided the students opportunities to discuss and share information related to assigned tasks. In this manner, they were able to produce meaning after receiving input from members of the group. While most of this exchange took place during cooperative and guided reading groups in Spanish, the given tasks were associated with learning early reading skills in English. Through oral language exchange, students discussed and shared their language knowledge. In doing this initially during the intervention, students improved their knowledge of English while they conversed in Spanish.

As the Spanish speaking students progressed in their acquisition of English, concepts related to specific content were processed in their native language through their interactions with each other in Spanish. In this manner, it appeared that students developed a deeper understanding of the concepts while they were learning English phrases and expressions because the expectation was that they were able to converse with each other. My field notes reflect this change on two separate occasions:

I just finished interviewing Jorge who talked about how he felt when he first entered the class in September. He recounted his detention in Corpus Christi, Texas for two months prior to arriving in Marville. The description of his family's determination to settle in the United States was compelling. He noted that the reason for coming to the United States was to "find a better way of life." When asked how he felt about Isaac Newton High School, Jorge explained that he felt "alone, isolated, and confused." He was soft-spoken but seemed comfortable speaking in Spanish with the interpreter. Jorge shared that he wanted to go to college in the United States (September 13, 2011).

This observation of Jorge is in sharp contrast to my field notes one month later:

In guided reading Jorge just read a short passage in English flawlessly. Ms. Adams then asked the group of students to define the word "height." Rodrigo said, "Height is how long you are." Jorge immediately responded back, "No, no, height is like in math; the distance up from the bottom" (October 18, 2011).

Through continuous encouragement to engage in oral language discussion, Jorge's acclimation to the classroom and to the school progressed. His ability to relate concepts between subject matter in defining words in English demonstrated his own advancement toward the pedagogical goal.

Throughout intervention implementation in cooperative groups students worked together in pairs or groups of three to complete worksheets related to skill concepts introduced during guided reading. By mid-October a new student, Alejandro, entered the class but was not included in the study due to his late entrance. Alyssa immediately took

on the role of peer tutor for Alejandro. Sitting next to him, she explained the directions on worksheets in Spanish while watching Alejandro to assure he answered appropriately. In Spanish, Alejandro would pose a question, and Alyssa would respond. As this process progressed two outcomes are noteworthy. First, in her interaction with Alejandro, it appeared that Alyssa engaged in a form of reciprocal teaching (Palincsear & Brown, 1984). As she became the teacher, Alyssa led the dialogue to decomposable parts for Alejandro to understand. In this way, Alyssa checked her own understanding through the process of summarization and review of her work. As Alyssa worked with Alejandro, Rodrigo observed the interaction. While he was paired with Benjamin, Rodrigo's attention focused on Alyssa and Alejandro. My notes of October 18, 2011 reflect this observation: "Rodrigo is staring at Alyssa and Alejandro. He's not working on the handout. Benjamin is working and appears oblivious to Rodrigo." Directly after this observation, Rodrigo joined Alyssa and Alejandro shortly before students rotated to new groups.

The following day and frequently throughout the duration of the intervention, Alyssa sat between Alejandro and Rodrigo during cooperative groups in the capacity of peer tutor. Flanked by the boys on both sides, she often stretched her arms across their backs in what appeared to be a gesture of support in her role as tutor while the boys worked to complete assignments.

Further discussions with Ms. Adams who readily shared her perceptions of factors that enhanced the intervention in meeting the pedagogical goal reflect this progress as she

related the planning required for coordinated skill instruction. My field notes of October 27, 2011 illuminate her effort:

Ms. Adams seemed pleased with the progress of the students today. She talked about the time she had spent to assure that the lessons within each group were related and believed that because of the tedious planning her effort had been rewarded. Student quizzes showed that all students were able to recognize letters and corresponding initial sounds, and they were correctly identifying consonant-vowel-consonant (CVC) patterns in words. She also remarked that she thought she might do more planning in coordinating the topics for reading in the *System 44* readers with the students' interests and new skills acquired as a result of progress made.

Ms. Adams seemed to be looking ahead in order to build on the work she had begun. Her positive attitude and intense work ethic assisted to enhance efforts toward reaching the pedagogical goal.

Evidence of factors that enhanced progress toward the pedagogical goal was seen in the progression of skill mastery that students were making. Using student quiz scores and the *System 44* Differentiated Instruction Grouping Report, Ms. Adams was able to design instruction for the guided reading, cooperative learning, and CAI groups that targeted individual student skills (see Table 12). In this way, instruction was specifically focused toward the needs of the students.

Table 12

Participant Skill Focus and Instructional Grouping

Skill Focus	Student	Targeted Instruction
Consonants		
Blends	Rodrigo (Student 2) Alyssa (Student 9) Chong (Student 5)	More s-blends Two- and three-letter blends More l-blends
Digraphs	Jacquelin (Student 8)	Digraph sh
Single Consonants	Dariana (Student 7)	Consonants v, z, q
Vowels		
Short Vowels	Benjamin (Student 4) Jorge (Student 1)	Short u Short u
Syllables		
Closed Syllables	Marisol (Student 6) Jose (Student 3)	Unstressed Closed Syllables i, o, u

Because the *System 44* software adapted instruction for each student after the initial SPI was given, each student daily worked on the computer in any one of the four strands as guided by the computer. For example, during the CAI group, one student was observed working in word strategies and another in sight word recognition. As students completed a cycle of instruction within each of the four strands (the code, word strategies, sight words, comprehension), the software measured each student's mastery automatically and either promoted the student to the next instructional topic or guided the student through additional instruction and practice with new content. In this manner, students worked independently on the computer as they occasionally assisted each other with difficulties that arose with the computer equipment although this was infrequently observed.

As students worked on the computer, student progress reports were generated by Ms. Adams to determine specific areas of need for instruction with individual students. For example, in late September, Jose was working on the identification of closed syllables as reflected in the *System 44* reading progress report. Ms. Adams incorporated closed syllables as part of Jose's work in guided reading and cooperative groups. This method was conducted for each member of the class in an effort by the teacher to coordinate skill instruction and assist students in advancement toward the pedagogical goal. While these reports were not shared with students, Ms. Adams shared pre- and postassessment data from the SPI with students (reported in Quantitative Data below) and set an overall goal of improvement for each student after the SPI was given in September at baseline data collection. The singular student goal for each student participating in CAI groups was to improve performance from pre- to posttest, and this was achieved as Ms. Adams worked toward coordination and reinforcement of skill instruction within each of the three groupings.

Because the *System 44* program is self-directed, one goal of the program is to allow students to work independently. After a brief orientation to the program led by Ms. Adams, most students worked without interruption at their own pace each day.

During student interviews, most students noted prior experience in working with computers, and it seemed this experience served to facilitate productivity within the CAI groups. As difficulties arose, students quickly assisted each other in solving technical problems. Most frequently, microphones for recording fluency needed to be adjusted and headsets replaced. New students were directed by those who had been in the class for the

duration of the intervention. This took the form of guided practice and explanation in Spanish as more experienced students demonstrated the navigational aspects of the program to newcomers. My field notes of October 25, 2011 reflect the ease of the CAI orientation process: “Jorge is helping Guillermo (new student) acclimate to the computer. Guillermo seems to understand Jorge’s explanation as the process took about three minutes before Guillermo began working independently.”

Reflected in my field notes throughout the intervention were observations related to students working quietly on the computer. Documented instances included 24 occasions, or in 100% of my observations over the 12-week intervention implementation, students worked quietly on the computers. Evidence of time spent on the computer throughout the study is illustrated in Table 13. It is important to note that student absenteeism is shown with time spent on the computer. Students who were absent from class had a lower total time spent on the computer than those students who were not absent from class.

Table 13

Participant Total Time Spent on the Computer During the Intervention

Student	Total Time Spent on the Computer (minutes)	Total Number of Student Absences
Student 3: Jose	1,191	0
Student 5: Chong	1,021	0
Student 9: Alyssa	1,005	0
Student 2: Rodrigo	909	1
Student 1: Jorge	792	2
Student 7: Dariana	783	2
Student 8: Jacquelin	759	3
Student 4: Benjamin	754	3
Student 6: Marisol	712	8

While evidence toward the positive benefits of the computer assisted program alone may be inconclusive, the students participated with the *System 44* computer program as evidenced in the time spent actively working on the computer. The students appeared engaged with the work in the CAI group.

Student conversational interviews conducted in early September during Phase 2 of the study revealed that all students had some experience using computers, and this was largely related to reading on the Internet. While most students did not have computers at home, prior use of computers in school and at friends' houses was common among all of the students. Jacquelin and Jorge reported exploring Spanish websites, and Jose used the Internet for researching topics in his school in San Salvador. In general, all of the students had prior experience and interest in using computer technology.

Noted in my field notes throughout the study was students' intense concentration during CAI groups. Typical protocol within the CAI group included students sitting down, putting on headphones, and working continuously without interruption for the duration of the group time. Participation within this group among all students was generally uninterrupted. Throughout my field notes documentation of interruptions to participation was recorded and is reported in Table 14 for two-week periods from September through December 2011.

Table 14

Interruptions to Participation Within Groups

Date of Observation in 2011	Guided Reading Group	Cooperative Learning Group	Computer Assisted Instruction Group
September 20	<ul style="list-style-type: none"> Chong leaves to use the restroom Jacquelin talks with Alyssa Ms. Adams digresses to a personal experience 	<ul style="list-style-type: none"> Jacquelin talks to Chong Alyssa is daydreaming 	none observed
September 21	<ul style="list-style-type: none"> Benjamin leaves to use the restroom Jorge is wandering around 	<ul style="list-style-type: none"> Benjamin and Jorge began work five minutes after group has begun 	none observed
October 19	<ul style="list-style-type: none"> Marisol has her head on the table 	<ul style="list-style-type: none"> Jose is reading a sports magazine 	none observed
October 20	<ul style="list-style-type: none"> Dariana is staring into space Chong leaves to use the restroom 	<ul style="list-style-type: none"> Rodrigo is looking at Jorge's book bag Jacquelin leaves the class 	none observed
November 22	<ul style="list-style-type: none"> Ms. Adams is talking with another teacher Rodrigo is talking to Jorge 	<ul style="list-style-type: none"> Jorge is talking with Rodrigo 	none observed
November 23	<ul style="list-style-type: none"> Chong has his head on the table Dariana leaves to use the restroom 	<ul style="list-style-type: none"> Marisol is looking out the window Jacquelin is talking to Dariana 	none observed
December 13	<ul style="list-style-type: none"> Benjamin is staring into space 	<ul style="list-style-type: none"> Chong is talking with Alyssa and Jacquelin 	none observed
December 14	<ul style="list-style-type: none"> Marisol leaves to use the restroom 	<ul style="list-style-type: none"> Jorge is looking at a sports magazine Dariana has her head on the desk 	none observed

While gathering evidence toward the positive benefits of working solely in the CAI group was not the purpose of this study, the students were engaged with work on the computer. Never did I observe them daydreaming or leaving the class to use the restroom. A natural outcome of all classroom activity to some degree is time spent in transitioning from one topic or group to the next. However, when moving to the CAI group, students often rushed toward the computers. Also noted was that because the class was 90 minutes and ended at 1:00 P.M., the likelihood that students would tire toward the end of the day exhibiting less enthusiasm for engaged activity was possible. And while this phenomenon was observed in guided reading and cooperative learning groups throughout the 90 minutes, students continually demonstrated engagement in class work when working in the CAI group.

Participation within the CAI group was noteworthy for several reasons. Students seemed to like the program simply because they diligently worked with it. As well, work on the computer may have provided reinforcement for students' improvement in the acquisition of early literacy skills. As previously noted, the purpose of this study was not to test the validity or causal effects of the *System 44* program, yet students spent the most attended time using the program in the CAI group than in any of the three groups. Because the program was aligned to the overall curriculum and goal for the course, participation in the CAI group may have assisted students in their progress toward acquiring early literacy skills as much if not more than guided reading and cooperative groups if individual group contribution were to be assessed. Ms. Adams referred to

students' attention to the CAI group frequently as was reflected in an informal discussion with Ms. Adams November 9, 2011:

Athene: How do you think the students did today?

Ms. Adams: They did fine. This is such a nice group of kids.

Athene: Are you ever surprised at the way they work at the computers?

Ms. Adams: Most of them don't have computers at home, so when they come here, I think they feel like a void is being filled.

Athene: When I observe, they always seem on task. They're always working on the program.

Ms. Adams: Yes—and they should be. Their goal is to improve their SPI score and they know that. But—I think they just like being on the computer more than anything.

As Ms. Adams noted, students liked working at the computer. They appeared to be engaged with their work in the *System 44* program.

Factors That Inhibited Progress Toward the Pedagogical Goal

As categories that enhanced the attainment of the pedagogical goal emerged, additional factors that inhibited the goal's progress also emerged. Here, I will further address the first research question through a description of factors that inhibited progress toward the pedagogical goal. These factors include the lack of a predetermined curriculum for the ESOL Level 1 class and the need for a more effective method of grouping students. These findings are reported below.

Lack of a predetermined curriculum for the ESOL Level 1 class inhibited progress toward the pedagogical goal. Weekly throughout the intervention implementation, Ms. Adams and I met to discuss students' progress. Consistently, we discussed factors that might enhance or inhibit students' acquisition of early literacy skills. In early September 2011 Ms. Adams and I met to review components of the intervention, and at that time she shared her concern that there was no prescribed curriculum for teaching the ESOL Level 1 class. Ms. Adams explained that she had not been provided with clear guidelines as to curriculum expectations from the school's ESOL department chair. At that time Ms. Adams admitted that she "didn't know where to begin."

With the later approval from the district ESOL director Ms. Martin, Ms. Adams and I agreed that she would develop daily instructional plans utilizing the WIDA English language proficiency standards with a focus on WIDA standard one, Social and Instructional Language, for the first 14 weeks of school. In this way, Ms. Adams could develop lessons that focused on the following topics included in WIDA standard one: Classroom routines, personal and business communication, personal preferences, points of view, recommendations and suggestions, school life, social and cultural traditions and values, study skills and strategies, information gathering, and workplace readiness. Lessons would be developed that incorporated reading, listening, speaking, and writing through the teaching of the standard topics within the cooperative and guided reading groups.

Curriculum for the CAI group was prescribed by the *System 44* program used for early instruction in language acquisition. CAI instruction was supplemented with a comprehensive teacher manual and detailed lessons related to instruction in phonemic awareness, phonics and decoding, spelling, vocabulary, and word analysis and morphology. Ms. Adams preferred not to use the manual as the primary instructional tool. She chose to supplement instruction within the cooperative and guided reading groups using the manual as a guide for instruction. Together we agreed that Ms. Adams would use the materials in her classroom to implement the lessons within the cooperative learning and guided reading groups using the *System 44* manual as a guide for instruction.

In late September Ms. Adams expressed concern regarding the amount of planning required for each of the groups. Daily, she worked toward aligning the WIDA English language proficiency standard one into her planning. She then selected appropriate books to use that coordinated with the standard for guided reading and prepared a lesson to use specifically in guided reading. Next, Ms. Adams would look for coordinated activities that students could complete in cooperative groups that were also aligned to standard one. This included finding magazines that students used to match vocabulary to pictures or creating worksheets that aligned to the focus of the guided reading lesson. Ms. Adams also checked the results of student progress in *System 44* weekly to determine a targeted focus for instruction in phonics. Results from *System 44* were used to coordinate planning for the guided reading and cooperative learning groups.

By late September Ms. Adams was overwhelmed with the time and work required to plan for daily instruction. My field notes reflect this feeling:

During lunch Ms. Adams told me that she was overwhelmed from all of the planning for the different groups. She admitted that the students seem to be benefitting from her effort, but that all of her free time was spent in planning (September 28, 2011).

It was clear that Ms. Adams continued to struggle with planning as indicated in my field notes of October 4, 2011:

Ms. Adams was distressed today. The students appear to be doing well, but Ms. Adams told me that she really needs a curriculum to follow. We discussed the possibility of writing curriculum the following summer, but agreed that didn't help in reconciling the current absence of a prescribed curriculum.

By late October, I observed a change in Ms. Adams' teaching during one guided reading group:

Students are round robin reading today. Jose looks as though he's falling asleep. Benjamin is nervously shaking his leg. Dariana has her eyes closed. Chong has his head on the table. Students are quiet, but they're not looking at the words in the book as each takes a turn reading. This looks like the beginning of the school year (October 31, 2011).

Shortly after the class ended, I met with Ms. Adams even though it was not our regular time to conference, as I wanted to understand if there were a problem and how it could be remedied:

I asked Ms. Adams how she thought the students were doing, and she said they were doing, "great." She paused and then seemed to break down; tearfully

admitting that the time required to plan activities for the guided reading and cooperative groups was intense. I noted that I didn't usually observe the students on Mondays and made an effort to praise her work thus far suggesting too that we would work together to find a method to alleviate the tedious planning (October 31, 2011).

As a second year teacher who had never independently taught a class of her own, Ms. Adams struggled with the daily demands of teaching. Combined with intense effort to enforce new policies required by the new administration at the high school and working on her ESOL endorsement at a local university along with completing required beginning teacher professional development seminars, Ms. Adams was inundated with work. Because Ms. Adams was overwhelmed with these responsibilities, I was concerned for two reasons. First, I believed her anxiety was unhealthy and might lead to a serious illness. And second, I was concerned that her teaching method might become substantially altered to the extent that she might deviate from the planned model and return to whole class instruction.

Later that evening I reflected on the day's events trying to determine how I might best assist Ms. Adams in her instructional planning. I first turned to the initial interview conducted with Ms. Adams during the first week of school. Below is a transcript from the interview:

Athene: How do you feel about my being in your classroom?

Ms. Adams: I was a little nervous at first, but I think everything will be fine now.

Athene: How many years have you been teaching?

Ms. Adams: This is my second year of teaching ELLs. I don't want to teach anything else.

Athene: What is your past experience with guided reading and cooperative groups?

Ms. Adams: My ESOL classes have helped me understand the need for early reading instruction for ELLs. I don't know much about cooperative learning, but I do know that shared learning helps the least competent group members. I worked extensively with small groups last year, and I'm excited about trying it in a more organized manner this year.

Athene: After receiving *System 44* training, do you think you're ready for implementation?

Ms. Adams: I'm glad the students will be on the computers. The manual is overwhelming (laughs).

Athene: Do you have any worries related to this study?

Ms. Adams: Not right now. I'm excited to begin teaching (September 7, 2011).

After review of the initial interview with Ms. Adams, I was surprised that I had not before noted her reference to the *System 44* manual as "overwhelming." Indeed, the manual may have been overwhelming, yet without having used it in the classroom I thought the conclusion odd. Ms. Adams may have easily used the *System 44* manual as a curriculum for instruction perhaps more easily than the choice to use the WIDA standard

one. I wondered if her familiarity with the WIDA standards encouraged her to select what was familiar to teach rather than choosing something new. Ms. Adams' experience in early reading instruction was foundational. In the absence of a curriculum that might provide a sequence and guidance for early reading skill instruction, Ms. Adams did not have a fundamental structure in place to guide her in teaching early reading skills. I concluded that she believed that she needed such a structure to guide her teaching. Further, in using WIDA standard one, "Social and Instructional Language" as a curriculum guide, Ms. Adams did not have specific guidelines to follow for skill instruction. And too, I surmised that the complexity of the instructional model added to Ms. Adams' concern for the need of a curriculum.

As a result of the factors described, together Ms. Adams and I developed a plan to modify the intervention, thus reducing the daily planning required and providing more structure to skill instruction. This change is reported in Modifications to the Intervention below.

Lack of effective regrouping for English language learners (ELLs) inhibited progress toward the pedagogical goal. The cooperative learning and guided reading groups provided students with opportunities to discuss and share experiences using Spanish as the target language to communicate with their peers. Through group interaction, the students were able to produce meaningful output with one another. Language acquisition often occurred after students received feedback from their group members. However, as noted in my field notes, seldom was language exchange among Hispanic students in English.

In early October I observed the behavior of students who were grouped with Chong, the only student in the class who was not Hispanic. Chong spoke only Chinese, and none of the Hispanic students knew or understood Chinese. When grouped with Chong, all students defaulted to speaking English, the only common language among the participants. All class members appeared to like Chong as evidenced in my field notes of October 5, 2011:

Students in the cooperative group are laughing amongst each other. Chong seems to be the center of attention. They are talking about football and Chong told the group that he likes football but his aunt doesn't let him watch "too much" [television]. Benjamin responded that watching football was, "no good," and that "soccer was better" [than football]. The group laughed and Chong continued talking, "Maybe soccer is better if you have big foot." Everyone laughed again.

Later that day I recounted the incident to Ms. Adams and asked her if she thought modifications to the intervention were needed. She did not answer the question but explained that students speaking English when they were grouped with Chong was a common occurrence. She was concerned that the girls in the class were often distracted by his willingness to converse and reported that she sometimes chastised those groups who talked with Chong. We discussed the overall progress that students had made since September through oral language exchange and agreed that the students were making good progress in the acquisition of early literacy skills as evidenced by their class work. I expressed my concern that progress toward that end could be heightened if students could speak more in English and suggested that Chong's influence in perpetuating spoken

English would be vital toward meeting the pedagogical goal. I further explained that talking out loud in English, though it might be a digression from class content, was vital to the students' oral language development. Because I had seen their English exchange with Chong, I was convinced that students' progress would be inhibited had they not been able to continue working with him. Ms. Adams was hesitant to accept my rationale and became silent. I suspected that Ms. Adams was afraid of losing control of students in the classroom and asked her if that was a concern. She agreed that it was and noted that it was still early in the school year.

Ms. Adams explained that by the end of the year, she feared the class might be out of control if students were in the habit of talking all the time (in cooperative and guided reading groups). As a result of that fear, she had been reluctant to group Chong with any student. Over the past two weeks, he had been working independently during both cooperative and guided reading groups apart from the other students. Because Ms. Adams was a relatively new teacher, I understood her concern but tried to explain that a class of ESOL Level 1 students speaking in English during the first three months of school would be viewed as a huge success. I also explained that when the students were speaking English about topics unrelated to the assigned class work, that this too might be good progress toward meeting the pedagogical goal. Hesitantly, Ms. Adams agreed that I might have a valid point and agreed to make modifications to the original plan for grouping.

From my perspective, further evidence of the need to regroup students was reflected in progress students were making in learning early reading skills. I knew too that this must be discussed with Ms. Adams in order to fully understand her hesitance in

regrouping students. Evidence from student quizzes during participation in cooperative groups combined with evidence from growth reports of the *System 44* program indicated that by mid-October most students had mastered the early reading skills of letter recognition and the combination of sounds and letters to form words. In order to maintain students' progress, further specific and targeted skill development was needed for each student to maintain progress toward the pedagogical goal. Because work in the CAI group adapted skill work to individual students' progress, grouping of any kind during CAI work was productive for all students. However, to further support students' individual progress needs in all of the groups, grouping students according to their individual progress was needed if maximum potential for each student were to be achieved. Combined with the need to perpetuate oral language exchange during guided reading and cooperative groups, overall grouping of students became challenging. Ms. Adams and I discussed this in late October prior to modifications to the intervention:

Athene: What factors do you think inhibit students' reading achievement?

Ms. Adams: I know I could be doing more with the grouping especially in the cooperative groups. It's hard to let them all talk at once. If I get more students, the talking might get out of control.

Athene: Do you think that if we develop a plan for regrouping in cooperative groups, the talking could be somewhat controlled? That might mean you would focus more on the oral language aspect in guided reading?

Ms. Adams: Yes, that might work (October 25, 2011).

While Ms. Adams seemed to understand the need to further target skill instruction during cooperative groups, her overall concern related to “out of control talking” seemed to direct her thinking and decision making even though she understood the benefits of regrouping the students. While Ms. Adams worked tirelessly to review skill reports from *System 44* and student quizzes, I believed that in order for her to move forward (target skill instruction for each student), she needed to believe that she had complete control of the class. Toward that end, a plan was developed to regroup students and is reported in Modifications to the Intervention below.

Modifications to the Intervention

Here, I address research question two through an account of modifications that were made to the intervention. By early November, two modifications to the intervention were in progress. These modifications were based on factors that inhibited the intervention’s effectiveness and efficiency and were reviewed and discussed with Ms. Adams prior to implementation. Together we developed a plan to modify the original intervention to capitalize on factors that enhanced the intervention and circumvent or neutralize the inhibiting factors. Modifications are described in detail below.

The first modification included the development of a workable plan that Ms. Adams could follow for purposes of instruction in the absence of a prescribed curriculum. Ms. Adams expressed concern on several occasions that the lack of a prescribed curriculum for teaching the ESOL Level 1 class required significant planning, coordination, and work. Her frustration, as described earlier, led to the collaborative decision to modify the initial curriculum plan to assist students in reaching the

pedagogical goal. Working toward that end, Ms. Adams and I agreed that in lieu of daily alignment of the WIDA English language proficiency standard one, Ms. Adams would select books for daily reading during the guided reading lesson from the Scholastic *System 44* books and focus instruction on the guided reading process as described in Chapter 3 with explicit emphasis on the acquisition of early reading skills as was appropriate for early reading instruction. Use of additional strategies such as questioning techniques, scaffolding, building background knowledge and promoting oral language proficiency would remain intact as originally planned. It was also agreed that as students progressed in word identification skills through explicit skill instruction, comprehension strategies would continue to be integrated into the guided reading and cooperative lessons.

To further facilitate the planning process, I made a request that was approved by the school system's deputy superintendent to purchase the Scholastic *System 44* skills workbook for student use in cooperative groups. The workbook was developed by Scholastic to allow students to practice skills and strategies introduced in *System 44*. This included practice in phonemic awareness, phonics and word study. Lessons also focused on prefixes, suffixes, roots, endings and syllable types and the identification of sight words. Using the *System 44* skills workbook allowed for coordination of instruction between all of the groups. Ms. Adams was relieved at the decision to purchase the books as she stated on October 31, 2011, "I can't wait until the books get here."

In an effort to continue working toward achievement of the pedagogical goal, I knew that Ms. Adams' continued requests for a designated curriculum needed to be

addressed. While using the *System 44* skills workbook may not have been my choice, I believed acquiescence was needed if student success in reading were to be attained.

Based on Ms. Adams' prior statements of fatigue and lack of time, the decision to modify the intervention was made.

The second modification involved a new plan for grouping students to facilitate their English language development. In early September when planning grouping for students, Ms. Adams and I noted that all of the students in the class were identified as ESOL Level 1 students, as determined by their performance on the Assessing Comprehension and Communication in English State-to-State for English Language Learners (ACCESS for ELLs) test. All of the students were designated at the lowest level of English language proficiency that ranges from Level I ("Entering"), to Level 6 ("Reaching") as identified by the WIDA, the assessment protocol required by the school district. In originally designing guided reading groups, to maintain homogeneity, student age, linguistic and cultural background and differences in life and educational experiences were considered.

Initially this method of grouping worked well for students as evidenced in my field notes and discussions with Ms. Adams. During the first six weeks of the intervention, all students except Chong who spoke only Chinese, moved from silent activity toward use of oral language in Spanish to solve problems, clarify directions, and enhance understanding. However, Chong had been removed from participation in the collaborative and guided reading groups because when students were grouped with Chong, Ms. Adams felt that the students were too loud. She articulated that conversations

were not focused on the work assigned when students were grouped with Chong. With Chong's absence from the guided reading and collaborative groups, I was concerned that his progress would be impeded if he continued to work independently. Further, because I had observed oral language exchange in English between Chong and other students, I felt that working in small groups with Chong was beneficial to all students. This conclusion was reached based in part on my observation that when students were grouped with Chong, they all spoke English.

To further support students' individual progress needs as discussed earlier, Ms. Adams agreed to continue using skill reports from *System 44* in order to plan for students' instructional needs. Additionally, in order to maximize oral language exchange in cooperative groups, Ms. Adams also agreed to allow Chong to be part of a new grouping plan.

Ms. Adams and I decided that group formations would change and focus on grouping according to students' personalities. This meant that students with outgoing personalities who were eager to speak English would be paired with more reticent students who seldom spoke spontaneously. To achieve this grouping, it was agreed that Chong and Alyssa would seldom be paired together in guided reading or cooperative learning groups. Both Chong and Alyssa had already proven their ability to motivate students as evidenced in my field notes and discussions with Ms. Adams. Chong's use of English to communicate combined with his outgoing personality propelled students to hear and use English in their communication with him and with other students. Acting in this capacity may have allowed Chong's skills to develop. Alyssa had developed the role

of tutor for students as described earlier in this chapter. In this way, her own skills may have been strengthened in addition to the skills of students under her tutelage. As much as possible, Ms. Adams made an effort to assure that all students had the opportunity to work in groups with Chong and Alyssa regularly throughout the duration of the intervention.

A positive benefit to grouping according to personality traits was that Ms. Adams was no longer required to review skill reports from *System 44* for grouping purposes, although her review of the reports continued for student skill reinforcement. This alleviated some of her work load and afforded her more time to focus on planning for instruction. Without this additional responsibility and with the realization that the classroom functioned well in this capacity, Ms. Adams appeared satisfied with the new grouping of students as summarized in my field notes of November 1, 2011:

Today I asked Ms. Adams how the intervention could be modified to more positively impact students' reading achievement. She was quick to tell me that things were going well with the new grouping, and that the students were speaking more English. Ms. Adams also expressed the desire to have a new student enter the class who might speak a language other than Chinese or Spanish! Things were going well.

The Conclusion of Phase 4

Following is the conclusion of the chronological account of events that occurred during the final weeks of the implementation of the intervention during Phase 4. This section describes events that occurred after modifications to the intervention were made.

Throughout the intervention during informal discussions with Ms. Adams, I asked if there was anything in the educational environment that she had not anticipated. Ms. Adams responded candidly that she had not anticipated that students would be decoding words and reading aloud as quickly as they had. She believed that this was due to work conducted during the guided reading group as evidenced in my field notes of November 8, 2011 as Ms. Adams recounted the following:

They began reading books quickly. I was surprised and want to say that it was because I had the opportunity to work with them closely in the reading group. I also think that the students helped each other more than I thought they would. They didn't come to me very much with questions. They asked each other questions and got answers from each other. But I think that's because they knew I was helping the other students [in guided reading]. That really surprised me.

Work in the guided reading group allowed Ms. Adams the time to focus instruction based on individual students' needs. Progress toward the pedagogical goal was strengthened because of the ongoing focus on the individual progress of group members. As this occurred, student progress was continually enhanced because mistakes were corrected at the time they were made. Because this process was iterative, students benefitted daily from working individually with the teacher thus strengthening their oral language abilities, vocabulary, decoding processes and progress toward the pedagogical goal.

Further evidence of progress toward the pedagogical goal was apparent by November 9, 2011. Students were reading paragraphs independently as described in my field observations:

It's hard to believe that students were reading! Ms. Adams chose a Level 1 reader, *Yo, Yolanda!* (340L) for guided reading today. Students were reading aloud softly to themselves as Ms. Adams worked with one student. Jorge had just read the following independently: "Friends are great. They make you laugh. They help you with your homework. They listen to your problems." Ms. Adams finished with the student and waited until all had completed reading. She then asked the students why it might be great to have friends. Marisol was quick to interpret in Spanish for the group as no one had responded to the question. When this occurred, students talked simultaneously in Spanish. Ms. Adams then asked Dariana specifically why it might be great to have friends. Dariana responded softly in English: "Friends make you happy." Ms. Adams continued to probe: "Why?" Dariana explained further: "Because you can be laughing." Seemingly pleased with the response, Ms. Adams continued asking the group questions (November 9, 2011).

I recount this incident as evidence that students had progressed from identifying letters to reading words and sentences, a key step toward reaching the pedagogical goal. Ms. Adams understood clearly that simply decoding was not enough if comprehension were to be attained. She probed until she was assured that Dariana understood what she read. Ms. Adams was able to make this determination quickly because she had the

opportunity to hear Dariana reading aloud during guided reading. Using this opportunity for informal assessment of Dariana's comprehension, Ms. Adams was able to plan to proceed to new and more challenging reading material designed to meet the specific skill needs for Dariana thus increasing the opportunity to progress toward the pedagogical goal.

By mid-November 2011, two months after the intervention implementation, the classroom environment had changed from passive to active learning. My field note observations recorded multiple instances of students getting up to find bilingual dictionaries, utilizing classroom materials such as books and magazines to enhance understanding, assisting one another to interpret directions, and clarifying information through oral language exchange. Examples of these occurrences are reported from my field notes below:

The cooperative group assignment today is to write a paragraph using three specific vocabulary words, "admire, recommend, and blog" using the past tense. Before beginning and without guidance from Ms. Adams, Jacquelin distributed bilingual dictionaries to all the members of the groups (November 15, 2011).

In order to complete the assignment, Jacquelin's assumption was that bilingual dictionaries were needed. Her engagement in the activity propelled her to actively facilitate her own and all the group members understanding through distribution of the bilingual dictionaries.

A second instance that demonstrates the transition from passive to active learning follows from my field notes of November 16, 2011:

Alyssa was trying to explain something in Spanish to Rodrigo who was shaking his head indicating disagreement or lack of understanding. Alyssa got out of her seat and walked to the front of the room where an easel with magnetic letters was displayed. Alyssa used the letters to write the word, "HOLA." Beneath the word, she used the letters and wrote the word, "HELLO." Rodrigo smiled, and Alyssa returned to her seat. Whatever the conflict, it was resolved through Alyssa's active demonstration and Rodrigo's apparent comprehension.

Shortly afterward during our informal discussions, I recounted the exchange between Alyssa and Rodrigo to Ms. Adams who had noted the activity: "Alyssa has found her niche as a teacher." I suggested that perhaps because Alyssa and Rodrigo were working together their freedom to talk and to move freely about the classroom perpetuated their progress. Ms. Adams agreed and noted that Rodrigo particularly seemed to be benefitting from the help from Alyssa he was receiving in the cooperative group but that his overall English skills were extremely low.

Later that evening when reviewing my field notes for the day, I turned to Rodrigo's conversational interview that had been conducted in early September. I quickly noted that Rodrigo had been in the United States since August 2011, and both his parents and two brothers remained in El Salvador. He was currently living with his uncle and his uncle's son. When asked what language he spoke at home, Rodrigo replied that his uncle spoke to his own son in English, but spoke only in Spanish to Rodrigo. I surmised that the extent of Rodrigo's practice in English took place largely in school and during his ESOL Level 1 English class. At postassessment in mid-December (see Quantitative

Findings, Student 2 below) Rodrigo's growth in all areas of the Scholastic Phonics Inventory demonstrated his progress toward the pedagogical goal.

As noted earlier in Phase 3, weekly informal discussions with Ms. Adams served as member checks for my observations in the classroom. For example, during one of our discussions in late November, I noted to Ms. Adams that Dariana, who was generally enthusiastic about participating in class, was talking less frequently and appeared disengaged from group work. Ms. Adams responded to this observation, "Yes, Dariana works at a restaurant until midnight three days during the week. She comes to school exhausted" (November 22, 2011).

Having learned through the student conversational interview conducted in early September that Dariana supported her own one year old child, both the necessity to continue to work and validation for her seeming disengagement became clear. Ms. Adams and I decided that Dariana's day would begin with small group work in guided reading in order to focus Dariana's attention. In this way, Ms. Adams could work to challenge her maximally through utilization of continuous questioning and answering techniques. Cooperative work would be completed with another female that Dariana could assist in an effort to keep her actively engaged. The class would end with CAI, Dariana's favorite group and something positive to anticipate. Though orchestrated by Ms. Adams and me to maximize Dariana's attention, it seemed that her ability to solve problems within small groups was maximized, and her understanding of English grew.

Further evidence that students transitioned from passive to active learning through oral language interaction was demonstrated in December as students worked in

cooperative groups. My field notes describe the assignment for cooperative groups (see Figure 7):

Today's lesson focus was on using transition words. During guided reading students completed a reading of "Lucky to be Alive!," a short reading about a 1972 plane crash carrying rugby players through the Andes mountains. The cooperative group assignment required that students use the sequencing words written on individual cards for each student "first," "then," "next," "after that," and "finally" to order the events of the story. Ms. Adams had cut five sentences from the story and distributed them to each of the students who were instructed to match the sentences to the sequencing cards (December 6, 2011).

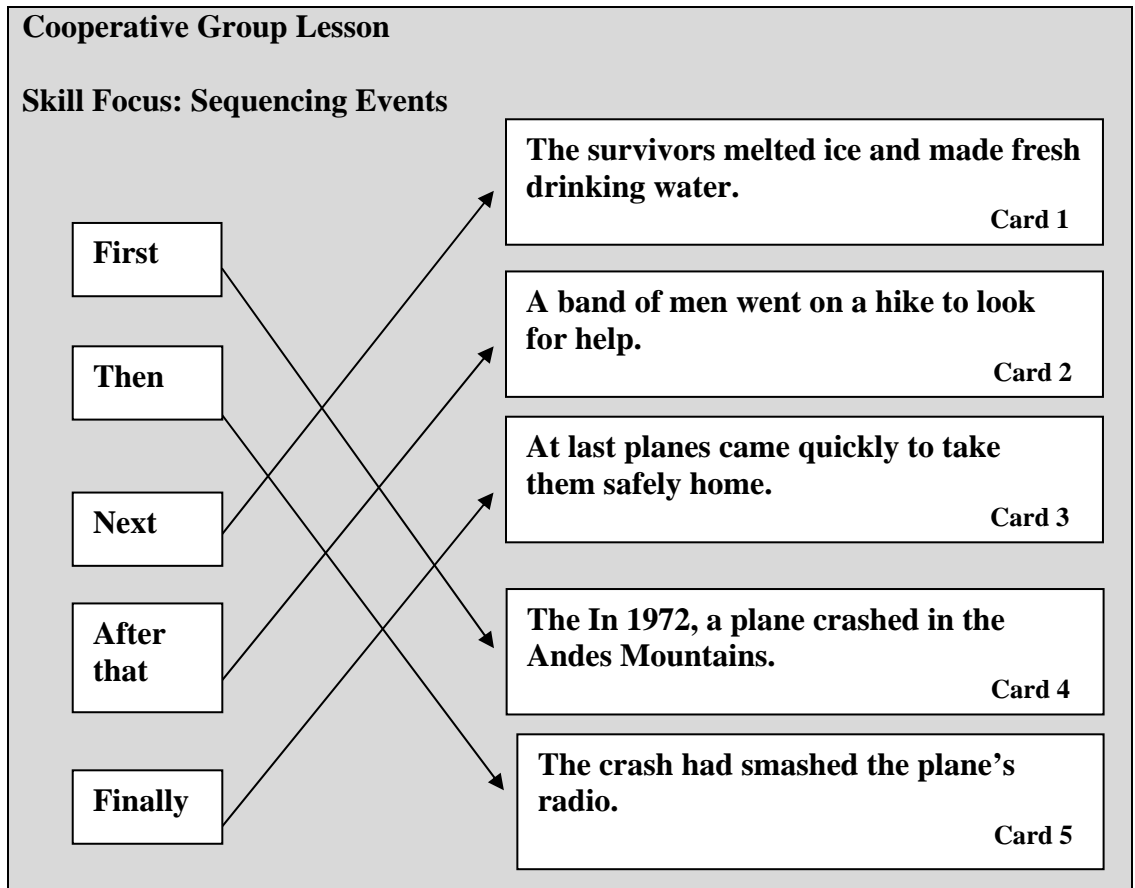


Figure 7. Cooperative learning sequencing lesson.

Conversation in English only among the students during the cooperative group assignment began immediately as students worked to order the events of the story using the sequencing cards. I noted the following in my field notes of December 16, 2011: “Students seemed so eager to start the activity that they forgot about working in pairs. All four of them are working together today. Ms. Adams doesn’t seem to mind.”

Jacquelin: No, no, no. No—first this (pointing to card 4).

Dariana: You too smart.

Chong: I see then the radio is smashed.

- Dariana: You also too smart.
- Jacquelin: What Chong? (Pats him on the shoulder.)
- Dariana: He say you do it.
- Jacquelin: What next (pointing to card 1)?
- Jose: Yes, yes (points to card 1). They make water for drinking.
- Chong: After that is this one; the men look for help.
- Jacquelin: One more is here (pointing to card 3). The end.

Throughout the semester, students worked in this manner moving from recipients of information toward active participants in their own learning consistently engaging in oral language interaction. As they became more active, daily practice in speaking English became routine classroom protocol and a natural outcome of their work together. By mid-December students had progressed from reading words and phrases to reading and understanding sentences and paragraphs. As well, by mid-December students had progressed from silence in English to spontaneously using whole sentences because the opportunity to speak and work actively together was the classroom expectation. Oral discourse became the natural by product for most of the work in which all students participated. As such, students were propelled to become actively involved in their own learning. This was observed most often in cooperative and guided groups as students interacted with each other and with the teacher as they worked toward progress of the pedagogical goal.

To conclude the description of qualitative evidence from this study, my field notes reflect abundant observations of students engaged in oral language exchange. These

observations were noted at the outset of the intervention implementation and conclude during the final days of the intervention. It is noted that oral language exchange among students during instructional time prior to the intervention implementation, was observed minimally as students seldom talked during class.

Opportunities to develop oral language proficiency were embedded within the guided reading and cooperative learning group frameworks of the instructional intervention of this research study. Examples of students talking to each other follow:

- Today the class is almost too loud. Everyone is talking out loud [in Spanish] (September 20, 2011).
- Marisol who had been in the country longer than the other students was able to provide clarifications and explanations that the students understood through use of oral language [in Spanish] (September 26, 2011).
- Students are working in cooperative groups talking to each other in Spanish (October 4, 2011).
- There is a great deal of talking going on today [in Spanish] (October 12, 2011).
- Today Jorge is explaining something to Jose. (October 18, 2011)
- Benjamin just described what a “skilled worker” is in English. I think even Ms. Adams was surprised at the progression of his oral language skills. (October 27, 2011)

- Alyssa and Rodrigo have been talking throughout cooperative learning. They seem to be focused on the worksheet, so it looks like work related talk (November 15, 2012).
- Jacquelin and Chong look like best friends today. They haven't stopped talking to each other [in English] (December 7, 2012).

The cooperative learning and guided reading groups provided students with opportunities to discuss and share experiences using Spanish as the target language to communicate with their peers. Through group interaction, the students were able to produce what appeared to be meaningful output with one another as they seemed to be understood. Language acquisition may have occurred after students received feedback from their group members, indicating that they had understood the meaning of the message.

Themes Recap

As a conclusion to the events described in Phase 4, I again present the themes that emerged from the qualitative evidence that were gathered throughout this study. These themes are summarized below.

Creating a classroom environment that encourages oral language interaction enhanced ELLs' progression from passive to active learning. Participating in ongoing oral language activities throughout the intervention allowed ELLs to actively engage in their learning. Working in small guided reading and cooperative groups where oral language exchange was expected and encouraged allowed these ELLs the opportunity to express themselves personally and practice formulating responses. In the process, most

students' oral language expression progressed from the use of words and phrases to full sentences and paragraphs. As students actively participated and interacted with each other, it appeared that their knowledge of English grew. The end result was in sharp contrast to the observation of students as passive recipients of information prior to the intervention implementation.

Working in small groups plays an important role in the ability of these ELLs to facilitate understanding through problem solving. Working in small groups allowed students to work together to clarify meaning and understanding. In this way, students worked cooperatively to complete assignments and to respond to teacher questions by assisting each other in comprehending the task, the question, or the skill required. This often took the form of students assisting each other in providing definitions, clarifying directions, or building prior knowledge to scaffold understanding. Important to this process was that the small groups allowed the students to work in this manner and thus find solutions to problems that might otherwise have been ignored or determined too difficult to complete alone as was observed during whole class instruction prior to the intervention implementation.

Participation in a variety of groups coordinated for skill instruction enhanced these ELLs' early reading skills, and progress toward the pedagogical goal. Each of the three group configurations focused on a similar early reading or vocabulary skill. In this way, daily work within each group was coordinated for instruction. ELLs had the opportunity to make connections between groups because the focus for instruction remained constant. As such, skills were reinforced daily giving

students focused and targeted instruction that met their individual needs. As the year progressed, students' early reading skills and vocabulary improved.

Computer assisted instruction (CAI) groups for early reading instruction seemed to enhance these ELLs' engagement in class work. Throughout the intervention, students were observed working consistently at the computers in the CAI group without interruption. With intense concentration, students worked only within the prescribed early reading program, *System 44*. Never throughout the 12-week intervention implementation, were students observed working outside the range of the *System 44* program or participatory in conversations unrelated to CAI work. Throughout the duration of the intervention, while students worked in the CAI group, they experienced fewer disruptions when compared to other groups. When participating in the CAI group, students were engaged with their work.

Phase 5: Postassessment

In this section, I will answer research question three of this formative study: How do students perform on pre- and posttest measures of early reading skills? In answering this question, I will report the results of the pre- and posttest quantitative data collected during the study.

The quantitative data collected during the study were examined through a comparison of baseline data obtained during Phase 3 of this formative design study to the postassessment data gathered during Phase 5 of the study. The purpose of the postassessment phase was to provide a point of comparison with the baseline data. Prior to intervention implementation, I gathered qualitative and quantitative data to set a

baseline to determine if the intervention was advancing the pedagogical goal. During the intervention I gathered qualitative data to ascertain progress, and after the intervention, I gathered qualitative and quantitative data to compare to the baseline data. Pre- and postintervention quantitative data were compared to complement the qualitative data in making inferences, not to establish a causal relationship as in a controlled experimental study.

The Scholastic Phonics Inventory (SPI) was administered at pre- and postintervention and was analyzed by total percentage of accuracy and fluency on five SPI subtests that included letter names accuracy, sight words accuracy, sight words fluency nonsense words accuracy and nonsense words fluency. A response was scored as accurate if the student selected the correct answer. It was scored as fluent if the student selected the correct answer within the established time limit for the item. The class means score for each subtest at pre- and postintervention are reported. In all subtests, students' means scores were higher on posttests compared to pretest scores, even though scores on all parameters varied (see Figures 4.3 to 4.8). Results demonstrated the variability in the students' demonstrated abilities from pre- to posttest. At pretest, this finding is consistent with students' initial interviews that indicated variability in years of schooling and reading dispositions. At posttest this finding suggests that the instructional intervention did impact students' reading achievement throughout the duration of the 14-week study.

A Wilcoxon signed-rank test was conducted at postintervention to evaluate whether students performed better on each of the five SPI subtest posttests compared to the SPI pretests. Wilcoxon test results are reported below for each of the SPI subtests.

The SPI was designed to measure speed for two word- level reading skills: Phonological decoding and sight word reading. In order to complete these components of the SPI assessment, students were first assessed on their ability to identify the letters of the alphabet in English, a foundational skill related to learning to read. Figure 8 displays both pre- and posttest scores by percentage for each student in letter names accuracy. Pretest mean scores were 81% compared to posttest mean scores of 97%. While three of the students were already at 97% at pretest, four students did not change, one decreased, and four increased. All of the students, with the exception of one, maintained or made gains in letter names accuracy indicating that almost all students were better able to identify letters of the alphabet in English and match prior to the intervention implementation. Improvement in this area indicates that progress toward the pedagogical goal was made.

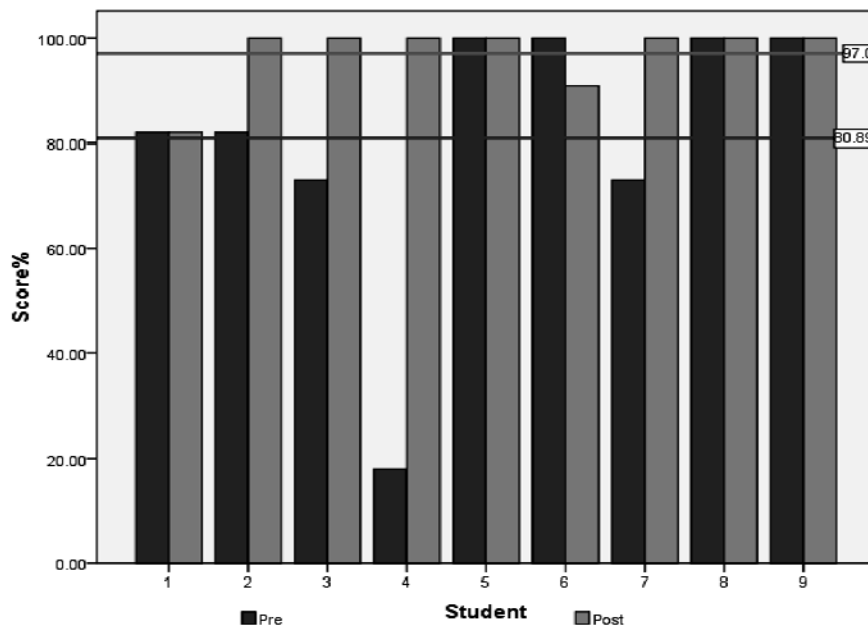


Figure 8. Letter names accuracy percentages and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed better on the Letter Name Accuracy posttest (Median = 100.00) compared to the Letter Name Accuracy pretest (Median = 82.00). The results indicated that while the students scored higher on the posttest, there were no significant differences, $z = -1.76$, $p = .08$. The mean of the ranks in favor of pretest was 3.50, while the mean of the ranks in favor of the posttest was 1.00. This finding suggests that while all students except one maintained or progressed in their ability to recognize and pronounce letters of the alphabet during the course of the intervention, foundational knowledge related to these tasks may have been established at a high level at pretest for most of the students thus accounting for the lack of significance at posttest.

The SPI measured Sight Words Accuracy, the second subtest of the SPI. Sight word accuracy, a factor in determining fluency, was assessed in part by the accuracy with which high frequency sight words were read. Figure 9 displays both pre- and posttest scores by percentage for each student. Pretest means scores were 43% compared to posttest scores of 60%. All of the students made gains in their accuracy of reading sight words. This finding indicates that all of the students made progress toward the pedagogical goal in their sight words accuracy reading.

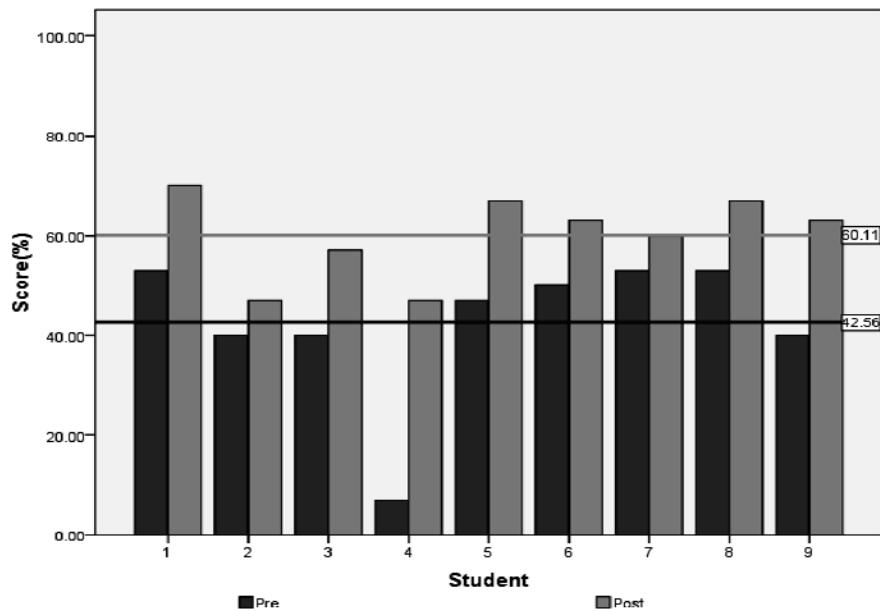


Figure 9. Sight words accuracy percentages and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed better on the Sight Words Accuracy posttest (Median = 63.00) compared to the Sight Words Accuracy pretest (Median = 47.00). The results indicated that the students did score significantly higher on the posttest, $z = -2.67, p = .01$. The mean of ranks in favor of the pretest was 0.00 while the mean of the ranks in favor of the posttest was 5.00.

Results indicated that as the students progressed throughout the semester, their ability in accurately recognizing sight words increased. As they worked in small groups designed to target their instructional needs, the small number of sight words that they could recognize with automaticity, grew.

The SPI measured Sight Words Fluency, the third subtest of the SPI. Sight word fluency, was assessed by the speed and accuracy with which high-frequency words were

read. Figure 10 displays both pre- and posttest scores by percentage for each student. The pretest mean scores for the 9 students was 6% compared to posttest mean scores of 13%. All of the students made gains or maintained progress in their sight word fluency reading.

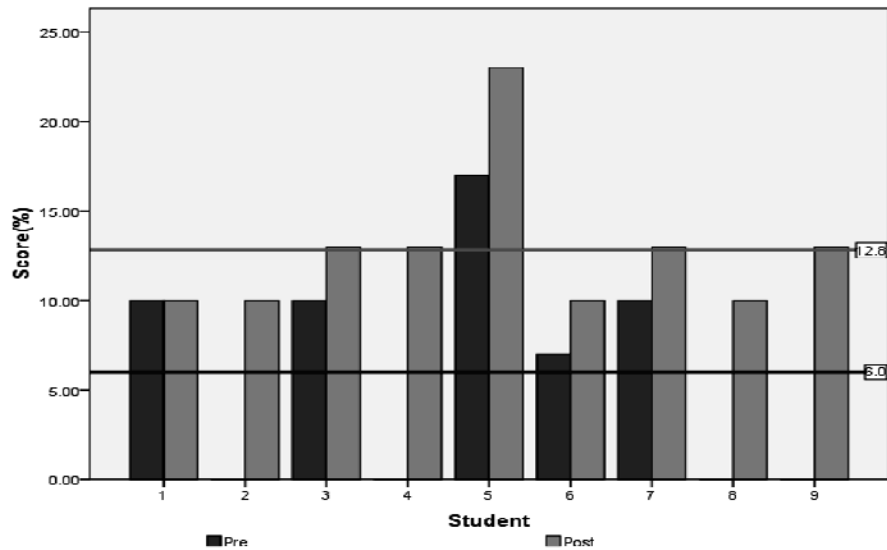


Figure 10. Sight words fluency percentages and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed significantly better on the Sight Words Fluency posttest (Median = 13.00) compared to the Sight Words Fluency pretest (Median = 6.00). The results indicated that the students did score significantly higher on the posttest, $z = -2.54, p = .01$. The mean of ranks in favor of the pretest was 0.00 while the mean of the ranks in favor of the posttest was 5.00. Results indicated that students more than doubled mean scores at posttest. Combined with results of the Sight Words Accuracy test, students became more accurate and automatic in early reading skills at the word level. This may have allowed students to

more accurately read strings of text that included words to which they had been previously exposed. While it appears that students' overall percentage of sight word achievement was low (no more than 23% of 100%), given that all of the students had been in the country for less than a year, consistent progress toward the pedagogical goal for the improvement in the acquisition of early reading skills was demonstrated and is consistent with Cummins (2001) theory of language development that suggests five to seven years as a minimal time for ELLs to progress toward language mastery.

The SPI measured Nonsense Word Accuracy, the fourth subtest. As in subtest two of the SPI, Sight Word Accuracy, nonsense word accuracy was assessed in part by the accuracy with which nonsense words were read. The SPI measured accuracy for both sight words and non words. Figure 11 displays both pre- and posttest scores by percentage for each student. Pretest mean scores were 47% compared to posttest scores of 66%. An increase in mean scores for all students was made with the exception of one student who was frequently absent from class during the intervention implementation. Results of the SPI Nonsense Word Accuracy indicated that most students were progressing toward basic decoding skills.

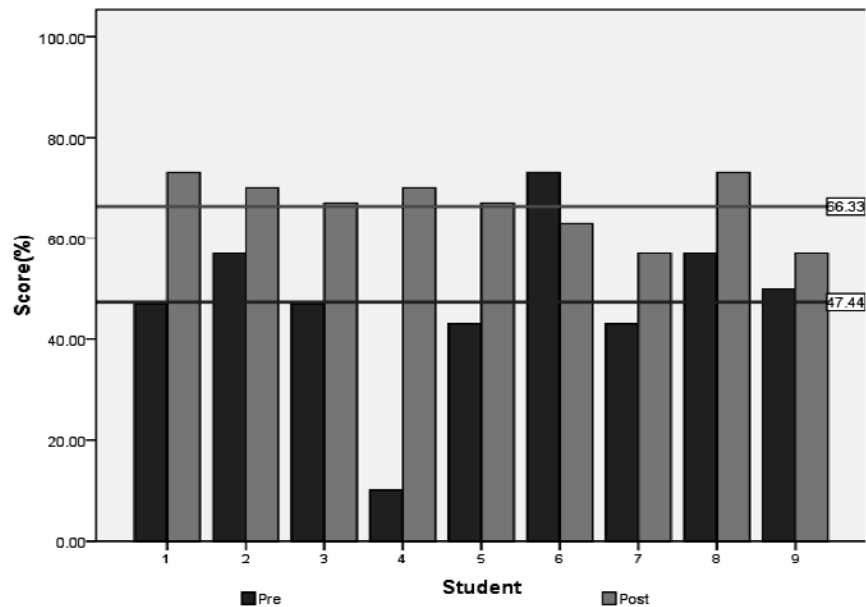


Figure 11. Nonsense words accuracy percentages and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed better on the Nonsense Words Accuracy posttest (Median = 67.00) compared to the Nonsense Words Accuracy pretest (Median = 47.00). The results indicated that the students did score significantly higher on the posttest, $z = -2.43, p = .01$. The mean of the ranks in favor of the pretest was 2.00, while the mean of the ranks in favor of the posttest was 5.38. Results indicated that reinforcement of basic skills in the identification of sight word accuracy, as noted in the Sight Words Accuracy subtest of the SPI, extended to students' abilities to accurately decode nonsense words.

The SPI measured Nonsense Words Fluency, the fifth subtest of the SPI. Nonsense word fluency was assessed by the speed and accuracy with which nonsense words were read. Figure 12 displays both pre- and posttest scores by percentage for each

student. The mean pretest score was 10% compared to the mean posttest score of 12%. Student performance in the Nonsense Words Fluency subtest of the SPI was varied. While some students made individual progress, others declined or remained the same. Because the subtest required both accuracy and speed in decoding nonsense words, students' speed in decoding may have been an inhibiting factor in decoding nonsense words. Because students progressed in their ability to accurately decode nonsense words as evidenced in Nonsense Word Accuracy, the fourth subtest of the SPI, they may have had an extensive sight word vocabulary but lacked sufficient practice time to build basic decoding skills as most had studied English for only 14 weeks.

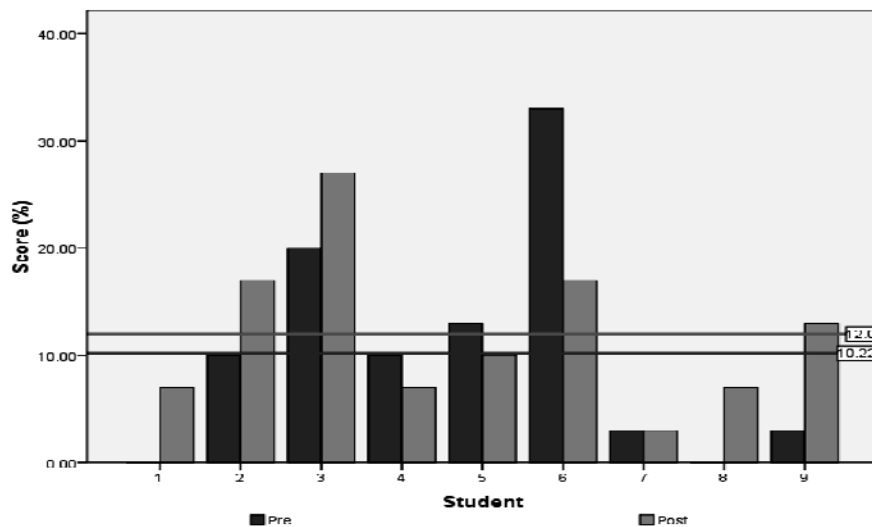


Figure 12. Nonsense words fluency percentages and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed better on the Nonsense Word Fluency posttest (Median = 10.00) compared to the Nonsense

Word Fluency pretest (Median = 10.00). The results indicated that the students did not score significantly higher on the posttest, $z = -99$, $p = .32$. The mean of ranks in favor of the pretest was 3.67, while the mean of the ranks in favor of the posttest was 5.00. Results of the Nonsense Word Fluency posttest indicated that students may have had difficulty in quickly identifying nonsense words. Given students' performance on the Sight Words Accuracy, Sight Words Fluency and Nonsense Word Accuracy subtests of the SPI, evidence does not seem to suggest that students lacked basic decoding skills, rather time may have been needed to perfect those skills.

The SPI Fluency Scores represent the total number of fluent responses in four of the five SPI subtests: Sight Words Accuracy, Sight Words Fluency, Nonsense Words Accuracy, and Nonsense Words Fluency. Letter Name Accuracy was not included as part of the total fluency score of the SPI Fluency Scores test. Figure 13 displays both pre- and posttest scores by percentage for each student. Results of the SPI Fluency Scores were used for initial placement into the *System 44* program. As students progressed through the *System 44* program, their reading achievement increased, and thus their status in the program increased. Work was adjusted to meet the students' levels of progression. Pretest means scores were 5% compared to posttest scores of 7%. At posttest, all of the students except one had increased their SPI Fluency Scores and had thus improved their acquisition of early reading skills.

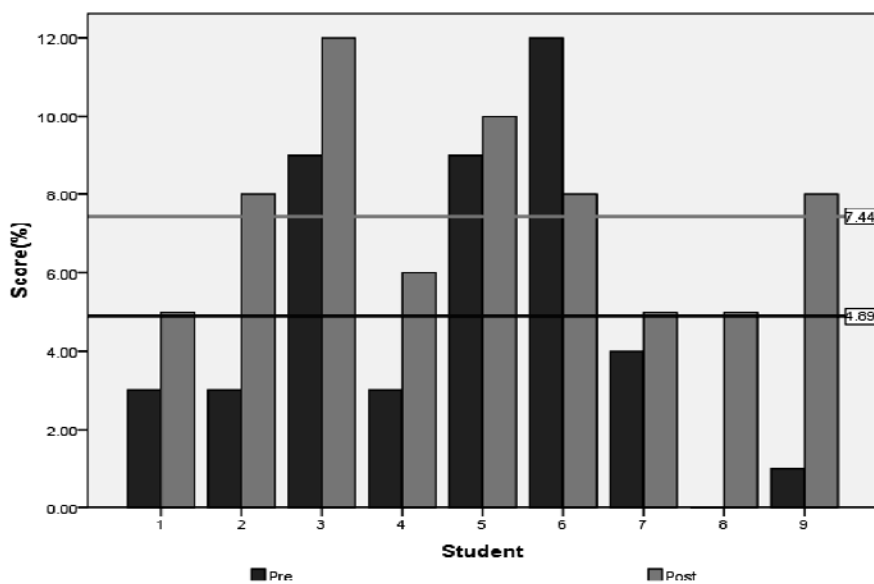


Figure 13. Scholastic Phonics Inventory (SPI) fluency scores and class mean scores.

A Wilcoxon test was conducted to evaluate whether the students performed better on the SPI Fluency Scores posttest (Median = 8.0) compared to the SPI Fluency Scores pretest (Median = 3.00). The results indicated that the students did score significantly higher on the posttest, $z = -1.96$, $p = .04$. The mean of ranks in favor of pretest was 4.88, while the mean of the ranks in favor of posttest was 6.00. Based on these findings, the ESOL Level 1 students made significant gains in decoding and identifying words accurately with fluency in their responses. Phonological decoding at the word level is a foundation upon which fluent reading is based (Hart & Risley, 1995). While this process takes longer for most adolescent ELLs (Cummins, 2001), The ESOL Level 1 students had increased their acquisition of early reading skills to the extent that students had begun to achieve the foundational skills needed in learning to read. Table 15 summarizes descriptive statistics for all of the SPI subtests.

Table 15

Pre- and Postintervention Means and Standard Deviations for Students' Scores on the Scholastic Phonics Inventory (SPI) Subtests

SPI Test	Number	Pretest	Posttest	Gain
Letter Names Accuracy	9	80.89 (26.32)	97.00 (6.36)	16.11
Sight Words Accuracy	9	42.56 (14.52)	60.11 (8.39)	17.55*
Sight Words Fluency	9	6.00 (6.26)	12.78 (4.11)	6.78*
Nonsense Words Accuracy	9	47.44 (16.90)	66.33 (6.14)	18.89*
Nonsense Words Fluency	9	10.22 (10.81)	12.00 (7.38)	1.78
SPI Fluency	9	4.89 (4.10)	7.44 (2.46)	2.55*

Note. * $p < .05$.

The pre- and postintervention quantitative data show that the ESOL Level 1 class made significant gains in their acquisition of early reading skills and progress toward the pedagogical goal in the areas of sight words accuracy and fluency and nonsense words accuracy. Phonological decoding at the word level is a critical component in the acquisition of early reading skills upon which fluent single word reading and fluent reading is built (Perfetti, 2007). While students made gains in each of these areas, significance was not achieved in nonsense words fluency. This finding is consistent with Cummins' (2001) theory of language development that suggests five to seven years as a minimal time for ELLs to progress toward language mastery. Because the Nonsense Words Fluency subtest required both accuracy and speed in decoding nonsense words, students' speed in decoding may have been an inhibiting factor in decoding nonsense

words. Because students progressed in their ability to accurately decode nonsense words as evidenced in the Nonsense Words Accuracy and Sight Words Fluency subtests, they may have had an extensive sight word vocabulary but lacked sufficient practice time to build basic decoding skills as most had studied English for only 14 weeks. It is important to note that as a group, significant gains in the overall Scholastic Phonics Inventory (SPI) Fluency subtest were made by the ESOL Level 1 students, and this finding supports the pedagogical goal of improvement in the acquisition of early reading skills.

At the conclusion of the postassessment during Phase 5 of the study, Ms. Adams and I met to discuss the instructional intervention. When asked if the intervention made a difference in the reading achievement of the ESOL Level 1 students, Ms. Adams was quick to respond:

I really think the students have made great progress since September. They came into the class with practically no oral language ability in English, and all of them have grown significantly in their ability to communicate in English. With respect to reading, I've seen good progress in decoding since September, but they still have a long way to go before they understand everything they read. This, I think is due to lack of vocabulary, but we're working on that; and it will take time for them to advance with comprehension. I wish I could have helped Marisol more, but she was absent so much and wouldn't open up. I'm not sure what's going on with her (December 21, 2011).

Ms. Adams and I also discussed the difficulty in the implementation of the instructional intervention, and she noted that the lack of a curriculum made planning for

the intervention troublesome. She was not always sure how the WIDA standards aligned to her daily activities and explained that she wanted to do what was best for students, but the planning was cumbersome and time consuming. In the tedious process of daily planning, Ms. Adams admitted that she may have overlooked Marisol's frequent absences and the impact that may have had on Marisol's daily class performance when she did attend school.

Ms. Adams explained that she had made a request to her supervisor to write curriculum for the ESOL Level 1 class during the following summer, and it appeared likely that this would happen. No other difficulties related to the intervention implementation were reported by Ms. Adams, who planned to continue to instruct the class utilizing guided reading, cooperative learning, and CAI groups for the remainder of the school year. As well, Ms. Adams noted that she believed that during the following school year, when her students advanced to the ESOL Level 2 class, continuation of the instructional model would be beneficial to the students. She admitted that she was not sure how that could be possible without the technology component included in the model.

At postintervention and the conclusion of this formative study during Phase 5, postassessment, Ms. Adams and I met with students during our final class together. Awarded to each participant was a certificate of recognition for outstanding achievement in reading (see Appendix H). Growth for all students had been noted although more for some than others.

Summary

In this chapter, I have reported the results of the qualitative and quantitative data to answer research questions one and two as described in Chapter 1, during Phases one through five for conducting formative experiments as described by Reinking and Bradley (2008). The qualitative data suggest that four key themes enhanced the intervention's effectiveness. These include: Working in small groups may play an important role in the ability of ELLs to facilitate understanding through academic problem solving; participation in a variety of groups coordinated for skill instruction may enhance ELLs' improvement in the acquisition of early reading skills and vocabulary development; creating a classroom environment that encourages oral language interaction may enhance ELLs' movement from passive to active learning; and CAI groups for early reading instruction may enhance ELLs' engagement in class work.

The quantitative data suggest that the ESOL Level 1 class made significant gains in their reading achievement and progress toward the pedagogical goal in their final SPI fluency test scores. Significance was achieved in the individual subtests of sight word accuracy, sight word fluency and nonsense word accuracy and in the overall SPI Fluency test. It was noted that because the subtest required both accuracy and speed in decoding nonsense words, students' speed in decoding may have been an inhibiting factor in decoding nonsense words. Because students progressed in their ability to accurately decode nonsense words as evidenced in nonsense word accuracy, the fourth subtest of the SPI, they may have had an extensive sight word vocabulary but lacked sufficient practice time to build basic decoding skills.

This chapter also discussed factors that inhibited progress toward the pedagogical goal. Two key factors emerged: A lack of predetermined curriculum for the ESOL Level 1 class and a lack of effective regrouping for the ESOL Level 1 class. Modifications to the intervention based on the inhibiting factors were made and included the replacement of the original curriculum used to teach the class and a reconfiguration of student grouping that included regrouping of all students in the class according to their outgoing personality traits.

In Chapter 5, I will present data that addresses the final two research questions presented in Chapter 1 through a description of the unanticipated effects that the intervention produced and a description of the changes in the instructional environment that resulted from the intervention. I will also discuss limitations of the study and provide future directions to extend and replicate the study.

5. DISCUSSION

In this final chapter, I will summarize the major findings of this formative study and present data that addresses the final two research questions:

1. What unanticipated positive or negative effects does the intervention produce?
2. What changes in the instructional environment result from the intervention?

I will also discuss the recommendations for educational practice and policy, and implications for future research. I conclude the chapter with final thoughts.

Summary of Findings

At the conclusion of Phase 5 of this formative study, students' progress toward the pedagogical goal was strong, and there is evidence that the instructional intervention had impacted English language learners' (ELLs') acquisition of early reading skills. Evidence of this progress from qualitative and quantitative data analysis is reviewed below.

First, working in small groups allowed the students to solve their own academic problems through interaction amongst themselves as they actively provided support to each other in their native language and in English. This method is consistent with Avalos' (2003) view that whole group models are inadequate in meeting the needs of ELLs. Facilitation of student understanding in small groups progressed through scaffolding, clarification, and extended explanations. This in turn allowed the teacher to work in an uninterrupted and continuous manner with small groups of students. A positive benefit of

this method was that the teacher was able to provide daily, targeted instruction to all of the students in specific areas of need. Furthermore, small group work allowed students to engage in what appeared to be a form of peer tutoring. Working in groups, students checked their own understanding through decomposition and summarization of information for themselves and each other. When students did not understand, they relied on each other for help because this was expected and permitted by the teacher in all groups.

Second, participating in a variety of groups that were coordinated for skill instruction appeared to enhance ELLs' early reading skills and vocabulary development. Teaching phonemic awareness and phonics, the beginning components of early reading, and adding daily vocabulary instruction were ongoing instructional processes well supported in the research (August & Shanahan, 2006; Genesee et al., 2006; Goldenberg, 2008) utilized by the teacher. This was conducted during guided reading groups and was reinforced within the CAI groups as students worked in the *System 44* program and in cooperative groups as students worked with each other. For example, if the focus for instruction was related to sight word recognition, each of the three groups would require work and study related to the same sight words. As this occurred, ELLs had the opportunity to make connections between subject matter within groups because the focus for instruction remained constant.

Third, review of the qualitative data also suggests that creating a classroom environment that encouraged oral language interaction enhanced these students' progression from passive to active learning. Throughout the intervention implementation,

students worked in groups to produce meaningful output with one another (Kagen, 1995). Working in groups provided students the opportunity to discuss and share information related to assigned tasks. Students were able to produce meaning after receiving input from members of the group throughout the class period.

Through oral language exchange, students discussed and shared their language knowledge. Initially, it seemed that students improved their fundamental knowledge of English while they conversed in Spanish. Later it appeared that during the intervention implementation, concepts related to specific content were processed in their native language through oral language exchange in Spanish as they developed a deeper understanding of the concepts. In this way, it seemed that students progressed toward relating concepts between subject matter through definition and use of words in English. Use of classroom dictionaries, white boards and letter manipulatives to clarify understanding became standard methods students used to actively clarify meaning for themselves and each other through oral language exchange. Throughout the intervention implementation I observed students working in this manner toward active involvement in their own learning.

Furthermore, to build ELLs conversational fluency and discrete language skills, cooperative groups coordinated to the skills introduced in guided reading groups provided the opportunity for students to carry on daily conversation in face-to-face situations practicing the use of simple grammatical constructions and the use of high frequency words. This is consistent with Cummins' (2001) theory of language development for ELLs that suggests the need for oral language exchange within the

classroom as well as the idea that students must be given the opportunity to express themselves through oral language exchange (Krashen, 1981) if they are to be successful in learning how to read.

Moreover, the use of CAI for early reading skills instruction reinforcement enhanced ELLs' engagement in class work and progress toward the pedagogical goal. While evidence toward the explicit positive benefits of technology for ELLs may be yet inconclusive (Short & Fitzsimmons, 2007), the students were attracted to and worked with the CAI reading program daily as evidenced in the amount of time recorded spent on the computer and my daily observation of intense concentration during CAI. Never throughout the 12-week intervention implementation, were students observed working outside the range of the *System 44* program or participatory in conversations unrelated to CAI work. When participating in the CAI group, it seemed that students were deeply engaged with their work.

The quantitative data collected at pre- and postintervention implementation indicated that all students had made gains in the areas of sight words accuracy and fluency and nonsense words accuracy. While students made gains in each of these areas, significance was not achieved in nonsense words fluency. This finding is supported by Cummins' (2001) theory of language development that suggests five to seven years as a minimal time for ELLs to progress toward language mastery. Because the Nonsense Words Fluency subtest required both accuracy and speed in decoding nonsense words, students' speed in decoding may have been an inhibiting factor in decoding nonsense words. Because students progressed in their ability to accurately decode nonsense words

as evidenced in the Nonsense Words Accuracy and Sight Words Fluency subtests, they may have had an extensive sight word vocabulary but lacked sufficient practice time to build basic decoding skills as most had studied English for only 14 weeks. It is important to note that as a group, significant gains in the overall Scholastic Phonics Inventory (SPI) Fluency subtest were made by the ESOL Level 1 students, and this finding supports the pedagogical goal.

Results from qualitative and quantitative data are significant for several reasons. First and most broadly, the results of this small scale study are consistent with the theory of social constructivism (Dewey, 1963; Piaget, 1932; Vygotsky, 1978) one guiding theory of this study. The instructional intervention relied on the social interactions of the students as they worked cooperatively in small groups with each other and with the teacher. As Gibson (1966) suggested, the students were not simply processors of information, but rather became actively involved in seeking information in order to make sense of learning to read in English. The contributions that the students actively made toward their own learning through participation in multiconfigured groups guided them toward achievement of the pedagogical goal.

Second, and more specifically, progress toward the pedagogical goal was made in varying degrees of early reading skill development through an instructional model that included components that are independently well supported in the findings of previous research. Specifically, cooperative learning has been supported by Johnson and Johnson (1989), Slavin (1995), and Vaughan (2002) and by a large body of research across different grade levels and subject areas although it has been significantly under-

researched as a method to examine the effects of cooperative learning on high school ELLs learning to read within the context of a multiconfigured reading model as described in this study.

While the positive benefits of guided reading as an instructional framework for children at the elementary have been reported (Clay, 1985; Fountas & Pinnell, 1996; Shanahan & Barr, 1995; Wasik & Slavin, 1993), few studies have shown guided reading as a method used to teach high school ELLs early reading skills in English within the context of reading model as described in this study. Daily work in guided reading groups allowed students to practice oral language and skill development under the close supervision of the teacher who worked to scaffold understanding for each student's individual needs. Further, students were able to explore the range of uses of particular words through the brainstorming process that the small group format provided. As this occurred, students sought the confirmation of the teacher who was always on hand to provide appropriate responses and adjust the difficulty level for learning of every student accordingly. The findings of this study may contribute to the research evidence related to the positive benefits of guided reading groups at the high school level for ELL classrooms.

Additionally, only recently have CAI reading programs begun to show evidence of positively impacting reading achievement (Kulik, 2003b; Soe et al., 2000), although few of these studies focused on secondary reading for high school ELLs. While this study showed evidence that the students participated in targeted skill instruction provided by CAI, establishing causal relationships was not the purpose of this study. One thing

however, seemed to be evident. To some degree, the use of CAI appeared to serve as a vehicle that encouraged students to participate in learning and provided a research-based pedagogical approach that promoted literacy participation. Further, there is research to support the teaching of technology-based literacy skills as support for literacy development for ELLs (Short & Fitzsimmons, 2007). Additionally, incorporating computer-based reading programs into instruction has been thought to positively impact student engagement (Kim & Kamil, 2004).

And finally, while research evidence supports multidimensional reading programs for middle and high school students (Slavin, Cheung, et al., 2008), no research to date has been conducted for high school ELLs learning to read using an integrated model and formative design as described to teach early reading skills. This formative study may add to and extend the existing body of research on multidimensional early reading programs for high school ELLs.

In summary, it is important to note that the intervention's relative success, as measured by the analysis of qualitative and quantitative data, was examined through its three interdependent components. These components were interwoven to create this intervention; therefore the results are dependent upon each other. While previous research supports each of these components independently outside the context of an ESOL Level 1 high school classroom, it is possible that this study has the potential to begin to create a body of evidence new to the field of research.

Unanticipated Effects Produced by the Intervention

According to Reinking and Bradley (2008), the intervention may produce

unanticipated effects:

Given the complexity of educational contexts and instructional practice, implementing an instructional intervention will invariably produce unanticipated effects and outcomes, some of which may be neither directly related to the intervention's pedagogical goal nor anticipated by whatever theory guides the instructional intervention. (p. 51)

There was one positive yet unanticipated effects of the study that extended beyond postintervention assessment. As I was walking through Isaac Newton High School in early February 2012, Jacquelin and Dariana came rushing toward me. Dariana addressed me first:

Dariana: Miss, Miss, we miss you. You should come back to our class and take notes.

Jacquelin: We liked you in the classroom to watch us work.

Shortly after this exchange, Jose and Rodrigo joined the group.

Jose: Miss, why don't you visit the class?

Rodrigo: She doesn't want to bring us candy (January 18, 2012).

This short exchange suggests that students continued to progress in their oral language development well after the intervention had ended. Using whole sentences in grammatically correct form was not often observed among these students during the intervention implementation. Their ability to spontaneously converse correctly in English was surprising outside of the classroom context. That the pedagogical goal had been met

and transferred five weeks across time outside the parameters of the classroom was unexpected.

There was also one unanticipated negative effect that the intervention produced. Once during my observations, Ms. Adams was absent from class, and on this occasion, a substitute was assigned to teach the class. Ms. Adams had created detailed lesson plans for the substitute to follow that included skill worksheets for the students to complete in cooperative groups and independent work in the CAI group. The guided reading group had been suspended for the class session.

When the class began, the substitute told the students that he did not speak Spanish, and that they could do what they usually did in groups. No effort on his part to further convey directions or speak to any member of the class was made. As might be expected, with the exception of Chong and Jose who worked at the computers, the students socialized with each other throughout the period.

While this incident was observed on only one occasion, Ms. Adams was absent from teaching the ESOL Level 1 students on five occasions throughout the intervention implementation due to illness and professional development responsibilities. Had the same substitute been assigned to Ms. Adams' class during each of these absences, and had the substitute demonstrated similar behavior, the ESOL Level 1 students may have lost one week of instruction.

I recount this incident as an unanticipated negative effect because the substitute made little effort to execute lesson plans left by the teacher. This incident is noteworthy when considering the 60% overall high school dropout rate for ELLs as reported in

Chapter 1 (Balfanz & Legters, 2004; Fergus, 2009; Greene & Winters, 2006; National Center for Educational Statistics, 2011). Furthermore, ELLs who are expected to develop academic literacy skills in English while still developing oral English proficiency are at heightened risk for low literacy achievement. Given these alarming statistics, it would seem important that every member of the school community work daily toward maximizing instructional practice efforts that work toward building positive school experiences and continued achievement for ELLs.

Changes in the Instructional Environment

Reinking and Bradley (2008) explain the inclusion of documenting changes in the instructional environment in a formative study through the potential of the intervention: “The interventions studied are often selected with an eye toward positively transforming educational perspectives or the cultural milieu of the classroom beyond simply accomplishing a narrow pedagogical goal” (p. 77).

In Ms. Adams’ class, change in the environment was demonstrated in several ways. During Phase 2 of the study, my observational notes recorded the classroom context initially as teacher-directed with little oral interaction between the teacher and the students. Student-to-student interaction during class at this time was also minimal. Students occasionally spoke to each other in Spanish only, and my field notes describe the class as courteous and respectful although “mechanical in performance of tasks” (September 14, 2011).

By late September 2011, the students had transformed in their use of oral language and interactions with Ms. Adams and with each other. It seemed as though the

class had been revitalized as evidence of conversation, cooperation, collaboration, and motivation to learn permeated the classroom environment. The transformation of the classroom context was notable as was reflected in my field notes:

There is a great deal of talking going on today. Students are talking in the guided reading group with the teacher and in the cooperative group with each other.

They're even talking at the computers, but everyone seems on task. It looks like productive talk. Students are smiling and helping each other; they appear happy (October 12, 2011).

As noted in Chapter 3, as students progressed in their reading skills during intervention implementation, so too did their ability to take responsibility for themselves as learners as well as their peers while they worked in the varied group configurations. Students became tutors for each other during cooperative groups and learned to solve their own problems through shared problem solving in both English and Spanish. Students became interpreters and emerged as leaders in guided reading groups as they worked daily to improve their vocabulary and oral language in learning to read in English. And students demonstrated independent motivation to pursue tasks during CAI groups as they consistently worked through the technology software. These events were in sharp contrast to the quiet environment observed during Phase 2 of the study as reflected in my field notes of September 8, 2011: "Students have been quietly working for nearly an hour. No one has said a word, but everyone seems to be on task."

In this manner, the instructional intervention is well supported by Piaget's (2000) social constructivist theory upon which this study was in part founded: "Knowledge . . .

arises from interactions between the subject and the objects. It is only through action that these relations originate" (p. 34). This theory creates an image of children as active thinkers and processors rather than passive recipients as seen in Phase 2 of the study.

As these events were taking place, so too may Ms. Adams have experienced a transformation in her own teaching practice which was reflected in the instructional environment as she became a facilitator of learning for her students. Consistent with Dewey (1924, 1963) and Piaget (1932) who were skeptical of methods that offered whole-class instruction, competitive examinations and individual homework, Ms. Adams seemed to work to create an environment for learning that promoted cooperation and active learning as essential components of the learning process. Her support of the instructional intervention relied on the daily, active participation of all group members for intellectual development as they worked in the various groups. My field notes of December 21, 2011 reflect Ms. Adams' summary of the 14-week study:

Athene: Do you think the instructional model is realistic to use in the classroom?

Ms. Adams: Oh, yes I do. I think I really understand what it means to guide the students and let them figure things out with each other, but that was hard because they are so low. I wasn't sure how they could help each other. The part that I struggled with mostly was the planning and the students talking, but I got to understand the talking—the need for it. I really think the planning was hard because I didn't have lessons to rely on; this was all new to me.

Athene: Do you think a teacher with 5 or 10 years of experience would have felt the same way?

Ms. Adams: Umm. Maybe. Not really. This kind of teaching is more about how to deliver a lesson—like the questioning and building background knowledge. I knew I couldn't just pick up a book and read it with the students. In the beginning that was hard and it's still hard because every book is new. Next year will be easier. I think this would be the same for all teachers who don't teach with groups.

As Ms. Adams spoke, I believe she understood how her role as a teacher might be characterized as that of a facilitator for learning. It appears that she understood that socialization was the foundation of cognitive development (Vygotsky, 1978) and that a learner's development first takes place on the social level (between people) before it moves on to the individual level (inside an individual) (p. 57) as she worked daily with her students. As Vygotsky defined scaffolding instruction as the "role of teachers and others in supporting the learner's development and providing support structures to get to that next stage or level" (Raymond, 2000), it is possible too that Ms. Adams understood the need for scaffolding of knowledge through building background knowledge and questioning techniques as she was consistently engaged students in the use of these strategies. Through her guidance, the learning environment of the classroom had changed significantly over the course of the 14-week study.

The results of this study demonstrate why formative experiments are useful and why guidelines for formative experiments may be developed. The instructional

intervention applied in this study can be separated from its context because the very factors that enhanced the intervention were explicitly outlined. In this way, formative experiments have the potential to be a useful component of education research.

Limitations

The results of this study must be interpreted in light of its limitations. There are many limitations to this study that should be taken into account when considering its results. First, this study was conducted in only one classroom, and this makes it difficult to generalize the findings of the study to classrooms within different contexts and with different characteristics. Further, the small number of participants in the study, though perhaps easier to facilitate, makes it difficult to generalize the findings of the study. A larger number of participants might lead to results that could be generalized.

Limiting the study to only 14 weeks also constrained the research. Pre- and posttest data were collected on only one occasion at pretest and one occasion at posttest. This possibly limits the availability of quantitative data that could shed light on the effects of the model over an extended period of time.

Conducting the study at midyear rather than at the outset of the school year may have provided a more accurate description of the classroom context as students would have had time to acculturate to the school, the classroom, and to the teacher. Thus changes in the instructional environment may have been more reliable if the students' behavior and interactions with each other and the teacher had been more firmly established.

A further limitation of the study included my dual role as the district literacy specialist and researcher for this study. At the outset of the study, the teacher expressed surprise and some concern that I would be observing students in her classroom during the first semester of the school year. She requested that I conduct observations of other ESOL classrooms in what I believe was an effort to confirm that my observation of her students alone was not an evaluation of her performance. I believe that she reasoned through observation of additional ESOL classrooms, my presence would not draw attention to her as might be noted by other faculty. And while this took place, the degree to which the teacher's performance in the classroom and thus the students' advancement toward the pedagogical goal, was impacted by my presence in the classroom may never be completely known. I hope that her later response prior to the study indicating that she had no reservations about my presence in the classroom was truthful and did not impose unnecessary stress throughout the 14-week study.

The lack of a curriculum for the ESOL Level 1 class was an additional limitation presented in this study. Prior to modifications made to the intervention, Ms. Adams struggled daily to create lesson plans for guided reading and cooperative learning groups while attending to the daily demands of teaching and requirements for new teachers. Combined with the personal goal of working toward her ESOL certification, Ms. Adams often commented that she was overwhelmed. These limitations may have set parameters on the outcome of the study.

Despite these limitations, much can be learned from this formative study. Both the qualitative and quantitative data collected in this study serve to promote factors for future

researchers to consider while investigating the effects of a multiconfigured reading model on the acquisition of early reading skills for ELLs.

Recommendations

While researchers have begun to focus on effective literacy instruction for high school ELLs learning to read English, results from this research study have the potential to add to the growing body of evidence that suggests a number of specific areas that might benefit from the attention of local and state policymakers. Several recommendations from this study can be applied to broader contexts. The following presents recommendations for classroom practice, district, and state policy informed by this study.

This study poses several recommendations for both educational practitioners and school administrators when designing instruction for high school ELLs. These include the incorporation of a variety of small groups into classroom instruction, the establishment of clear guidelines regarding the effects of oral classroom dialogue, the inclusion of a curriculum guide for new teachers, and professional development related to ESOL education for substitute teachers. Each of these recommendations is addressed below.

Drawing heavily upon the work of Vygotsky (1978), social constructivism postulates that knowledge is constructed within a contextual framework grounded in the learner's social environment. Meaning has no relevance outside human beings interaction with each other and their environment. Small group work can easily be incorporated within the framework of most ESOL classrooms allowing students to maximize cognitive development through the process of cooperation with their peers and with the teacher.

Providing students the opportunity to work in groups is not a random process. School administrators can provide ongoing, high quality professional development opportunities on cooperative learning for teachers prior to the implementation of small groups within daily classroom instruction. The positive benefits of cooperative learning in which small groups of students work with each other are well documented in the research literature. Cooperative learning has been regarded as an effective teaching method in English as a Second Language (ESL) classrooms by educators across the world (Brown, 2007; Chien, 2004; Kagan, 1995).

As demonstrated in this study, daily class work and instruction for ELLs comprised the opportunity for students to converse in English, receive feedback from peers and learn from others while working in groups. As might be expected, during this process, students were actively engaged in oral language exchange. For ELLs and for most students, oral language is the foundation for learning to read and to comprehend what is read (Barnes, 1992). Furthermore, according to Snow et al. (1998), oral language and reading have a great deal in common. If the words in a text are to be recognized, it is because of the reader's oral language abilities (Cummins, 2001). Oral language development is necessary in the classroom in learning how to read and understand. For ELLs to be successful in the acquisition of early reading skills, students should be given the opportunity to express themselves socially and culturally (Krashen, 1981) through oral language exchange. Students learning English as a second language need opportunities to use their new language and to communicate with each other (Cummins, 2001). Given the abundant literature related to the positive benefits of oral language

exchange, particularly for ELLs, classroom practitioners and administrators might benefit from the awareness that classroom discourse is a positive outcome of good instruction. School administrators might not only endorse oral language exchange but also praise teachers who encourage the use of oral language exchange as a productive method for instruction among students.

No singular teaching strategy, curriculum or reading intervention designed for all students is likely to be effective for every high school ELL. It is for this reason that curricula for ELLs learning to read in English should be designed to allow students to work in diverse small groups that include cooperative learning, guided reading, and CAI in order to facilitate ELLs' understanding as they work with each other in academic problem solving. These groups should be coordinated for skill instruction based on the needs of the students and provide many opportunities for ELLs to engage in oral language interaction in their native language and in English. Finally, groupings of students should additionally consider pairing of ELLs according to their personality traits allowing more reticent students to work with more outgoing vocal students in order to attempt to maximize the learning of all students.

A third recommendation stemming from this formative experiment impacts school policy. This includes the support by the local district for a curriculum for teaching ESOL Level 1 students. As this study began, the classroom teacher was beginning her second year of teaching. Throughout the 14-week study, she was inundated with school meetings, training sessions, observations and required professional development as she pursued her Master's degree and endorsement in ESOL education. Combined with the

daily demands of planning and teaching, the teacher strove mightily daily to maintain a positive attitude and high quality instructional agenda. The most experienced teacher might have felt the extraneous pressures of teaching under similar circumstances. These pressures for new teachers can be alleviated if school administrators can begin to make allowances for new teachers by creating a reasonable timeline for introduction to the many requirements of new teachers. This is not to suggest that school initiatives are not worthy. Rather, mastery of teaching can be the primary objective for all teachers with a gradual introduction to secondary school requirements.

Throughout this formative study the classroom teacher sought to deliver high quality instruction utilizing a multiconfigured instructional model without the support of a curriculum. Modifications to the intervention were put in place to reduce the workload of the teacher in the absence of such a curriculum. Given in part to the work ethic and dedication of the teacher, all students made gains in their acquisition of early literacy skills, thus achievement of the pedagogical goal was realized. Had a curriculum been established prior to the intervention implementation, the teacher may have felt more confident as she began her second year of teaching.

A fourth recommendation stemming from the findings of this study relates to the professional development training that might benefit substitute teachers who are working in schools with a significant population of ELLs. Substitute teachers may benefit from professional development that emphasizes the unique educational needs and circumstances in which ELLs often face in the United States (Vernez & Abrahamse, 1996). Professional development that focuses on these complex challenges may better

assist substitutes who are working with ELLs. This might include an understanding that ELLs often leave behind a familiar language, culture, and community social system before entering the American educational system (James, 1997). In addition, such training might focus on the current literacy achievement of ELLs that reports that nearly all Hispanic eighth grade ELLs read at the basic or below basic level of proficiency in reading (NAEP, 2011). With this understanding, substitute teachers may become better informed and equipped to meet the needs of ELLs when working in schools and classrooms represented by ELLs.

A final recommendation appeals to the state policy makers to actively support bilingual instruction for ELLs who have been in the United States for one year or less. As noted previously, state regulations required that all instruction for ELLs be conducted in English. Despite the existing research that supports the idea that ELLs who retain their bilingual skills are more academically successful (Cummins, 2001), policy makers have been reluctant to allow bilingual education as ELLs continue to be among the lowest achieving students in the nation (NAEP, 2011). Without substantial research to support the belief, bilingualism has often been regarded as an obstacle to societal integration of new immigrant populations however, students who study and learn in two languages and become fully proficient and literate in their home language *and* in English can enjoy the values of two linguistic systems and two cultural traditions that complement and enhance each other (Krashen, 1985).

Future Research

This study was designed to help fill a void in the research literature. Up to this point, an exploration of the effect of such a model for reading that incorporates cooperative learning groups, guided reading groups, and CAI has not been available despite the prevalence of high school ELLs who are faced with the challenges of learning to read in English. While there is considerable research evidence and literature regarding the teaching of reading to elementary-aged ELLs, there is less evidence to support the beginning reading instruction for high school students learning to read English. Based on these findings, it seems reasonable to suggest that more research is needed in this area. Two areas of future research based on the findings of this study are proposed below.

The findings of this research study validate the findings of previous research (Clay, 1985; Fountas & Pinnell, 1996; Johnson & Johnson, 1989; Kulik, 2003b; Shanahan & Barr, 1995; Slavin, 1995; Soe et al., 2000; Vaughan, 2002; Wasik & Slavin, 1993) and extend those independent findings into one reading model embedded in the theory of social constructivism and language development that has the potential to positively impact the acquisition of early reading skills for high school ELLs. This information might be used to further investigate interventions aimed at extending and expanding the multiconfigured model of instruction developed for this study. This might include all ESOL teachers within ESOL resource classes and content areas that teach ELLs throughout their high school years not only in their beginning literacy instruction, but in academic subjects including math, science and social studies. This can be studied through a research agenda that explores the implementation of a multiconfigured model

of instruction that relies on the incorporation of small guided learning groups, cooperative groups and CAI. While this might require significant professional development and curriculum development and may be viewed as an aggressive approach, it may be an important step in assisting ELLs toward successful achievement and graduation from high school.

As previously noted, the intervention's relative success was examined through its three interdependent components. In designing future reading interventions for high school ELLs who are learning to read English, educational practitioners might consider a similar combination of key elements of the structures presented in this study as part of classroom instruction. This might include systematic, ongoing, and daily instruction that includes small group work with the teacher that is coordinated to skill work or content related work on the computer. These structures might be reinforced in cooperative groups that allow students to assure the success of all group members by working together with opportunity to express themselves orally. Because each of the structures in this study were well supported independently in the existing literature through an examination of theory or practice, it seems likely that their inclusion with most content in most classrooms might yield positive learning outcomes for high school ELLs. Future research that examines instructional interventions that are well supported in the research literature through theory and practice might be examined outside the parameters of the combination of structures selected for this study. Specifically, future research might examine a combination of different instructional structures supported by theory and practice proven

to work independently and combined to possibly yield maximum effect for student reading achievement.

Further, the methodology of formative design was selected for this investigation. While formative experiments have been used by many researchers in the field of literacy (Baumann et al., 2007; Fisher et al., 2009; Ivey & Broaddus, 2007; Jiménez, 1997; Neuman, 1999; Palinscar et al., 2001; Reinking & Watkins, 2000; Taboada & Rutherford, 2011), no previous formative studies have examined the acquisition of early literacy skills among high school ELLs. This study has the potential to add to the existing body of formative design studies in the field of literacy.

While formative experiments do not have one specific protocol or set of procedures that must be followed (Reinking & Bradley, 2008), this study outlined a framework that included the refinement of an instructional method through modifications of the design. This was conducted in an iterative approach as changes to the intervention were expected outcomes of the design. Researchers might more effectively achieve a desired goal if changes can be made during the course of an intervention rather than recording irregularities after a study is completed (Reeves et al., 2005). Future research might benefit from the formative design model used in this study and the modifications made that were based on the intervention's effectiveness rather than designing new studies that test the effectiveness of the intervention prior to modifications made in light of inhibiting factors. In this way, future formative studies might be beneficial in the field of research.

From this perspective, high school ELLs may begin to show greater success in school and ultimately in college and the work place. The need for future research in this area appears warranted and may be the answer to enabling ELLs to find success not only in school but perhaps equally significant, as educated and contributing members of society.


Concluding Thoughts

The purpose of this study was to investigate the acquisition of early reading skills for ELL high school students beginning to read English utilizing a formative design methodology. It is my hope that the study provides a framework for others interested in learning how such a model might improve the acquisition of early reading skills of high school ELLs. I clearly remember the voices of the students recounting their past histories as the study began that included reasons for emigrating to the United States. In all cases, the prevailing theme focused on finding a better way of life that included their own education. Toward that end, the ELLs who participated in this study worked relentlessly to learn to read English. Their teacher too contributed to the process as she strove daily to facilitate the learning of each student and the implementation of the reading intervention.

Success for the students in this study was achieved through small group work in guided reading, cooperative learning and CAI groups. It is my hope that the research presented in this study continues to the extent that results for ELLs can be seen in high graduation rates and fulfilled dreams as productive and contributing members of American society.

APPENDIX A

GEORGE MASON UNIVERSITY HUMAN SUBJECTS REVIEW BOARD APPROVAL

	<p>Office of Research Subject Protections Research 1 Building 4400 University Drive, MS 4C6, Fairfax, Virginia 22030 Phone: 703-993-4121; Fax: 703-993-9590</p>
<p>TO: Seth Parsons, College of Education and Human Development</p>	
<p>FROM: Keith R. Bushey <i>KRB</i> Chief of Staff, Office of Research</p>	
<p>TITLE: An Investigation of the Effects of an Instruction Reading Model on Student Motivation and Achievement for High School English Language Learners Beginning to Read English</p>	
<hr/>	
<p>PROTOCOL NO.: 7582 Research Category: Doctoral Dissertation</p>	
<p>DATE: July 19, 2011</p>	
<p>CC: Athene Bell, College of Education and Human Development</p>	
<p>Under George Mason University (GMU) procedures, this project was determined to be exempt by the GMU Human Subjects Review Board (HSRB) since it falls under DHHS Exempt Category 1, research conducted in an educational setting that will assess the effectiveness of educational materials and practices.</p>	
<p>You may proceed with data collection. Please note that any modification in your protocol must be submitted to the Office of Research Subject Protections for review and approval prior to implementation. Any unanticipated problems involving risks to participants or others, including problems regarding data confidentiality must be reported to the GMU Office of Research Subject Protections.</p>	
<p>GMU is bound by the ethical principles and guidelines for the protection of human subjects in research contained in <u>The Belmont Report</u>. Even though your data collection procedures are exempt from further review by the GMU HSRB, GMU expects you to conduct your research according to the professional standards in your discipline and the ethical guidelines mandated by federal regulations.</p>	
<p>Thank you for cooperating with the University by submitting this protocol for review. Please call me at 703/993-3088 if you have any questions.</p>	

APPENDIX B

SCHOOL DISTRICT'S PERMISSION TO CONDUCT RESEARCH



June 22, 2011

Mrs. Athene Bell
District Literacy Specialist
[Redacted]
Doctoral Candidate
George Mason University
Fairfax, VA 22030-4444

Dear Ms. Bell,

[Redacted] supports your doctoral work at George Mason University and your request to conduct your dissertation research, *An Investigation of the Effects of an Instructional Reading Model on Student Motivation and Achievement for High School English Language Learners Beginning to Read English*. I am aware that this project will involve English Speakers of Other Language Students (ESOL) in the ESOL Level 1 class at [Redacted] over a 12 week period from September through mid December during the fall 2011 school year. Since you indicate that you will be engaging students in your study, preliminary approval to move forward is granted. Once you have your IRB approval from GMU, I will need to submit your request to the School Board for final approval. I do not anticipate any problems in gaining this approval. This is a requirement of our division if students are to be included directly in any study.

I understand that the research study seeks to integrate into one reading model those evidence based practices of successful reading programs that are intended to enhance the motivation and reading achievement of English Speakers of Other Languages (ESOL) high school students. In addition, I understand that the proposed study is based on the integration of Robert Slavin's model of cooperative learning, Marie Clay's theory of guided reading, and theories of language acquisition for the use of the *System 44* computer assisted instruction (CAI) reading system currently being implemented in our Level 1 ESOL program at [Redacted].

I am aware that data on reading development and achievement will be collected through use of the Scholastic Phonics Inventory (SPI) in September and December 2011. I am also aware that this is a formative design study and once final approval by the School Board is gained that data will be collected through student interviews and observations to incorporate the input of the students, thus identifying the strengths and areas in need of improvement in order to address the unique learning needs of secondary students acquiring a new language.

I fully recognize the potential impact of this research and am delighted that you have chosen this topic for your research study within [Redacted]. The division is committed to the improvement of ESOL students' beginning reading skills, and we look forward to making a contribution to the field of literacy and motivational studies for ESOL Level 1 students.

Sincerely, [Redacted]



APPENDIX C

TEACHER INTERVIEW QUESTIONS PROTOCOL

Initial Interview Preintervention

1. How do you feel about my being in your classroom?
2. How many years have you been teaching?
3. What is your past experience with guided reading groups?
4. What is your past experience with cooperative groups?
5. After receiving your training for *System 44*, do you feel that you are ready to begin the implementation of the program?
6. How do you feel that this research might impact your daily teaching routine?
7. Do you have any worries related to this study?
8. Do you think that this reading model will help your students' achievement in reading?

Weekly Interview Questions During the Intervention

1. What factors in the educational environment do you think enhance students' reading achievement?
2. What factors in the educational environment do you think inhibit students' reading achievement?

3. How do you think the intervention might be modified to more effectively impact students' reading achievement?
4. Has anything occurred in the educational environment that you did not expect to happen?

**Interview Questions
Postintervention**

1. Do you think the intervention made a difference in the reading achievement of your students?
2. Was this instructional model difficult to implement?
3. Will you continue to use this instructional model throughout the school year?
4. Do you think this instructional model is realistic to use in the classroom?

APPENDIX D

MOTIVATION TO READ CONVERSATIONAL INTERVIEW FOR ENGLISH LANGUAGE LEARNERS

E. G. Sturtevant and G. Kim, adapted from the *Adolescent Motivation to Read: Conversational Interview* by Pitcher et al. (2007)

To Interviewer:

Explain that you are interested in learning more about high school students' reading, writing, and language at school and also outside of school.

Background Information

1. Tell me a little about your background. (How old are you? What grade are you in?)
2. How long you have been at [your school]? Where did you go to elementary and middle school; in what country were you born?)?
3. Tell me a little about your family. Who lives in your home? What languages do your family members speak?
4. How long have you lived in the U.S. (probe for whether student has gone back and forth, e.g., living some of the time in the US and some in the home country).
5. What language do you normally speak at home? (probe for whether he/she speaks different languages to different people in the home, and/or if he/she is spoken to in a different language but responds in English).
6. Have you learned to read and write in the language spoken in your home (if not English)? If so, how did you learn to do *this*?
7. Can you think of some things that you read in English at home (probe for books, newspapers, computer, religious materials, magazines, other environmental print such as phone books).
8. Can you think of some things you read in your family's language at home (same probes).

9. How often do you watch TV? Do you watch in English or your home language? Can you understand both?
10. Do you, or does anyone in your home, look at web sites that are in your home language? Can you give an example?
11. Do you ever help your parents or other relatives translate important papers? If so, can you give an example? How did it go when you did this?
12. Did you ever go somewhere with your parents or other relatives to help them understand a conversation in English (for example, a bank, a school meeting). Can you give an example? How did it go?

Reading

To the Interviewer: Explain that we are interested in learning more about high school students' reading of story (narrative) and also nonfiction materials, like textbook, information on the Internet, or new papers (expository).

1. Tell me about the most interesting story or book you have read recently. Take a few minutes to think about it (wait time). Now, tell me about the book. Probe: What else can you tell me? Is there anything else? What language was the book written in?
2. How did you know or find out about this book? (Some possible responses: assigned, chosen, in school, out of school)
3. Why was this story interesting to you?

Informational Text

1. Interviewer, say this: "Often we read to find out or learn about something that interests us. I am going to ask you some questions about what you like to learn about from reading. Think about something important that you learned recently, not from your teacher and not from television, but from something you have read. What did you read about?"

(Wait time.) Tell me about what you learned. (Probe for language material was read in).

Probes: What else could you tell me? Is there anything else?

2. How did you know or find out about reading material on this?

(Some possible responses: assigned, chosen, in school, out of school)

3. Why was reading this important to you?

General Reading

1. Did you read anything at home yesterday? What? (Probe for language; probe also for various types of reading-for school, for fun, in a book, on the Internet, newspaper, magazine, etc.)
2. Do you have anything at school (desk, locker, backpack) today that you are reading? Tell me about it.
3. Do you have a favorite author? Can you tell me about him or her. Why is this author your favorite?
4. How do you think you could improve your own reading? Why? Do you try to do this?
5. Is it important to be a good reader in English? Why or why not?
6. Is it important to be a good reader in your home language? Why or why not?
7. Did someone ever do something that got you interested in reading a book, or something else? Who? What did he/she do?
8. Do you use computers sometimes? What do you do on a computer? How much time do you think you spend on a computer a day?

Literacy Motivation and School/Nonschool Literacies

9. Where do you use computers? At school? At home? Somewhere else? (probe for library, friend's house, parent's workplace, youth club, internet cafe).
10. Do you ever read something in a language other than English on the computer?

Emphasis: School Reading in Comparison to Home Reading

1. What types of reading do your teachers ask you to do this year in school? What is your favorite type? Why?
2. Do you have any classes where you can read materials in your home language? (Explain)
3. Do you have any classes in which your teacher reads to the class? Explain. How do you feel about this?
4. In what class do you feel the reading is the most difficult? What makes it difficult?
5. In what class is reading easiest? What makes it easy?

6. Do you ever talk with friends about reading? For example, some friends look at magazines or the Internet together. Other friends talk about books together. (If so, describe.)
7. Do you ever write at home, besides doing your homework? What do you write? Do you ever use the computer for writing at home? What language do you write in?
8. Do you ever read things with members of your family such as newspapers, magazines, religious materials, games? Explain.
9. Do you ever read to your brothers, sisters, or other family members? Explain.
10. Have you helped anyone else to learn to read or write? Explain.
11. What language do you use when you share reading materials with your family?
12. Do you belong to any clubs or organizations for which you read and write? Could you explain what kind of reading or writing it is? (Give example, sometimes people read religious materials at church, or scout manuals at Girl Scouts or Boy Scouts).
13. Do you ever work, or help others with work, where you read or write? For example, students sometimes help their parents in a job or family store (If yes, probe for detail).
14. What is your favorite class at school? Why?
15. What is your favorite thing to do outside of school? Why?

Future Goals/Plans

1. In the next year, what kinds of new materials would you like to learn to read or write? Why?
2. What sort of job would you like to have when you grow up? Why?
3. What sorts of reading and writing do you think you will need to use for that job?
4. Do you think it is useful for people to be able to speak and read and write in two languages? If so, explain how.
5. Do you think having two languages has ever caused a problem for you? Explain.
6. Is there anything that worries or concerns you about reading or writing? Please explain.

Thank you for helping us learn more about high school students!

APPENDIX E

STUDENT ASSENT FORM

An Investigation of the Effects of an Instructional Reading Model on Student Motivation and Achievement for High School English Language Learners Beginning to Read English

STUDENT ASSENT FORM

Dear Student,

Research Procedures

I am a doctoral student at George Mason University. I will be working in your ESOL Level 1 classroom during the fall semester of the 2011-12 school year. I will be trying to find better ways to teach students like you who are in high school and who are learning to speak and read English. I will be working on this project with your classroom ESOL Level 1 teacher. You will be learning English by working in small groups with your classmates and with your teacher. You will also be using the Scholastic *System 44* computer reading program. This means that you will learn to speak and to read English with the help of your classmates, the teacher and a computer reading program. You will take the *Scholastic Phonics Inventory* test at the beginning of the fall semester in September and at the end of the fall semester in December. This test will take about 15 minutes and will help determine how much you know about reading in English and much you have learned. While the Scholastic Phonics Inventory is part of the regular classroom procedure, I will use the test results for research purposes. The tests are not for a grade so it is OK if you make mistakes. I will also ask you some questions about your previous experience and attitude toward reading. This will also take about 15 minutes. Your answers to these questions will also be used for research purposes. If you agree, sometimes if I ask you questions, I may tape-record our conversations. Your answers will not be for a grade. Throughout the semester, I may also collect some of your class assignments or observe what is happening in your classroom. This will not be to grade you, but to see how you are learning and what can be done to teach you better. It is important that you come to school every day in order to participate in this project that will take place over the semester or 12-week period.

Risks

Nothing bad will happen to you if you take part in this study. However, some people may feel a little bit nervous when they have to take a test in reading and answer questions to a person who they do not know like me. There are no rewards or money paid for being in this study. But the things I find out may help teachers and other researchers learn more about how high school students learn to read.

Benefits

The benefit to you is that your ability to learn to speak, and to read and understand English may improve. The results of the project may help teachers, administrators and researchers understand the best methods for teaching reading to students of other languages.

Confidentiality

For purposes of research, the information collected in this project will be confidential. All students will be anonymous, and students' names will not be placed on any research data. Your name will be given a number and that number will be assigned to your reading test results. Through the use of an identification key, the researcher will be able to link reading test scores to you. Only the researcher will have access to the identification key. In addition, all demographic data (age, sex, country of origin) will be kept confidential in a similar manner, through the use of an identification key accessible to the researcher only.

Participation

Your participation in this study is voluntary, and you may withdraw at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you may be entitled. There are no costs to you.

Alternatives to Participation

All research will be conducted in the classroom. While the use of the computer based reading program is part of the regular school curriculum in which you must participate as part of the classroom requirement, you do not have to allow the release of test results or demographic data to the researcher. If this is the case, and you decide not to participate in the project, you will follow classroom protocol of participation in the reading program however, no student data will be released to the researcher.

Contact

This research is being conducted by Athene Bell, district literacy specialist for Manassas City Public Schools. Ms. Bell is a doctoral student at George Mason University and is working under the direction of Dr. Seth Parsons, College of Education and Human Development, Graduate School of Education at George Mason University. If you have any questions about this study, you can call me, Ms. Bell, at xxx xxx xxxx or Dr. Parsons who can be reached at xxx xxx xxxx. You may also contact the George Mason University

Office of Research Subject Protections at xxx xxx xxxx if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

Consent

I have read this form, and I give my permission to participate in this study.

Name (Print)

Name (Signature)

Date of Signature

APPENDIX F

PARENT INFORMED CONSENT FORM

An Investigation of the Effects of an Instructional Reading Model on Student Motivation and Achievement for High School English Language Learners Beginning to Read English

INFORMED CONSENT FORM: PARENT

Dear Parent,

Research Procedures

I am a doctoral student at George Mason University, and I am requesting your permission for your child to participate in research as part of my doctoral dissertation. I will be working in your child's ESOL Level 1 classroom during the fall semester of the 2011-12 school year. I will be trying to find better ways to teach students who are in high school and who are learning to speak and read English. I will be working on this project with your child's classroom ESOL Level 1 teacher. Your child will be learning English by working in small groups with classmates and with the teacher. Your child will also be using the Scholastic *System 44* computer reading program. This means that all students will learn to speak and to read English with the help of classmates, the teacher and a computer reading program. Research procedures will include observation of your child in all three groups: cooperative learning, guided reading and computer assisted instruction. This means that the entire 90-minute ESOL Level 1 class, or the instructional framework, will be included in the research for a 12-week period from September to December 2011. While the Scholastic *System 44* computer reading program is part of the regular classroom procedure, your child's participation with *System 44* will be included in the research to see how he/she learns English using *System 44*, small group instruction, and cooperative learning together.

Your child will take the *Scholastic Phonics Inventory* test at the beginning of the fall semester in September and at the end of the fall semester in December. These tests are part of the regular class procedure, and I will be using the test results for research purposes. The tests will take about 15 minutes to complete and will help determine how much your child knows about reading in English and much your child has learned. The tests are not for a grade so it is OK to make mistakes. I will also ask your child some questions about his/her previous experience and attitude toward reading. This will also

take about 15 minutes. Information from these questions will also be used for research purposes. If you agree, I may tape-record some of the conversations. Your child's answers will not be for a grade. Throughout the semester, I may collect some of your child's class assignments or observe what is happening in the classroom. This will not be to grade your child, but to see how your child is learning and what can be done to teach him/her better. It is important that your child come to school every day in order to participate in this project that will take place over the semester or 12-week period.

Risks

Nothing bad will happen to your child if he/she takes part in this study. However, some people may feel a little bit nervous when they have to take a test in reading and answer questions to a person who they do not know like me. There are no rewards or money paid for being in this study. The things I find out may help teachers and other researchers learn more about how high school students learn to read.

Benefits

The benefit to your child is that his/her ability to learn to speak and to read and understand English may improve. The results of the project may help teachers, administrators and researchers understand the best methods for teaching reading to students of other languages.

Confidentiality

For purposes of research, the information collected in this project will be confidential. All students will be anonymous. Students' names will not be placed on any research data. Your child's name will be given a number and that number will be assigned to his/her reading test results. Through the use of an identification key, the researcher will be able to link reading test scores to your child. Only the researcher will have access to the identification key. In addition, all demographic data (age, sex, country of origin) will be kept confidential. This will be through the use of an identification key accessible to me only.

Participation

Your child's participation in this study is voluntary. He/she may withdraw at any time and for any reason. If he/she decides not to participate or if he/she withdraws from the study, there is no penalty or loss of benefits to which your child may be entitled. There are no costs to your child.

Alternatives to Participation

All research will be conducted in the classroom. While the use of the computer based reading program is part of the regular school curriculum in which your child must participate as part of the classroom requirement, you do not have to allow the release of test results or demographic data to the researcher. If this is the case, and your child decides not to participate in the project, he/she will follow classroom protocol of

participation in the reading program however, no student data will be released to the researcher.

Contact

This research is being conducted by Athene Bell, district literacy specialist for Manassas City Public Schools. Ms. Bell is a doctoral student at George Mason University and will be working under the direction of Dr. Seth Parsons, College of Education and Human Development, Graduate School of Education at George Mason University. If you have any questions about this study, you can call me, Ms. Bell, at xxx xxx xxxx or Dr. Parsons who can be reached at xxx xxx xxxx. You may also contact the George Mason University Office of Research Subject Protections at xxx xxx xxxx if you have questions or comments regarding your child’s rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your child’s participation in this research.

Consent

I have read this form, and I give my permission for my child to participate in this study.

Name (Print)

Name (Signature)

Date of Signature

APPENDIX G

SCHOLASTIC, INC. PERMISSION


Scholastic Inc., Research & Validation
524 Broadway, 8th Floor, New York, NY 10012 (212) 965-7200
www.scholastic.com

Lindsay Weil
Director of Research
Research & Validation
(212) 965-7981
Lweil@scholastic.com

July 28, 2011

Dear Athene,

Scholastic is pleased to learn of your interest in evaluating the impact of System 44 on high school English Learners in [REDACTED]. As we discussed, Scholastic Phonics Inventory data is owned by [REDACTED] and you will need to ask permission directly from [REDACTED] for its retrieval and use.

As always, Scholastic is pleased to support the independent evaluation of the impact of System 44 across the country. We ask that the Scholastic name not be used in connection with your research project in any way that would imply endorsement by Scholastic.

If the foregoing is acceptable to you, I would appreciate if you would so indicate by signing below and returning one of the copies of this letter to me.

Regards,



Lindsay Weil

Agreed and accepted
This 28 day of July 2011.

Signature: 

APPENDIX H

STUDENT CERTIFICATE OF ACHIEVEMENT



REFERENCES

REFERENCES

- Abrami, P. C., Chambers, B., Lou, Y., Poulsen, C., & Spence, J. C. (2000). Within-class grouping: Evidence versus conjecture. *National Institute Economic Review*, 169, 105-108.
- Adams, I. W. (2000). Exploring the efficacy of cooperative/collaborative learning: The experience of college ESL teachers. *Dissertation Abstracts International*, 61(04), 1271A.
- Adams, P. (2006). Exploring social constructivism: Theories and practicalities. *Education*, 4(3), 243-257.
- Allington, R. (2002). What I've learned about effective reading instruction from a decade of studying exemplary elementary classroom teachers. *Phi Delta Kappan*, 83(10), 740-747.
- Almasi, J. F. (1996). A new view of discussion. In L. B. Gambrell & J. F. Almasi (Eds.), *Lively discussions! Fostering engaged reading* (pp. 2-24). Newark, DE: International Reading Association.
- Anderson, T., O'Leary, D., Schuler, K., & Wright, L. (2002). *Increasing reading comprehension through the use of guided reading*. Master of Arts Action Research Project. Retrieved May 5, 2012 from ERIC database. (ED471413)
- Antil, L., Jenkins, J., Wayne, S., & Vadsy, P. (1998). Cooperative learning: Prevalence, conceptualizations, and the relation between research and practice. *American Educational Research Journal*, 35, 419-454.
- Antonacci, P. A. (2000). Reading in the zone of proximal development: Mediating literacy development in beginning readers through guided reading. *Reading Horizons*, 41(1), 19-33.
- August, D., & Shanahan, T. (Eds.). (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Avalos, M.A. (2003). Effective second language reading transition: From learner specific to generic instructional models. *Bilingual Research Journal*, 27(2), 171-205.

- Avalos, M.A., Plasencia, A., Chavez, C., & Rascón, J. (2007). Modified guided reading: Gateway to English as a second language and literacy learning. *The Reading Teacher*, 61(4), 318-329. doi:10.1598/RT.61.4.4
- Avent, J. (1993). A study of language learning achievement differences between students using the traditional language laboratory and students using computer-assisted language learning courseware. *Dissertation Abstracts International*, 54(09A), 3354. (UMI No. AAG9404633)
- Balfanz, R., & Legters, N. (2004). *Locating the dropout crisis: Which high schools produce the nation's dropouts? Where are they located? Who attends them?* Baltimore, MD: Center for Social Organization of Schools, Johns Hopkins University.
- Barnes, D. (1992). *From communication to curriculum* (2nd ed.). Portsmouth, NH: Boyton/Cook.
- Batalova, J., Fix, M., & Murray, J. (2007). *Measures of change: The demography and literacy of adolescent English learners*. New York, NY: Migration Policy Institute, Carnegie Corporation.
- Baumann, J. F., Dillon, D. R., Shockley, G. B., Alvermann, D. E., & Reinking, D. (1996). Perspectives in literacy research. In L. Baker, P. P. Afflerbach, & D. Reinking (Eds.), *Developing engaged readers in school and home communities* (pp. 217-245). Hillsdale, NJ: Erlbaum.
- Baumann, J. F., Ware, D., & Edwards, E. C. (2007). Bumping into spicy, tasty words that catch your tongue: A formative experiment on vocabulary instruction. *The Reading Teacher*, 61, 108-122.
- Bodrova, E., & Leong, D. J. (2007). *Tools of the mind: The Vygotskian approach to early childhood education*. Upper Saddle River, NJ: Pearson.
- Braul, B. (2006). ESL teacher perceptions and attitudes toward using computer-assisted language learning (CALL): Recommendations for effective CALL practice. *Dissertation Abstracts International*, 44(05). Canada. (UMI No. MR13761)
- Breen, C. (2003). Mathematics teachers as researchers: Living on the edge? In A. Bishop, M. Clements, C. Keitel, J. Kilpatrick, & F. Leung (Eds.), *Second international handbook of mathematics education*, 523-544. Dordrecht, The Netherlands: Kluwer.
- Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy* (3rd ed.). New York, NY: Pearson Education.

- Bruffee, K. A. (1999). *Collaborative learning: Higher education, interdependence, and the authority of knowledge* (2nd ed.). Baltimore, MD: Johns Hopkins University Press.
- Calderon, M., Hertz-Lazarowitz, R., & Slavin, R. (1998). Effects of bilingual integrated reading and composition on students making the transition from Spanish to English reading. *Elementary School Journal*, 99, 153-165.
- Calhoon, M. B. (2005). Effects of a peer-mediated phonological skill and reading comprehension program on reading skill acquisition for middle school students with reading disabilities. *Journal of Learning Disabilities*, 38(5), 424-423.
- Castex, G. (1997). Immigrant children in the United States. In N. Phillips (Ed.), *Urban Environment: Linking social policy and clinical practice*. Springfield, IL: Charles C. Thomas.
- Chall, J. S. (1994). Patterns of adult reading. *Learning Disabilities: A Multidisciplinary Journal*, 5(1), 29-33.
- Chambers, E. A. (2003). *Efficacy of educational technology in elementary and secondary classrooms: A meta-analysis of the research literature from 1992-2002* (Unpublished doctoral dissertation). Southern Illinois University at Carbondale, IL.
- Chang, C. Y. (2002). Does computer-assisted instruction + problem solving = improved science outcomes? A pioneer study. *Journal of Education Research*, 95(3), 143-151.
- Chappelle, C. (2001). *Computer applications in second language acquisition*. Cambridge, United Kingdom: Cambridge University Press.
- Chapman, C., Laird, J., & Kewal Ramani, A. (2010). *Trends in high school dropout and completion rates in the United States: 1972-2008* (NCES 2011-012). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education. Retrieved May 5, 2012 from <http://nces.ed.gov/pubsearch>
- Cherryholmes, C. H. (1992). Notes on pragmatism and scientific realism. *Educational Researcher*, 21(6), 13-17.
- Chien, Y. C. (2004). *Incorporating cooperative learning in Taiwan English as foreign Language EFL classrooms* (Unpublished doctoral dissertation). University of Central Florida, Florida.

- Clay, M. M. (1985). *The early detection of reading difficulties* (3rd ed.). Auckland, New Zealand: Heinemann.
- Cobb, P., Confrey, J., diSessa, A., Lehrer, R., & Schauble, L. (2003). Design experiments in educational research. *Educational Researcher*, 32(1), 9-13.
- Cohen, J. (1977). *Statistical power analysis for the behavioral sciences* (Rev. ed.). New York, NY: Academic Press.
- Cole, A. L., & Knowles, J. G. (1993). Teacher development partnership research: A focus on methods and issues. *American Educational Research Journal*, 30(3), 473-495.
- Coleman, R., & Goldenberg, C. (2010, Winter). Using strategies and techniques that make academic content more accessible, classroom teachers can help ELL students keep pace academically. *Kappa Delta PI Record*, 61-65.
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. W., & Clark, V. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage.
- Cummins, J. (1994). The socioacademic achievement model in the context of coercive and collaborative relations of power. In R. DeVillar, J. F. Christian, & J. P. Cummins (Eds.), *Cultural diversity in schools: From rhetoric to practice* (pp. 365-366). Albany, NY: State University of New York Press.
- Cummins, J. (2001). Basic interpersonal communicative skills and cognitive academic language proficiency. *Encyclopedia of language and teaching*. London, England: Routledge.
- Cuseo, J. (1992). Collaborative and cooperative learning in higher education: A proposed taxonomy. *Cooperative Learning and College Teaching*, 2(2), 2-4.
- D'Andrade, R. (1995). *The development of cognitive anthropology*. Cambridge, UK: Cambridge University Press.
- Deshler, D. D., Palincsear, A. S., Biancarosa, G., & Nair, M. (2007). *Informed choices for struggling adolescent readers: A research-based guide to instructional programs and practices*. Newark, DE: International Reading Association.

- Despain, S. (1997). The effects of two delivery systems for listening comprehension exercises on the language performance and attitude of beginning Spanish students. *Dissertation Abstracts International*, 58(08A), 3047. (UMI No. AAG9805338)
- Dewey, J. (1916). *Democracy and education*. New York, NY: Macmillan.
- Dewey, J. (1924). *Democracy and education*. New York, NY: Macmillan.
- Dewey, J. (1963). *Experience and education*. New York, NY: Collier Books.
- Duckworth, E. (1964). Piaget rediscovered. In R. E. Ripple & V. N. Rockcastle (Eds.), *Piaget rediscovered: A report of the Conference on Cognitive Studies and Curriculum Development* (pp. 1-5). Ithaca, NY: Cornell University.
- Dynarski, M., Agodini, R., Heaviside, S., Novak, T., Carey, N., & Campuzano, L. (2007). *Effectiveness of reading and mathematics software products: Findings from the first student cohort* (NCEE Rep. No. 2007-4005). Washington, DC: U.S. Department of Education, Institute of Education Sciences.
- Fawson, P. C., & Reutzel, R. D. (2000). But I only have a basal: Implementing guided reading in the early grades. *The Reading Teacher*, 54, 84-98.
- Fawson, P. C., Reutzel, D. R., Smith, J. A., Ludlow, B. C., & Sudweeks, R. (2006). Examining the reliability of running records: Attaining generalizable results. *Journal of Educational Research*, 100(2), 113-126. doi:10.3200/JOER. 100.2.113-126
- Fergus, E. (2009). Understanding Latino/a students' schooling experiences: The relevance of skin color among Mexican and Puerto Rican high school students. *Teachers College Record*, 111, 339-375.
- Fisher, D., Frey, N., & Lapp, D. (2009). Meeting AYP in a high-need school: A formative experiment. *Journal of Adolescent and Adult Literacy*, 52, 386-396. doi:10.1598/JAAL.52.5.3
- Ford, M. P., & Opitz, M. F. (2008). A national survey of guided reading practices: What we can learn from primary teachers. *Literacy Research and Instruction*, 47(4), 309-331. doi:10.1080/19388070802332895
- Fountas, I. C., & Pinnell, G. S. (1996). *Guided reading: Good first teaching for all children*. Portsmouth, NH: Heinemann.
- Fountas, I. C., & Pinnell, G. S. (2001). *Guiding readers and writers*. Portsmouth, NH: Heinemann.

- Fountas, I. C., & Pinnell, G. S. (2007). *The continuum of literacy learning, Grades 3-8: A guide to teaching*. Portsmouth, NH: Heinemann.
- Fry, E., Kress J., & Fountoukidis, D. (2000). *The reading teacher's book of lists* (4th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Fuchs, L. S., Fuchs, D., & Kazdan, S. (1999). Effects of peer-assisted learning strategies on high school students with serious reading problems. *Remedial and Special Education, 20*(5), 309-318.
- Fuligni, A. (1997). The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behavior. *Child Development, 68*, 351-363.
- Gambrell, L. B., Palmer, B. M., Codling, R. M., & Mazzoni, S. A. (1996). Assessing motivation to read. *The Reading Teacher, 49*, 518-533.
- Garcia, M. R., & Arias, F. V. (2000). A comparative study in motivation and learning through print-oriented and computer-oriented tests. *Computer Assisted Language Learning, 13*(4-5), 457-465.
- Genesee, F., Lindholm-Leary, K., Saunders, W., & Christian, D. (Eds.). (2006). *Educating English language learners: A synthesis of research evidence*. New York, NY: Cambridge University Press.
- Ghaith, G. M. (2003a). Effects of the Learning Together model of cooperative learning on English as a foreign language reading achievement, academic self-esteem, and feelings of school alienation. *Bilingual Research Journal, 27*(3), 451-474.
- Ghaith, G. M. (2003b). The relationship between forms of instruction, achievement and perception of classroom climate. *Educational Research, 45*, 83-93.
- Gibson, J. J. (1966). *The senses considered as perceptual systems*. Boston, MA: Houghton-Mifflin.
- Gil, A., Vega, W. A., & Dimas, J. M. (1996). Acculturative stress and personal adjustment among Hispanic adolescent boys. *Journal of Community Psychology, 22*, 43-54.
- Glass, G. V. (1976). Primary, secondary, and meta-analysis of research. *Educational Researcher, 5*, 3-8.
- Goldenberg, C. (2008). Teaching English language learners: What the research does—and does not—say. *American Educator, 32*(2), 8-23.

- Gourgey, A., Azumi, J., Madhere, S., & Walker, E. (1984). *Computer-assisted instruction evaluation report, 1983-84 school year*. Washington, DC: US Department of Education, Office of Educational Research and Improvement.
- Graves, M. (2004). Theories and constructs that have made a significant difference in adolescent literacy—but still have the potential to produce still more positive benefits. In T. L. Jetton & J. A. Dole (Eds.), *Adolescent literacy research and practice* (pp. 433-452). New York, NY: The Guilford Press.
- Greenberg, D. (1998). Betsy: Lessons learned from working with an adult nonreader. *Journal of Adolescent and Adult Literacy*, 41(4), 252-261.
- Greene, J., & Winters, M. A. (2006). *Leaving boys behind: Public high school graduation rates* (Civic Report #48). New York, NY: Manhattan Institute for Policy Research.
- Hagerman, T. E. (2003). *A quasi-experimental study on the effects of Accelerated Reader at middle school* (Unpublished doctoral dissertation). University of Oregon, Eugene, OR. *Dissertation Abstracts International*, 64(06A), 124-2027.
- Hankinson, R. D., & Myers, D. L. (2000). *Effectiveness of the Middle School PALS in Reading program on the reading comprehension of middle school students* (Unpublished doctoral dissertation). Duquesne University, Pittsburgh, PA.
- Hart, B., & Risley, R. T. (1995). *Meaningful differences in the everyday experience of young American children*. Baltimore, MD: Paul H. Brookes.
- Hiebert, E. H., & Fisher, C. W. (1991). Task and talk structures that foster literacy. In E. H. Hiebert (Ed.), *Literacy for a diverse society: Perspectives, practices, and policies* (pp. 141-156). New York, NY: Teachers College Press.
- Hunter, C. T. L. (1994). *A study of the effect of instructional method on the reading and mathematics achievement of Chapter One students in rural Georgia* (Unpublished doctoral dissertation). South Carolina State University, Orangeburg, SC.
- Iaquinta, A. (2006). Guided reading: A research-based response to the challenges of early reading instruction. *Early Childhood Education Journal*, 33(6), 413-418. doi:10.1007/s 10643-006-0074-2
- Igel, C. C. (2010). The effect of cooperative learning instruction on K-12 student learning: A meta-analysis of quantitative studies from 1998 to 2009. *Dissertation Abstracts International*, 7201A. (UMI No. AAT 3435906)

- Ivey, G., & Broaddus, K. (2007). A formative experiment investigating literacy engagement among adolescent Latina/o students just beginning to read, write, and speak English. *Reading Research Quarterly*, 42(4), 512-545.
doi:10.1598/RRQ.42.4.4
- James, D. C. (1997). Coping with a new society: The unique psychosocial problems of immigrant youth. *Journal of School Health*, 67, 98-102.
- Jiménez, R. T. (1997). The strategic reading abilities and potential of five low-literacy Latino/a readers in middle school. *Reading Research Quarterly*, 32, 224-243.
- Joftus, S., & Maddox-Dolan, B. (2003). *Left out and left behind: NCLB and the American high school*. Washington, DC: Alliance for Excellent Education.
- Johnson, D. W., & Johnson, R. T. (1989). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book.
- Johnson, D. W., & Johnson, R. T. (1990). Social skills for successful group work. *Educational Leadership*, 47, 29-33.
- Johnson, D. W., & Johnson, F. (2009). *Joining together: Group theory and group skills* (10th ed.). Boston, MA: Allyn and Bacon.
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1993). *Circles of learning: Cooperation in the classroom* (4th ed.). Edina, MN: Interaction.
- Johnson, D. W., Johnson, R. T., & Smith, K.A. (1991). *Active learning: Cooperation in the college classroom*. Edina, MN: Interaction Book Company.
- Kagan, S. (1995). *We can talk: Cooperative learning in the elementary ESL classroom*. Retrieved from EClearinghouse on Language and Linguistics. (ED382035)
- Kagan, S., & McGroarty, M. (1993). Principles of cooperative learning for language and content gains. In D. D. Holt (Ed.), *Cooperative learning: A response to linguistic and cultural diversity* (pp. 47-66). McHenry, IL: Delta Systems, Inc.
- Kessler, C. (1992). *Cooperative language learning: A teacher's resource book*. Englewood Cliffs, NJ: Prentice Hall.
- Kim, H. S., & Kamil, M. L. (2004). Culturally responsive practices for youth literacy learning. In T. Jetton & J. Dole (Eds.), *Adolescent literacy research and practice* (pp. 351-368). New York, NY: Guilford Press.
- Kitchener, R. F. (1991). Jean Piaget: The unknown sociologist? *British Journal of Sociology*, 42(3), 421-442.

- Kitz, W. R. (1988). Adult literacy: A review of the past and a proposal for the future. *Remedial and Special Education, 9*, 44-50.
- Krashen, S. (1981). *Second language acquisition and second language learning*. Oxford, England: Pergamon Press.
- Krashen, S. (1985). *The input hypothesis: Issues and implications*. New York, NY: Longman.
- Kulik, J. (1994). Meta-analytic studies of findings on computer-based instruction. In E. L. Baker and H. F. O'Neil, Jr. (Eds.), *Technology assessment in education and training*. Hillsdale, NJ: Lawrence Erlbaum.
- Kulik, J. (2003a). *Effects of using instructional technology in elementary and secondary schools: What controlled evaluation studies say*. Arlington, VA: SRI International.
- Kulik, J. (2003b). *Effects of using instructional technology in colleges and universities: What controlled evaluation studies say*. Arlington, VA: SRI International.
- Kulik, J., Bangert, R., & Williams, G. (1983). Effects of computer-based teaching on secondary school students. *Journal of Educational Psychology, 75*(1), 19-26.
- Lai, S. H. (2001). Student perceptions regarding needs for communication-based English instruction in a selected university in southern Taiwan. *Dissertation Abstracts International, 62*(03), 900A.
- Landale, N., & Oropesa, R. S. (1995). *Immigrant children and the children of immigrants: Inter and intra-ethnic group differences in the United States* (Population Research Group Research Paper 95-2). East Lansing, MI: Institute for Public Policy and Social Research, Michigan State University.
- Lee, J., Grigg, W., & Donahue, P. (2007). *The nation's report card: Reading 2007* (NCES 2007-496). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.
- Leslie, L., & Caldwell, J. (1995). *Qualitative Reading Inventory-II*. New York, NY: Longman.
- Liou, H.-C. (1997). The impact of WWW texts on EFL learning. *Computer Assisted Language Learning, 10*(5), 455-78.
- Lipsey, M. W., & Wilson, D. B. (2001). *Practical meta-analysis*. Thousand Oaks, CA: Sage.

- Liston, W. R. (1991). *The effects of computer-assisted instruction on remedial reading students' achievement in grade 10 identified South Carolina high schools as measured by BSAP state testing in school years 1988-89 and 199-90* (Unpublished doctoral dissertation). University of South Carolina, Columbia, SC.
- Marin, N., Benarroch, A., & Gomez, E. J. (2000). What is the relationship between social constructivism and Piagetian constructivism? An analysis of the characteristics of the ideas within both theories. *International Journal of Science Education*, 22(3), 225-238.
- Maxwell, J. (2005). *Qualitative research design: An interactive approach* (2nd ed.). Thousand Oaks, CA: Sage.
- McCurdy, M., Daly, E., Gortmaker, V., Bonfiglio, C., & Persampieri, M. (2007). Use of brief instructional trials to identify small group reading strategies: A two experiment study. *Journal of Behavioral Education*, 16(1), 7-26. doi:10.1007/s10864-006-9021-y
- McDonnell, L., & Hill, P. (1993). *Newcomers in American schools: Meeting the educational needs of immigrant youth*. Santa Monica, CA: RAND Corporation.
- McIntyre, E., Kyle, D. W., & Moore, G. H. (2006). A primary-grade teacher's guidance toward small-group dialogue. *Reading Research Quarterly*, 41(1), 36-66.
- Merriam, S. B. (1998). *Qualitative research and case study applications in research*. San Francisco, CA: Jossey-Bass.
- Mesmer, H. A. E. (2010). Textual scaffolds for developing fluency in beginning readers: Accuracy and reading rate in qualitatively leveled and decodable text. *Literacy Research and Instruction*, 49(1), 20-39. doi:10.1080/19388070802613450
- Mishel, L. R., & Roy, J. (2006). *Rethinking high school graduation rates and trends*. Washington, DC: Economic Policy Institute.
- Mooney, M. E. (1990). *Reading to, with, and by children*. Katonah, NY: Richard C. Owen.
- Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research*, 1(1), 48-76.
- Najjar, L. J. (1996). Multimedia information and learning. *Journal of Educational Multimedia and Hypermedia*, 5, 129-150.

- National Center for Educational Statistics. (2011). *The nation's report card: Reading 2011* (NCES 2012-457). Washington, DC: National Center for Education Statistics Institute of Education Sciences U.S. Department of Education.
- National Clearinghouse for English Language Acquisition and Language Instruction Education Programs. (2007). English language literacy, academic language, and content area literacy: Introduction to the issues. Washington, DC: Tartir, S.A., 2007.
- National Institute of Child Health and Human Development (NICHD). (2000). *Report of The National Reading Panel. Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Department of Health and Human Services.
- Neuman, S. B. (1999). Books make a difference: A study of access to literacy. *Reading Research Quarterly*, 34, 286-311.
- No Child Left Behind: Reauthorization of the Elementary and Secondary Education Act of 2001*. (2001). A report to the nation and the Secretary of Education, U.S. Department of Education.
- Nunan, D. (1992). *Collaborative language learning and teaching*. Cambridge, England: Cambridge University Press.
- Olsen, R. E., & Kagan, S. (1992). About cooperative learning. In C. Kessler (Ed.), *Cooperative language learning: A teacher's resource book* (pp. 1-30). Englewood Cliffs, NJ, Prentice Hall.
- Palincsear, A. S., & Brown, A. (1984). Reciprocal teaching of comprehension fostering and comprehension monitoring activities. *Cognition and Instruction*, 1(2), 117-175.
- Palincsear, A. S., Magnusson, S. J., Collins, K. M., & Cutter, J. (2001). Making science accessible to all: Results of a design experiment in inclusive classrooms. *Learning Disabilities Quarterly*, 24(1), 15-32.
- Paratore, J. R., & Indrisano, R. (2003). Grouping for instruction in literacy. In J. Flood, D. Lapp, J. R. Squire, & J. M. Jensen (Eds.), *Handbook of research on teaching the English language arts* (2nd ed., pp. 566-572). Mahwah, NJ: Lawrence Erlbaum Associates.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

- Perfetti, C. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading, 11*(4), 357-383.
- Peterson, R., & Eeds, M. (1990). *Grand conversations: Literature groups in action*. New York, NY: Scholastic.
- Piaget, J. (1932). *The moral judgment of the child* (M. Gabain, Trans.). New York, NY: Harcourt, Brace and Company.
- Piaget, J. (1964). Development and learning. In R. E. Ripple & V. N. Rockcastle (Eds.), *Piaget rediscovered: A report of the conference on cognitive studies and curriculum development* (pp. 7-20). Ithaca, NY: Cornell University.
- Piaget, J. (2000). Piaget's theory. In K. Lee (Ed.), *Childhood cognitive development: The essential readings* (pp. 31-47). Oxford, England: Blackwell Publishers.
- Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. New York, NY: Basic Books.
- Pinkus, L. M. (2009). *Meaningful measurement: The role of assessments in improving high school education in the 21st century*. Washington, DC: Alliance for Excellent Education.
- Pitcher, S. M., Albright, L. K., DeLaney, C. J., Walker, N.T., Seunarinisingh, K., Mogge, S., Dunston, P. J. (2007). Assessing adolescents' motivation to read. *Journal of Adolescent and Adult Literacy, 50*(5), 378-396. doi:10.1598/JAAL.50.5.5
- Rance-Roney, J. (2010). Jump-starting language and schema for English-language learners: Teacher-composed digital jumpstarts for academic reading. *Journal of Adolescent and Adult Literacy, 53*(5), 386-395. doi:10.1598/JAAL.53.5.4
- Raymond, E. (2000). *Cognitive characteristics: Learners with mild disabilities* (pp. 169-201). Needham Heights, MA: Allyn and Bacon.
- Reeves, T. C., Herrington, J., & Oliver, R. (2005). Design research: A socially responsible approach to instructional technology research in higher education. *Journal of Computing in Higher Education, 16*, 97-116.
- Reinking, D., & Bradley, B. (2004). Connecting research and practice using formative and design experiments. In N. K. Duke & M.H. Mallette (Eds.), *Literacy research methodologies* (pp. 149-169). New York, NY: Guilford Press.
- Reinking, D., & Bradley, B. (2008). *Formative and design experiments*. New York, NY: Teachers College Press.

- Reinking, D., & Pickle, J. M. (1993). Using a formative experiment to study how computers affect reading and writing in classrooms. In C. Kinzer & D. J. Leu (Eds.), *Examining central issues in literacy research, theory, and practice* (pp. 263-270). Chicago, IL: National Reading Conference.
- Reinking, E., & Watkins, J. (2000). A formative experiment investigating the use of multimedia book reviews to increase elementary students' independent reading. *Reading Research Quarterly, 35*(3), 384-419.
- Ross, S.M., & Nunnery, J.A. (2005). *The effect of School Renaissance on student achievement in two Mississippi school districts*. Memphis, TN: University of Memphis, Center for Research in Educational Policy.
- Ross, S. M., Nunnery, J., Avis, A., & Borek, T. (2005). *The effects of School Renaissance on student achievement in two Mississippi school districts*. Memphis, TN: University of Memphis, Center for Research in Educational Policy.
- Roy, J. W. (1993). *An investigation of the efficacy of computer-assisted mathematics, reading, and language arts instruction* (Unpublished doctoral dissertation). Baylor University, Waco, TX.
- Rueda, R., & Garcia, G. (2001). How do I teach reading to ELLs? (Ninth in a series). *Teaching every child to read*. Ann Arbor, MI: Center for the Improvement of Early Reading Achievement.
- Salahu-Din, D., Persky, H., & Miller, J. (2008). *The nation's report card: Writing 2007* (NCES 2008-468). Washington, DC: National Center for Education Statistics, Institute for Education Sciences, US Department of Education.
- Salomon, G. (1991). Transcending the qualitative-quantitative debate: The analytic and systemic approaches to educational research. *Educational Researcher, 20*(6), 10-18.
- Sam, D. L. (1992). Psychological acculturation of young visible immigrants. *Migration World Magazine, 20*, 21-24.
- Schulman, M. B., & Payne, C. D. (2000). *Guided reading: Making it work*. New York, NY: Scholastic.
- Sedlmeier, P., & Gigerenzer, G. (1989). Do studies of statistical power have an effect on the power of studies? *Psychological Bulletin, 105*(2), 309-316.
- Shanahan, T., & Barr, R. (1995). A synthesis of research on reading recovery. *Reading Research Quarterly, 30*, 958-996.

- Short, D. J., & Fitzsimmons, S. (2007). *Double the work: Challenges and solutions to acquiring language and academic literacy for adolescent English language learners—A report of the Carnegie Corporation of New York*. Washington, DC: Alliance for Excellent Education.
- Skidmore, D., Perez-Parent, M., & Arnfield, S. (2003). Teacher–pupil dialogue in the guided reading session. *Reading: Language and Literacy*, 37(2), 47-53. doi:10.1111/1467-9345.3702002
- Slavin, R. E. (1986). *Using student team learning* (3rd ed.). Baltimore, MD: Johns Hopkins University, Center for Research on Elementary and Middle Schools.
- Slavin, R. E. (1990). On making a difference. *Educational Researcher*, 19(3), 30-34, 44.
- Slavin, R. E. (1994). *Using student team learning* (4th ed.). Baltimore, MD: Johns Hopkins University, Center for Social Organization of Schools.
- Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd ed.). Needham Heights, MS: Allyn and Bacon.
- Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology*, 21, 43-69.
- Slavin, R. E., Chamberlain, A., Daniels, C., & Madden, N. A. (2008). *The Reading Edge: A randomized evaluation of a middle school cooperative reading program*. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Slavin, R. E., Cheung, A., Groff, C., & Lake, C. (2008). Effective reading programs for middle and high schools: A best-evidence synthesis. *Reading Research Quarterly*, 43(3), 290-322. doi:10.1598/RRQ.43.3.4
- Slavin, R. E., Daniels, C., & Madden, N. A. (2005). “Success for All” middle schools add content to middle grades reform. *Middle School Journal*, 36(5), 4-8.
- Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Soe, K., Koki, S., & Chang, J. M. (2000). *Effect of computer-assisted instruction (CAI) on reading achievement: A meta-analysis*. Retrieved July 15, 2011, from <http://www.prel.org/products/products/effect-cai.pdf>
- Stenson, N., Downing, B., Smith, J., & Smith, K. (1992). The effectiveness of computer-assisted pronunciation training. *CALICO Journal*, 9(4), 5-19.

- Stevens, R. J., & Durkin, S. (1992). *Using student team reading and writing in middle schools: Two evaluations* (Report No. 36). Baltimore, MD: Johns Hopkins University, Center for Research on Effective Schooling for Disadvantaged Students.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Thousand Oaks, CA: Sage.
- Sturtevant, E. G., & Kim, G. S. (2010). Literacy motivation and school/non-school literacies among students enrolled in a middle-school ESOL program. *Literacy Research and Instruction, 49*, 68-85. doi:10.1080/19388070802716907
- Su, S. F. (2003). *A study on English instructional innovation in Taiwan junior high schools—Exploring the status quo and feasible coping strategies* (Unpublished doctoral dissertation). National Taiwan Normal University, Taipei, Taiwan.
- Szapocznik, J., & Kurtines, W. (1993). Family psychology and cultural diversity: Opportunities for theory, research, and application. *American Psychologist, 48*, 400-407.
- Taboada, A., & Rutherford, V. (2011). Developing reading comprehension and academic vocabulary for English language learners through science content: A formative experiment. *Reading Psychology, 32*, 119-137. doi:10.1080/02702711003604468
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.
- Texas Center for Educational Research. (2007). *Evaluation of the Texas Technology Immersion Pilot: Findings from the second year*. Austin, TX: Robert Slavin.
- Tyner, B. (2004). *Small-group reading instruction: A differentiated teaching model for beginning and struggling readers*. Newark, DE: International Reading Association.
- U.S. Department of Education. (2011). *The nation's report card: An introduction to the National Assessment of Educational Progress (NAEP)*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.
- U.S. Department of Education. (2011). *Trends in high school dropout and completion rates in the United States: 1972-2008*. Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics.

- Vaughan, W. (2002). Effects of cooperative learning on achievement and attitude among students of color. *Journal of Educational Research*, 95, 359-364.
- Vernez, G., & Abrahamse, A. (1996). *How immigrants fare in U.S. education*. Santa Monica, CA: Rand Corporation.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wasik, B, A., & Slavin, R. E. (1993). Preventing early reading failure with one-to-one tutoring: A review of five programs. *Reading Research Quarterly*, 28, 179-200.
- What Works Clearinghouse. (2007). *Beginning reading*. Washington, DC: U.S. Department of Education, Institute of Education Sciences. Retrieved March 17, 2008, from http://ies.ed.gov/ncee/wwc/reports/beginning_reading/topic
- Whitehead, D. (2002). "The story means more to me now": Teaching thinking through guided reading. *Reading*, 36(1), 33-37. doi:10.1111/1467-9345.00182
- Wild, M., Mayeaux, A., & Edmonds, K. (2008). *TeamWork: Setting the stage for collaborative teaching, grades 5-9*. Portland, ME: Stenhouse.

CURRICULUM VITAE

Athene Bell is the district literacy specialist in Manassas City Public Schools, Virginia where she works with teachers and students to support literacy initiatives within the school district. For 19 years Ms. Bell taught English to adolescents in grades 6-8. Currently, she is specializing in literacy at George Mason University. Her areas of interest include the study of visual and multimodal literacy among adolescents, teacher education, and formative design methodology. Ms. Bell's current work seeks to use multiconfigured reading interventions within classroom contexts to better understand how high school English language learners learn to read in English.