THE EFFECTS OF READING COMPREHENSION STRATEGIES ON ACHIEVEMENT FOR ENGLISH LEARNERS (ELs)

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THE EFFECTS OF READING COMPREHENSION STRATEGIES ON ACHIEVEMENT FOR ENGLISH LEARNERS (ELs)

A Dissertation

by

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SPRING 2011
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I certify that this student has met the requirements for format contained in the University format manual, and that this dissertation is suitable for shelving in the library and credit is to be awarded for the dissertation.

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Carlos Nevarez, Ph.D.      Date
DEDICATION

I would like to dedicate this dissertation to my parents, Pat Bird and John Carder. This would not have been possible without your love and support through the years. Thank you for making me the tenacious person I am today and for your continued faith in me.

I would also like to thank my partner in life, JCG, whom challenges me to keep believing in myself. Thank you for your continued love and support.
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Finally, I would like to acknowledge the support, guidance, and expertise of my dissertation committee. Your guidance and support have made it possible for me to reach my goals.
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K-12
Abstract

of

THE EFFECTS OF READING COMPREHENSION STRATEGIES ON ACHIEVEMENT FOR ENGLISH LEARNERS (ELs)

by

Sunny Marie Carder

This study offers conclusions and recommendations on increasing reading comprehension for ELs. Previous studies have focused on the use of certain instructional strategies, but few have investigated the effect of these strategies on EL reading achievement. This research adds to the body of knowledge that already exists on EL reading achievement by addressing the following problem: too few ELs are passing the reading comprehension portion of the Standardized Testing and Reporting (STAR) test in California. This study utilized a Likert scale survey to collect data from teachers and used a multiple regression analysis to identify significant findings. Specifically, the survey asked teachers to respond to the amount of knowledge/use and perceived effectiveness about the following instructional strategies: total physical response, interactive word wall, dual language or concept books, schema stories, student self-monitoring, KWL, and picture and sentence match. This study found two significant findings in the self-reported effectiveness of student self-monitoring and...
KWL. Recommendations and implications for educators, administration, and policy are shared, including suggestions for supporting all learners within a transformative organization. School leaders and teachers can seek professional development opportunities to strengthen the instructional practices for ELs in order to close the achievement gap.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dedication</td>
<td>v</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>vi</td>
</tr>
<tr>
<td>Curriculum Vitae</td>
<td>vii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>xiii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>xiv</td>
</tr>
<tr>
<td><strong>Chapter</strong></td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Background of the Problem</td>
<td>1</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>4</td>
</tr>
<tr>
<td>Brief Literature Review</td>
<td>7</td>
</tr>
<tr>
<td>Statement of the Problem</td>
<td>9</td>
</tr>
<tr>
<td>Nature of Study</td>
<td>10</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>12</td>
</tr>
<tr>
<td>Operational Definitions</td>
<td>14</td>
</tr>
<tr>
<td>Assumptions and Limitations</td>
<td>17</td>
</tr>
<tr>
<td>Conclusion</td>
<td>18</td>
</tr>
<tr>
<td>2. REVIEW OF RELATED LITERATURE</td>
<td>21</td>
</tr>
<tr>
<td>Introduction</td>
<td>21</td>
</tr>
<tr>
<td>Legal Implications</td>
<td>22</td>
</tr>
<tr>
<td>Learning Theory</td>
<td>27</td>
</tr>
<tr>
<td>Culturally Responsive Pedagogy</td>
<td>40</td>
</tr>
<tr>
<td>What is Reading?</td>
<td>45</td>
</tr>
<tr>
<td>Reading Comprehension Strategies</td>
<td>48</td>
</tr>
<tr>
<td>Summary</td>
<td>64</td>
</tr>
</tbody>
</table>
6. APPENDICES.................................................................................................................. 149
  Appendix A: Quantitative Likert-scale Survey. ..................................................... 150
  Appendix B: Human Subjects Approval .............................................................. 155
References ..................................................................................................................... 157
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. School ABC Student Enrollment by Ethnic Group</td>
<td>70</td>
</tr>
<tr>
<td>2. School XYZ Student Enrollment by Ethnic Group</td>
<td>71</td>
</tr>
<tr>
<td>3. Grade Level Representation for ABC Elementary</td>
<td>90</td>
</tr>
<tr>
<td>4. Grade Level Representation for XYZ Elementary</td>
<td>90</td>
</tr>
<tr>
<td>5. Summary of Response Frequencies: Knowledge/Use</td>
<td>92</td>
</tr>
<tr>
<td>6. Summary of Response Frequencies: Effectiveness</td>
<td>94</td>
</tr>
<tr>
<td>7. Summary of Descriptive Statistics: Knowledge/Use</td>
<td>97</td>
</tr>
<tr>
<td>9. Median Scores at ABC Elementary</td>
<td>101</td>
</tr>
<tr>
<td>10. Median Scores at XYZ Elementary</td>
<td>102</td>
</tr>
<tr>
<td>11. Significance: Survey Items Knowledge/Use</td>
<td>104</td>
</tr>
<tr>
<td>12. Significance: Survey Items Effectiveness</td>
<td>106</td>
</tr>
<tr>
<td>14. Question 10: Best Ways to Assess Reading Comprehension of ELs</td>
<td>112</td>
</tr>
<tr>
<td>15. General Recommendations</td>
<td>135</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Theoretical Framework</td>
<td>12</td>
</tr>
<tr>
<td>2. Theoretical Framework for Study</td>
<td>36</td>
</tr>
<tr>
<td>3. ELD Proficiency Levels</td>
<td>48</td>
</tr>
<tr>
<td>4. Research Design of the Study</td>
<td>82</td>
</tr>
<tr>
<td>5. Research Findings</td>
<td>119</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

California has the most diverse student population in the world, with more than 100 languages spoken in the homes of those students. Today, our student population is “majority-minority.” Forty-one percent of our students speak a language other than English at home, and a quarter of all California public school students are struggling to learn the English language in school.

Jack O’Connell, Superintendent of Public Instruction
State of Education remarks, 2006

Background of the Problem

The English Learner (EL) population is one of the fastest growing populations in the nation in public schools. Furthermore, in California the EL population makes up more than one-quarter of the total student population. Nearly 1.6 million students are enrolled in kindergarten through grade 12 (K-12) in the public education system in California, and one in four are ELs (California Department of Education, 2010a). This represents approximately one-third of the ELs in the nation. ELs are enrolled in almost every district and in a majority of schools throughout the state. Approximately 85% are Spanish speaking, 2.2% are Vietnamese speaking, and 1.5% are Hmong speaking (California Department of Education, 2010a).

The major concern regarding ELs is too few are proficient on the reading comprehension portion of the Standardized Testing and Reporting (STAR) test in
California. In addition, according to the National Assessment of Educational Progress (NAEP) in reading in 2009, the percentage of students in California who performed at or above Proficient was 24% (NAEP, 2009). In comparison, California’s ELs who performed at or above Proficient was 21% (California Department of Education, 2010b). The change in percentage point(s) from 2009 is an increase of one percentage point for this subgroup; and the change in percentage from 2003-2010 is an increase of 11 percentage points (NAEP, 2009). The percentage of students in California who performed at or above the NAEP basic level was 54% in 2009. However, this percentage was not significantly different from 2007 at 53%. From 2003-2010, the statistics on EL performance has not changed much. The mystifying performance of ELs over the last seven years has only changed by 11 percentage points and is cause for concern because ELs continue to fall below Proficient standards.

According to the National Academy of Sciences, students who are not proficient in the language of assessment (English) will not reflect their knowledge on the subject being assessed (National Research Council, 1998). Moreover, these assessments have serious negative effects on learning for ELs in two ways:

1. positive changes in test scores over time can give an inaccurate impression that students have gained subject matter knowledge when instead they have gained proficiency in English; and

2. consistently low test scores may lead educators to believe their students need remedial education when they may have mastered the curriculum in another language, but cannot express competencies through an English
language assessment. (Gándara, Rumberger, Maxwell-Jolly, & Callahan, 2003)

English learners who do not read and write proficiently in English fall behind in school and society. NAEP data indicate that 10% of students who speak English at home did not complete high school as compared to 31% of language minority students who speak English (National Center for Education Statistics, 2004).

The laws governing the educational services administered for ELs are varied and consist of both state and federal requirements. In California, the Education Code requires individuals to hold the appropriate authorization prior to providing instructional services, including specified EL services. Specifically, Education Code 313 and 60810 require school districts to administer the California English Language Development Test (CELDT) of English language proficiency to (a) newly enrolled students whose primary language is not English; and (b) students who are English Learners as an annual assessment. Additional applicable statutes include EC Section 44001, EC Section 44830(a), EC Section 44831, and particularly EC Section 44253.1, which reads:

For these pupils to have access to quality education, their special needs must be met by teachers who have essential skills and knowledge related to English language development, specially designed content instruction delivered in English, and content instruction delivered in the pupils’ primary languages. (California Department of Education, 2010a, p. 1)
The California Commission on Teacher Credentialing is responsible for establishing the teacher authorization process by which teachers are certified as having specified knowledge, skills, and abilities for providing instruction to ELs. The state requires teachers who are assigned to teach ELs to have the appropriate authorization for the EL services they provide. Therefore, districts must ensure that they are in compliance with all federal requirements while also implementing state requirements.

ELs face the overwhelming task of learning the academic curriculum and a new language concurrently to meet state standards. They need to learn English quickly enough and fluently enough to participate and complete academic work, and like all children in California, learn grade level mathematics, reading/language arts, social studies, and science in order to be proficient in the competencies assessed by the STAR test. This study is inspired by the question of how to create a meaningful learning community for ELs to implement successful instructional practices that integrate the way in which they learn.

**Significance of the Study**

Given that too few ELs are proficient in reading, especially comprehension, they face a tremendous challenge to meet No Child Left Behind (NCLB) requirements and learn content area subject matter in order to pass state assessments. In 2001, federal policy under NCLB required each state to identify and be accountable for the instructional performance of all EL students. At this time, nationally, ELs are among the lowest performing subgroup in state assessments (NCLB, 2001). As a result, schools continue to investigate educational strategies for their ever-growing EL
It is important for the state of California to adopt new policies or research best practices when it comes to educating its rapidly growing EL population. Since many of these students are not meeting AYP in reading, using research-based best practices can significantly increase the achievement of this subgroup. However, NCLB has left many schools in California to meet EL requirements without the proper resources or time to produce results that reflect the abilities of these students and meet state and federal mandates.

The significance of NCLB resides in the “one size fits all” approach used to assess ELs as mandated by the federal government. Along with the accountability of each state NCLB requires states to establish a longitudinal database to track students’ progress over time. Currently, California is developing two student databases: California Longitudinal Pupil Achievement Data System (CALPADS) and California Longitudinal Teacher Integrated Data Education System (CALTIDES). These databases provide valuable information for legislators, teachers, and researchers to better assess the effectiveness of various instructional programs. The projected implementation of CALPADS is to occur in the 2009-2010 school year. Furthermore, the projected implementation of CALTIDES is to occur during the 2010-2011 school year.

NCLB uses the term Limited English Proficient (LEP) and defines an EL student as an individual who is age three to twenty-one years old and is enrolled or preparing to enroll in elementary or secondary school. However, for the purpose of this study the researcher will use the operational definition of an EL student provided by the
California Department of Education (CDE). CDE defines an EL as a K-12 student who has not developed listening, speaking, reading, and writing proficiencies in English. These students have difficulties in speaking, reading, writing, or understanding the English language that may deny the individual the ability to meet the state’s proficient level of achievement. The NCLB guidelines mandate states issue a Home Language Survey identifying the student as bilingual and the Primary Language Survey indicates a score showing limited proficiency in speaking, reading, writing, or listening in order to identify ELL students (NCLB, 2001).

In response to NCLB, many schools and districts are making improvements in curriculum instruction and assessment for its EL population. According to Capps et al. (2005), NCLB poses many challenges for ELs and the schools serving them because of its emphasis on testing. This emphasis narrows the focus to subjects covered by the standardized tests only, even in schools that have difficulty meeting their performance targets (Capps et al., 2005). Additionally, with English proficiency foremost among their goals, schools may rely less on dual language immersion programs that build students’ English and native language skills, instead adopting transitional bilingual or English immersion programs (Capps et al., 2005). EL students that do not pass the state assessments may be discouraged over time and eventually drop out of high school (Capps et al., 2005).

This study will add to the body of knowledge on the effectiveness of reading comprehension strategies to significantly improve EL academic success. The following section provides a brief but necessary review of literature in the process of
conceptualizing the necessity for this study. A more comprehensive review of literature is discussed in Chapter 2.

**Brief Literature Review**

According to Perez (2008), ELs require more specific instructional programs and resources to meet their educational needs than their native English-speaking peers. It is a daunting task for schools and districts to meet both state and federal performance measures such as the Academic Performance Index (API) and Adequate Yearly Progress (AYP) in California due to their EL population. In fact, many schools across the state are not meeting these growth targets due to their large number of EL populations. Perez (2008) states the state and districts need better indicators of the academic performance of its EL population in order to understand alternative approaches to addressing these teaching challenges in reading. The best practices indicate a need for further research based on teacher interventions, student interventions, and/or a better assessment tool to measure reading achievement for ELs. Literature that supports best practices in order to increase reading achievement among the EL population is further discussed in Chapter 2.

A five-year study by the American Institutes for Research (AIR) and WestEd on California’s Proposition 227 underscored severe limitations to the state’s current information on ELs (Parrish et al., 2006). Proposition 227 requires EL students be taught in English through various English immersion programs. The argument surrounding the proposition is whether these programs are successful in educating ELs. The findings indicate a performance gap between ELs and native English
speakers in reading. However, the findings also indicate there is no one path to academic success among ELs.

One major limitation of the AIR study is the state does not collect information at the student level on the type of instructional setting in which ELs are being taught (Parrish et al., 2006). The state only collects data on the instructional services an EL receives during the year. It makes tracking the instructional settings difficult throughout the year because an EL can receive many services within the instructional setting. The instructional settings are important to track because it will provide data as to how ELs learn to read and which strategies are critical in doing so. Also, since an EL student’s classification status can change during the year it would be advantageous to have a system that tracks these changes. Unfortunately, the state does not provide longitudinal information tracking ELs’ educational needs over time.

Another study performed by McBride (2008) suggests moving away from summative assessments mandated by the state to a focus on formative assessments of ELs. This is not to negate the importance of the summative assessments, but to include more formative assessments throughout the year instead of relying on one or two standardized tests. Formative assessments allow teachers to better understand their students’ needs in reading development and adjust the delivery of instruction throughout the year. It is a continuous and open-ended process among teachers and students. However, teachers need to take into account the cultural context of their students and understanding of cognitive learning tasks in order to attain learning goals.
The research provides valuable strategies for educators and policy makers to explain the link between reading achievement and the academic success of the EL population. Despite many efforts by researchers to explore EL reading achievement and what works, there is not enough research on effective best practices to significantly increase achievement for this subgroup. A major concern as indicated by Garcia and Curry-Rodriguez (2008) for schools across California is educating children from immigrant families and ethnolinguistic groups. While this study is from 2000, this need has increased as California’s immigrant population continues to grow. The current policies regarding EL educational outcomes represent forms of interventions for students and teachers to alter the current practices while raising standardized test scores. The problem is that teachers may not be addressing the needs of the EL population to produce desirable outcomes, one of which is to increase the number of ELs passing the reading portion on the STAR test. The research for increasing achievement among the EL population merits value, especially because ELs continue to fall below the standard.

**Statement of the Problem**

Many of California’s ELs are experiencing limited academic success in reading. *Too few ELs are proficient in reading.* Given the current need to increase ELs’ reading achievement, extensive research studies have examined the complexity of how EL children are taught reading comprehension strategies. However, there is still a gap in the research that has not produced significant reading improvement for this subgroup in California. In 2009, Hispanic students had an average score that was
45 points lower that of White students. This performance gap at 41 points was not significantly different from 2003 (California Department of Education, STAR Data, 2010b).

This study was designed to contribute to current research by investigating several research-based best practices utilized by teachers in determining ELs success in reading comprehension instructional strategies. It also attempted to fill a gap in the existing literature on effective reading comprehension strategies and EL reading achievement. While there has been little improvement over the years in EL reading achievement, this study explored ways to improve EL performance in reading comprehension.

**Nature of Study**

The research questions for this study focus on the examination of specified instructional strategies and reading comprehension achievement for ELs. Purposely, the research questions the study investigated are as follows:

*Research question #1:* What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?

*Research question #2:* Which strategies have the most and least significant impact on reading comprehension achievement among ELs?

This quantitative research was an analytic study of how effective instructional practices are utilized to enhance reading comprehension ability of ELs. Reading comprehension in the content areas is essential to successful learning (Brown, 2007).
For the purpose of this study the researcher elected to use reading comprehension as one measure in determining reading achievement among ELs. Many reading comprehension strategies are used to teach ELs, but not all of them have been successful. A Likert scale survey was developed for primarily determining how much knowledge/use teachers have with a set of predetermined reading comprehension strategies. This study surveyed teachers in grades 2 through 5 at two distinctive Northern California schools regarding self-reported instructional strategies they use in the classroom to teach reading comprehension strategies to ELs. The survey asked participants to answer questions based on: (a) knowledge/use of each strategy; (b) perceived effectiveness of each strategy; and (c) knowledge of more compelling examples of how to increase EL reading achievement. Both sites selected for this study have distinguishing Academic Performance Index numbers over 800. The state of California has set 800 as the score that all schools should strive to meet. The scaled responses from the Likert scale survey were compared to the students’ percent proficient scores in reading comprehension as reported on the STAR test. A regression analysis was used to identify any correlations between reading strategies used in the classroom and reading comprehension scores for ELs on the STAR test. Chapter 3 further describes the research methodology, design, setting, population, instrumentation, data collection, and data analysis. The theoretical framework that guided this study is Culturally Responsive Pedagogy.
Theoretical Framework

Culturally Responsive Pedagogy and practice facilitates and supports the success of all students. The theory assumes that the academic achievement of diverse students will increase if schools and teachers reflect and draw upon their cultural and language strengths. Along with Culturally Responsive Pedagogy, the researcher selected other learning theories to guide the study. For example, the importance of brain-based research is fundamental for considering various multicultural strategies, learning styles, and the diverse needs of ELs. Figure 1 illustrates the researcher’s theoretical framework.

*Figure 1: Theoretical Framework.*
As Figure 1 illustrates, the relationship among the brain-based learning theories, culturally responsive pedagogy, and multiple intelligences all have an impact on how ELs learn, especially in the capacity of reading. The evidence from Caine and Caine (1991) propose that the brain learns from experiences, and acknowledging those experiences will help to understand meaningful learning processes better. It may require teachers and schools to restructure their classrooms in order to allow ELs to learn through multiple visual, tactile, emotional, or auditory preferences. Even though this study’s population was not highly diverse, it still sought to promote the academic success of ethnically diverse students. A brief overview is provided below, and Chapter Two of this dissertation presents more information about this topic.

**Culturally Responsive Pedagogy**

While there is extensive research regarding culturally responsive teaching, this study uses Gay (2000) because of her extensive research in the subject for improving the academic success of ethnically diverse students. Gay (2000) defines culturally responsive teaching as using the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective for them; it teaches to and through the strengths of these students. Additionally, Gay (2000) describes culturally responsive teaching as having the following characteristics:

- It acknowledges the legitimacy of the culture heritages of different ethnic groups, both as legacies that affect students’ dispositions, attitudes, and
approaches to learning and as worthy content to be taught in the formal curriculum.

- It builds bridges of meaningfulness between home and school experiences as well as between academic abstractions and lived socioeconomic realities.
- It uses a wide variety of instructional strategies that are connected to different learning styles.
- It incorporates multicultural information, resources, and materials in all the subjects and skills routinely taught in schools (p. 29).

Using these characteristics will improve the school success of ethnically diverse students. Because culture strongly influences the attitudes, values, and behaviors that students and teachers bring to the classroom, it has to be a major determinant of how the problems of underachievement are solved (Gay, 2002).

**Operational Definitions**

The meaning and description of the terms used in this study are intended to guide the reader, expound the literature, and provide direction toward understanding the data. The following terms will be used throughout this study:

1. *Academic Performance Index (API)*: The API is a single number, ranging from a low of 200 to a high of 1000, that reflects a school’s, an LEA’s, or a subgroup’s performance level, based on the results of statewide testing. Its purpose is to measure the academic performance and growth of schools. The API was established by the Public Schools Accountability Act (PSAA) in 1999.
that created a new academic accountability system for K-12 public education in California.

2. *Adequate Yearly Progress (AYP):* Shows how well a school and school districts are meeting common standards of academic performance, as measured by whether a school or school district makes AYP.

3. *California English Language Development Test (CELDT):* Federal and state laws require a state test of English language proficiency that school districts must give to students who are ELs. The California test is called the CELDT. All students whose primary language is not English must take the test within 30 calendar days after they are enrolled in a California public school for the first time. The CELDT also must be given once each year to ELs until they are reclassified as fluent English proficient. More information on the CELDT is available at http://www.cde.ca.gov/ta/tg/el/assistancepkt.asp (California Department of Education, 2010b).

4. *English Language Development (ELD):* Districts are to provide ELs with instruction using whatever materials are deemed appropriate that are specifically designed to enable students at each level of English language proficiency to acquire academic English rapidly, efficiently, and effectively. The law does not require a specific number of minutes of ELD for all ELs.

5. *English Learner (EL):* is a K-12 student who, based on objective assessment, has not developed listening, speaking, reading, and writing proficiencies in English sufficient for participation in the regular school program. The process

6. *English as a Second Language (ESL):* is a student who does not speak English as their first language.

7. *English for Speakers of Other Languages (ESOL):* is a student with a different native language other than English.

8. *Limited English Proficient (LEP):* is a K-12 student who, based on objective assessment, has not developed listening, speaking, reading, and writing proficiencies in English sufficient for participation in the regular school program.

9. *Standardized Testing and Reporting (STAR):* All students in grades 2 through 11 participate in the STAR program, including students with disabilities and students who are ELs. In addition to the tests administered in English, all Spanish-speaking ELs who have been enrolled in a school in the United States for less than 12 months or who receive instruction in Spanish regardless of how long they have been in school in the United States must take the designated primary language test (DPLT), currently the Aprenda 3 (*EC 60640*).
Assumptions and Limitations

This study explored effective reading strategies for ELs and was limited in scope by the selection of participants from two northern California elementary schools. Other assumptions and limitations inherent in the study are:

1. This is a quantitative study conducted within a specified Northern California school district and limited number of participants. The criterion for inclusion is teaching in grades 2 through 5 with an EL student population greater than five percent in his/her classroom. The study is limited to those students identified as English learner. Other racial/ethnic student subgroups within the EL subgroup are not studied.

2. Since the study is based on self-reported survey responses, there is an assumption that the participants understand each question and self-report the responses accurately. The inherent risk in using a survey is that the participants will report what the researcher wants to hear, or what they think may be the most desired response.

3. The validity and reliability of the study may be compromised by the comfort level of the survey participants in expressing an honest response without fear that a colleague or supervisor will view the survey. The survey results will be reported anonymously to protect the identity of the participants.

4. Since the participants in the study were selected from one school district, and two elementary schools within that district, the data has limited
generalizability. However, based on the demographics of the two selected schools, other schools with similar demographics may be able to apply the results of the study to make programmatic improvements.

5. The study assumes the STAR data is accurate and reported correctly. Also, the STAR data is one measure of how the EL subgroup performs throughout the year. Other assessments may be able to provide additional academic successes.

6. Since the curriculum is set at the district/state level teachers may not have the freedom to teach the self-reported instructional strategies even though they believe the strategies to be effective. Other strategies not identified in this study may also be effective.

7. Since the study uses self-reported survey responses on instructional strategies, the researcher acknowledges the difference between instructional strategies versus reader strategies. The focus of this study is on instructional strategies.

Conclusion

Due to the NCLB mandates, the EL population is required to take and pass state assessments as compared to their native English-speaking peers. Many researchers like Linda Darling-Hammond (1994) argue standardized tests for ELs do not offer an accurate picture of their academic abilities. One of the issues for ELs is the test scores represented by them is for a test developed for native English speakers. However, many researchers will argue for the accountability of all students, including
the ELs, and the development of assessment policies and practices to enhance EL experiences in the classroom. Another issue for ELs is addressing best practices for best results. The research indicates the following best practices for ELs are increasing: phonemic awareness, phonics, oral language fluency, vocabulary, text comprehension, and writing (National Institute of Child Health and Human Development, 2000).

Effective schools will implement many of the aforementioned strategies to increase EL student achievement. Also, within many schools there are various program models to teach the ELs. For example, there are programs to address English-as-a-Second Language (ESL), Speakers of Other Languages (ESOL), and English Language Development (ELD). The key to the success of these programs is based on research of language acquisition that includes instructional supports designed for ELs and staffing by educators who know how to work with this group of students and receive ongoing professional development (August & Shanahan, 2006). This study expands on how ELs are taught reading comprehension strategies as it relates to academic achievement.

Chapter 2 provides a detailed review of the literature on effective reading comprehension instructional strategies for ELs to increase reading comprehension achievement. The chapter also provides information on legal implications, learning theories, culturally responsive pedagogy, reading development, and reading comprehension.

Chapter 3 explains the methodology used in conducting this quantitative study to uncover the relationship between reading strategies and reading achievement for
ELs. Also, this chapter provides an explanation of how the data were collected and the methods used for analysis.

Chapter 4 examines the research tool used for data collection, the findings of the self-reported survey, and overall analysis of the data.

Chapter 5 identifies themes that emerged from the data regarding the effectiveness of the self-reported reading strategies used among ELs to increase reading achievement. This chapter provides an interpretation of the findings as well as recommendations for action and further research.
Chapter 2

REVIEW OF RELATED LITERATURE

Introduction

The literature on improving reading comprehension ability among ELs is extensive. However, the ability to improve reading achievement is insufficient. This study sought to fill the gap in the existing literature on effective reading strategies among the EL population. This purposeful literature review is a sample of peer-reviewed journals in the field of education, and more specifically research in the area of reading comprehension and English learners. The intent of this literature review is twofold. First, the information is used to develop a profound understanding of how ELs develop reading comprehension strategies as well as identify areas for further research. Second, it serves to situate important theoretical aspects of learning such as brain-based learning to frame the researcher’s study on the effects of reading comprehension strategies on achievement and how the findings may contribute to research in this area. Seminal works by Geneva Gay (1994, 2000, 2002) and others on Culturally Responsive Pedagogy are discussed.

The researcher’s study is important because many schools with an EL population continue to score below proficient in reading comprehension. Educational reforms such as No Child Left Behind (2001) have focused on academic accountability of all students, including ELs. However, little attention has been paid in recent reforms to removing the “one size fits all” approach to assessing ELs along with other student subgroups.
This literature review is organized into the following sections:

1. The legal implications involving English learners.
2. Learning theory and English learners.
3. Culturally Responsive Pedagogy as related to English learners.
4. Reading development and reading comprehension according to California state standards.
5. Reading comprehension instruction for English learners.

Finally, the literature review concludes with a critical summary of the research on the use of instructional best practices in reading comprehension achievement for the EL subgroup.

**Legal Implications**

State and federal legal decisions and legislative acts have created the context for English learner education in the United States. For the purpose of this chapter, the researcher has selected and highlighted the major legal implications affecting English learner education in California. On a national level, the Bilingual Education Act of 1968 was designed to address the needs of English learners. The next landmark case was the ruling of *Lau v. Nichols* by the Supreme Court.

**Impact of Lau v. Nichols**

In 1971, a class suit was brought by non-English speaking Chinese students against the San Francisco Unified School district for failure to provide English language instruction to approximately 1,800 students, or to provide them with other adequate instructional procedures. Failure to provide equal educational opportunities
to the Chinese students denied them a meaningful opportunity to participate in the public educational program, and thus violating 601 of the Civil Right Act of 1964. The Civil Rights Act of 1964 bans any discrimination based on the ground of race, color, or national origin in any program receiving Federal financial assistance and the implementing regulations of the Department of Health, Education, and Welfare (HEW).

The Supreme Court in 1974 ruled in favor of the students expanding the rights of limited English proficient students nationwide. The Supreme Court based its decision on California Education Code § 71 which states, “English shall be the basic language of instruction in all schools.” However, California Education Code permits individual school districts to determine when bilingual instruction is appropriate. California Education Code § 8573 also states that students will not receive a diploma unless they meet the standards of proficiency in English, and requires children ages six to sixteen to receive a full time education. The opinion handed down by the Supreme Court requires the San Francisco Unified School District to comply with 601 of the Civil Right Act of 1964 and all requirements imposed by HEW and California’s educational statutes.

The San Francisco Unified School District received federal financial assistance, and therefore must assure that students of a particular race, color, or national origin were not denied the same educational opportunities obtained by other students in the same school. Thus, the decision in Lau v. Nichols continues to serve as a benchmark of equal treatment for EL students.
Proposition 227

In 1998, Proposition 227 made it “illegal” for teachers to use the appropriate pedagogy to teach ELs such using their primary language. Article 2, Section D, of California’s English Language in Public Schools Initiative Statute (also known as Proposition 227) states:

All children in California public schools shall be taught English by being taught in English. In particular, this shall require that all children be placed in English language classrooms. Children who are English learners shall be educated through sheltered English immersion during a temporary transition period not normally intended to exceed one year. Local schools shall be permitted to be placed in the same classroom with English learners of different ages but whose degree of English proficiency is similar. (WestEd, 2006, para. 1)

Proposition 227 was passed by 61% of California’s electorate. In 2000, a five-year study was conducted by America Institutes for Research (AIR) and WestEd to evaluate the effects of Proposition 227 on the education of ELs. The purpose of the study was to examine how the proposition was implemented, which EL services were most and least effective, and what unintended consequences resulted from Proposition 227’s implementation. At the time, almost one-third of the nation’s 5 million ELs are in California with Spanish as the most common primary language accounting for 85 percent of the EL population (WestEd, 2006). When Proposition 227 was first
introduced following a 10-year period the number of ELs dramatically rose from 15% to 25% of the state’s K-12 population (WestEd, 2006)

Following the passage of Proposition 227, the number of ELs receiving primary instruction with English language development dropped significantly from 30% to 8% (WestEd, 2006). During the time of the implementation of Proposition 227 other policy initiatives were affecting ELs. For example, study respondents reported the class reduction program as a major factor in its effect on EL instructional services throughout the state. However, later in the study, the same study respondents reported the federal and state accountability systems as having the greatest influence on EL instructional practices. While there have been performance gains on the SAT-9 and CST since the passage of Proposition 227, it is not possible to attribute the gains to any one factor due to other accountability reforms.

Key findings from this report point toward many avenues for success among ELs. School principals in the study indentified the following features as most critical for ELs’ success:

1. staff capacity to address EL needs;
2. school wide focus on English language development and standards-based instruction;
3. shared priorities and expectations; and
4. systematic, ongoing assessment and data driven decision making.

The key findings from this report suggest the important factors for success in EL education, and have been repeatedly shown successful in all schools.
Impact of NCLB

In 2002, No Child Left Behind (NCLB) was signed into federal law. Its purpose was to create national accountability standards. No Child Left Behind holds schools and the state as a whole accountable for student performance. However, a significant provision to the act is “adequate yearly progress (AYP),” which is an annual measure of student participation and achievement on statewide assessments. Also, NCLB requires schools to report student performance. This landmark federal legislation focuses its attention on the academic performance specific subgroups within a school, especially ELs.

Title III of the Education and Secondary Education Act (ESEA) focuses on the specific goals of identifying students who have limited English proficiency (LEP) and serving them with effective language instruction educational programs was first implemented upon the reauthorization of the ESEA by the No Child Left Behind Act, 2001. Specifically, Title III as stated in NCLB holds states accountable for increases in English proficiency and core academic content knowledge of LEP children. The nine purposes of the law of Title III are outlined in section (§ 3102 (1)). Although the primary goal of Title III is to help ensure that LEP children (called English learners under California laws) attain English proficiency, develop high levels of academic attainment in English, and meet the same challenging state academic content as all children.

The use of Title III funds is limited to providing LEP children with appropriate language programs and services, so they can attain English proficiency based on the
California English Language Development Test (CELDT) and meet academic standards. Furthermore, California Education Code § 313 (d) requires that local educators use multiple criteria, including CELDT results, the student’s score on the California Standards Test in English-language arts, teacher evaluation that measures overall curriculum mastery, and parent input and consultation for every individual student. Moreover, Title III requires every state to develop English language proficiency (ELP) standards that include the recognized language domains of reading, writing, speaking, and listening, and as also required by Title I, assess the ELP of LEP students on an annual basis.

Under current NCLB regulations, ELs entering school are exempt from taking standardized reading tests for the first 12 months. However, states cannot exempt its EL population from testing in mathematics or science but are allowed to exclude their scores from their annual yearly progress (AYP) reports (U.S. Department of Education, 2010c). Each state is required under NCLB to assess ELs in English language proficiency and in content area knowledge.

**Learning Theory**

The following literature provides key characteristics of brain based research that aid in the understanding of how ELs learn. Elaboration of brain based research and other key learning theories through the following narrative provide insight about the multifaceted approach to learning.
Brain Based Research

Since one-quarter of California’s students are classified ELs, teaching them using a full range of auditory, visual, and kinesthetic approaches all tap into the best of brain compatible learning (Lombardi, 2008). Lombardi (2008) asserts teachers can now draw on recently developed brain-based research, in addition to considerations of multicultural strategies, learning styles, and diverse needs.

Krashen’s language model of 1979 (as cited in Doherty & Jensen 1998; Zadina 2005) calls for rich and varied input, suggests language is acquired naturally and peripherally emphasizes message over form, recognizes the importance of the unconscious, and claims attitude is more important than aptitude. Asher’s total physical response developed in 1969 states that second language acquisition mirrors first language acquisition in its commands and physical responses. Moreover, a significant pathway for learning is through procedural memory and that motion activates emotion, which activates memory.

Another leading innovator in neurodevelopment approaches to learning is Mel Levine. In Levine’s, A Mind at a Time (2003), he posits these key ideas:

1. Observed behaviors are windows to learning.

2. Every student comes to school with a balance sheet of strengths and weaknesses.

3. Labels create barriers and do not tell us what is going when students try to tackle assignments.
4. Students should be helped to see their special possibilities for a gratifying life.

5. No one can be good at everything.

6. Students need to be able to talk about their learning: if you think it is hard for the parents and teachers of children with behavior, attention, or linguistic challenges, try being the child.

7. Helping students get better at what they are good at and interested in makes sense.

8. Students have a right and need to be aware of their strengths and weaknesses in learning.

9. The brain can be modified at any age or stage.

10. Being a nonnative speaker is not a disability, yet many ELs are misidentified as learning disabled.

This framework is based on what he terms neurodevelopmental functions, for understanding why children struggle in school.

While Levine’s work has primarily been applied to native speakers, best practices with ELs can effectively attend to the neurodevelopmental constructs. Using brain based approaches such as anticipatory set for learning through interactive activities, using graphic organizers, tapping prior knowledge, and encouraging student participation can motivate second language learners. Levine (2003) suggests throughout the lesson students can paraphrase, summarize, and categorize information, create visual or graphic representations, and form associations. He further states using
lists, graphs, charts, tables, and mind maps can help students organize information conducive for comprehension and retention.

Other skills for ELs are developed through read-alouds, vocabulary explorations, reader’s theater, pair-shares, and use of kinesthetic activities and audiovisuals. According to Lombardi (2008) students must feel they are in a welcoming, non-threatening environment when testing new language skills. One-way teachers can create a non-threatening environment for ELs is by using cooperative learning activities like a pair-share and jigsaw. Cooperative learning plays an essential role in EL instruction, especially in regards to listening and speaking. Another way for teachers to help students feel at ease is asking them to write about themselves and to share elements of their personal experiences.

Caine and Caine (1991) developed 12 principles of brain-based research that apply to EL teaching and learning:

1. The brain is a complex adaptive system.

   The brain functions on many levels and in many ways simultaneously. ELs can benefit from changing activities throughout the day and teaching to the various learning styles can stimulate thought and action in many ways.

2. The brain is a social brain.

   Activities such as cooperative learning, jigsaw puzzles, rituals, games, and talking for social interaction can improve EL learning (Zadina, 2005, as cited in Lombardi, 2008).
3. The search for meaning is innate.

The search for meaning often entails making sense of what the brain learns and knows about its purpose and value. For ELs, this means sharing with them a rationale for what they are doing through collaboration, discovery, community involvement, and kinesthetic projects.

4. The search for meaning occurs through patterning.

Patterning includes schematic maps and categories that are both innate and acquired. Effective EL teachers use graphic organizers, prediction strategies, introducing vocabulary, and pair-shares to prepare the brain for new knowledge.

5. Emotions are critical to patterning.

According to Caine and Caine (1991) emotions and thoughts shape each other and cannot be separated. The emotional impact of any lesson or life experience may continue long after the specific event triggers it. It is important to provide ELs with an appropriate emotional environment using strategies that are engaging and exciting.

6. Every brain simultaneously perceives and creates parts and wholes.

Effective EL teachers engage their students in activities that use both sides of the brain.

7. Learning involves both focused attention and peripheral perception.

The brain absorbs information it is directly aware of and directly beyond the focus of immediate attention. ELs often respond to the subtext of a lesson.
Because learning involves attention and perception teachers can help ELs by allowing extra reflection and response time during a lesson. Therefore, meaningful learning should include all facets of the educational environment.

8. Learning always involves both conscious and unconscious processes.
   Caine and Caine (1991) assert that much of our learning is unconscious in that experience and sensory input is processed below the level of awareness. For example, understanding of learning may not come during class but hours or months after class. EL teachers must organize what they do in order to facilitate the unconscious processing of experience by students. Moreover, EL teachers can incorporate reflection and metacognitive activities to help learners elaborate on their ideas, skills, and experiences.

9. We have at least two ways of organizing memory.
   Short-term and long-term memory helps record experiences. It is imperative for EL teachers to organize activities into meaningful parts and introduce a range of learning styles and multiple intelligences into daily classroom practice.

10. Learning is developmental.
    Learning new material helps the brain grow. As the brain learns new material it is building new neuron pathways, dendrites, and connections. Since the brain continues to grow throughout life, EL students can benefit from instruction that includes multiple learning strategies and modalities.
11. Complex learning is enhanced by challenge and inhibited by threat.

The brain learns when it is appropriately challenged in an environment that encourages risks. Teachers of ELs need to create a challenging and welcoming environment that encourages students to take risks and excel. An important aspect of creating such an environment is to integrate the students’ first language, culture, and values so they can feel positive about themselves as an integral part of the class (Tinajero, 2001).

12. Every brain is uniquely organized.

Embrace the different learning styles, talents, and intelligences of ELs. Teachers must appreciate that second language learners are different and need alternative approaches to learning to address their diverse needs.

According to Caine and Caine (1991) the objective of brain-based learning is to move away from memorization to meaningful learning. They maintain it requires three interactive elements: relaxed alertness, immersion, and active processing. Relaxed alertness refers to the brain’s preference for challenge and its search for meaning. Teachers must balance providing a low threat environment with a degree of relaxation for their students to become confident and at ease with themselves. Immersion requires teachers to integrate subjects such as science, mathematics, history, and reading in order to create meaningful learning experiences. Active processing allows students to take charge of consolidation and internalization of learning in a way that is personally meaningful. Moreover, active processing allows
students to recognize and deal with personal biases and attitudes in order to develop thinking skills and logic for what they are learning.

Understanding how the brain learns has implications for instructional design, administration, evaluation, the role of the school in the community, and teacher education (Caine & Caine, 1991). The evidence suggests that the brain learns from experiences, and acknowledging those experiences will help to understand meaningful learning processes better. It may require teachers and schools to reshape learning organizations so they exhibit inclusive classrooms in order to allow students, especially ELs, to learn through visual, tactile, emotional, or auditory preferences.

Other learning theories such as cognitive and behaviorist theories attempt to explain how children and adults learn by explaining, predicting, or observing events. For the context of this study the primary learning theory is brain-based research because of the core principals outlined in this section. However, cognitivism focuses on the inner mental activities such as thinking, memory, knowing, and problem solving. Under this theory knowledge can be seen as schema, and learning is defined as change in a learner’s schemata. A response to behaviorism, a cognitivism views people as rational beings that require active participation in order to learn. Changes in behavior can occur, but only as an indication of what is occurring in the learner’s mind. Of the most notable theory that bridges behaviorist and cognitive theories is Albert Bandura’s social learning theory. Bandura’s theory posits that people learn from one another through observation, imitation, and modeling. Social learning theory
explains human behavior as continuous reciprocal interaction between cognitive, behavioral, and environmental influences.

Alternatively, behaviorism assumes the learner is essentially passive responding to environmental stimuli. The learner starts off with a blank slate and is influenced by negative and positive reinforcement. Both negative and positive reinforcement increase the probability that the antecedent behavior will reoccur. Because a positive reinforcement indicates the application of a stimulus, whereas negative reinforcement indicates the absence of a stimulus. Therefore, learning is defined as a change in behavior. Behaviorism precedes the cognitivist view and most of the early behaviorist work was done using animals and generalized to humans (e.g. Watson, 1930; Pavlov, 1927; Skinner, 1953).
Figure 2. Theoretical Framework for the Study.

Figure 2 illustrates the overarching learning theories beginning with brain-based learning and the impact of culturally responsive pedagogy on teaching effective reading comprehension strategies.

The seven instructional strategies (total physical response, interactive word wall, dual language alphabet books, schema stories, student self-monitoring, KWL, and picture/sentence match) and their related theories fall under both brain-based learning and culturally relevant pedagogy. This framework is based on research that all children learn differently, especially those with diverse needs and backgrounds and for understanding the complexity of teaching ELs. Understanding and advancing the
learning for ELs is pivotal in the reading process. This includes using components of Gardner’s multiple intelligences theory.

**Multiple Intelligences**

In 1983 Howard Gardner challenged theories of brain immutability with his critical work on multiple intelligences. Gardner (1993) believes that each intelligence has a unique biological basis with different end performances. He suggests since all intelligences are part of the human genetic heritage, at some level each intelligence is manifested universally independent of education and cultural support (Gardner, 1993). He asserts that there is no general intelligence, but every person has at least eight intelligences. These eight intelligences include: bodily/kinesthetic, interpersonal/social, intrapersonal/introspective, logical/mathematical, musical/rhythmic, naturalist, verbal/linguistic, and visual spatial. Each learner is capable of exhibiting all eight intelligences, which can be developed throughout his or her lifetime. Instructional practices should include all eight intelligences, which will benefit all learners.

Pat Burke Guild (1997) defended Gardner’s theory of multiple intelligences by stating that multiple intelligences, learning styles, and brain-based education have theoretical constructs and applications. She claims these theories are separate and distinct from each other, but in a classroom environment these theories having many similarities. Furthermore, educators who believe in these theories use an approach to teaching that focuses on how students learn and the unique qualities of each learner. Each of these theories uses a comprehensive approach to teaching and learning.

- First, she claims all the learning theories are learner-centered. Schools that are learner-centered focus on helping all students become successful learners (Guild, 1997). In addition, classroom conversations revolve around learning and the outcomes emanate from the learners’ needs and interests. Therefore, “the learning process is the dominant process” (p. 30). Next, the teacher is a reflective practitioner and decision maker.

- Burke claims in order for teachers to understand each of the theories they must study them, reflect upon them, and apply them. The principles of these theories guide teachers to make decisions and have challenging conversations about their work.

- In the third comparison the student is just as important as the teacher as a reflective practitioner. Students who are engaged in their learning and are active in the planning and assessment of the learning process are more engaged.

- The fourth comparison focuses on the student as a whole learner. She defines this by teachers who pay attention to the cultural, physical, and emotional life as well as the academic needs of their students. Teachers acknowledge the developmental stages of their students and take them into account when planning, implementing, and assessing them. Prominently, each student is
respected for his or her individuality and it is evident in the school climate and discipline procedures.

• Next, the curriculum must have substance, depth, and quality (Guild, 1997). School and teachers have high expectations for their students and consciously avoid standardization of curriculum and methodologies. Researchers such as Guild (1997) who support brain-based education, learning styles, and multiple intelligences are convinced that accommodating students’ strengths and intelligences result in more effective learning.

• Lastly, each of the three theories supports diversity. It is at the core of each theory that each student is unique, which has an effect on how students learn. It is important for teachers and students to recognize, celebrate, and foster diversity in the classroom.

Despite the commonalities among these theories researchers are cautious to give credit to a single theory for educational quandaries. Guild (1997) states each theory has its specific terms and cautions against the simplistic applications of those terms. She claims learning is a complex process and each of these theories can facilitate learning when successfully applied.

Since 1983 when Gardner first announced his theory on multiple intelligences it has become a way for EL teachers to develop their teaching techniques using the different modalities. By providing multiple ways for students to learn maximizes their potential for success. Gardner’s theory argues that teachers who use different methodologies and activities to reach all students will better serve them. While
educators support Gardner’s theory psychologists feel that his theory is not supported by empirical evidence. Moreover, thematic and interdisciplinary units that provide opportunities for cooperative learning and include a variety of activities provides students with greater depth and understanding of material.

Based on Gardner’s multiple intelligences theory, the challenge for teachers is to create learning environments that foster the development of all eight intelligences. In a study designed to apply the multiple intelligences theory to second language learners in grades K-12, it attempted to shape and inform instructional strategies, curriculum development, and assessment. The study began with identifying general characteristics of each student’s intelligence profile by administering a multiple intelligences survey. The purpose of the survey was to raise awareness for both teachers and students about multiple intelligences. Teachers used the survey results for instructional planning and assessments, which created a more learner-centered classroom. Furthermore, students showed an interest in multiple intelligence concepts and showed positive responses to the increased variety of instructional strategies used in their classrooms. The overall benefits from applying the multiple intelligence theory in daily instruction relate to academic achievement and student motivation.

**Culturally Responsive Pedagogy**

**Theoretical Framework**

The theoretical framework selected to support and guide this study is Culturally Responsive Pedagogy. In the last three decades researchers such as Kathryn Au (2001), Roland G. Tharp (1994), A. Wade Boykin (1986), Sonia Nieto (2005),
Lisa Delpit (2002), Jacqueline Irvine (McAllister & Irvine, 2000), and Gloria Ladson-Billings (2001) have been concerned over the growing number of low income, students of color not achieving as well as other ethnic groups. These researchers have constructed a theory of culturally responsive pedagogy to help guide educators who are trying to improve the academic success of these students. Although there is a substantial body of research that supports the use of culturally responsive pedagogy, this study will focus on the works by Geneva Gay (1994, 2000, 2002) because of her extensive research for improving the academic success for ethnically diverse students for more than a quarter century.

Many of the students who enroll in California public schools come from varied racial, cultural, and linguistic backgrounds. Gay (2000) defines culturally responsive teaching as using the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective. The first premise is cultural knowledge, which she refers to as a dynamic system of social values, cognitive codes, behavioral standards, worldwide views, and beliefs. Moreover, culture should be what drives curriculum, instruction, administration, and assessment. She asserts the academic achievement of students from culturally and linguistically diverse backgrounds would improve if educators would: (a) teach in a manner that is responsive to the students’ home cultures, and (b) modify the way that classrooms are structured and eventually transform the policies of the school to enhance learning for all students (Gay, 2000).
Gay (2000) identifies five essential components of culturally responsive teaching:

- developing a cultural diversity knowledge base
- designing culturally relevant curricula
- demonstrating cultural caring and building a learning community
- building effective cross-cultural communications
- delivering culturally responsive instruction

All of these components are necessary in preparing teachers to work with the diversity in their classrooms, especially working with English learners. Researchers Gay (2002), Villegas and Lucas (2002), and Ladson-Billings (2001) have identified characteristics of culturally responsive teachers who are able to plan and deliver culturally responsive instruction. For example, Ladson-Billings (2001) proposed three characteristics relevant to the teacher’s ability to create a context in which all students can be successful by: focusing on individual students’ academic achievement, developing students’ cultural competence, and developing a sense of sociopolitical consciousness.

Gay (2002) believes one of the most important aspects of culturally responsive teaching is for teachers to become critically conscious of their own cultural socialization, and how it affects their attitudes and behaviors toward cultures of other ethnic groups. She continues to state that the emphasis is on teachers revealing and analyzing how their cultural values, assumptions, and beliefs shape their behavior in
educational settings. Once teachers are self-aware, then they are better equipped to recognize different cultural elements of their students’ behaviors to enhance their teaching skills. However, some elements of culture are more important for teachers to know than others. These include values, communication styles, learning styles, contributions, social problems, and levels of ethnic identity development and affiliation (Gay, 1994).

Culturally responsive teaching encompasses many characteristics that will improve the school success of ethnically diverse students. According to Gay (2000) culturally responsive teaching is based on the assumption that when academic knowledge and skills are situated within the lived experiences and frames of reference of students, they are more meaningful and easily learned. Therefore, all teachers will need to become culturally responsive to students from culturally and linguistically diverse backgrounds throughout their instructional processes (Gay, 2000). The context of having culturally responsive teachers allows English learners to connect their lives to reading various texts and making connections, which will effectively help their reading comprehension abilities. Other work with ELs by Luis Moll (Gonzalez, Moll, & Amanti, 2005; Gonzalez, Moll, Neff, & Amanti, 1992; Moll & Diaz, 1997) focuses on the shared responsibility and equity of teachers to work closely with parents and other family members. In their seminal work, *Funds of Knowledge* (Gonzalez et al., 1992), efforts to communicate to families that their language, culture, and educational goals of their children are valued. Eventually, the goal is to build a highway of trust
that goes back and forth from school to home, in which culturally and linguistically
diverse families are more likely to participate in their child’s learning.

**Funds of Knowledge**

*Funds of Knowledge* was based on the concept that people are competent, they
have knowledge, and their life experiences have given them that knowledge.

Researchers Norma Gonzalez, Luis Moll, Deborah Neff, and Cathy Amanti (1992)
define *Funds of Knowledge* “to refer to the historically accumulated and culturally
developed bodies of knowledge and skills essential for household or individual
functioning and well-being” (p. 133). They claim that teachers need to shed their
traditional role *teacher* and take on a new role as a *learner* to come to know their
students and families in new ways. By learning new knowledge about their students
and families, teachers can see that the households of their students provide rich
cultural and cognitive resources. These resources can transfer to the classroom to
provide culturally responsive and meaningful lessons that tap into the students’ prior
knowledge.

In order for teachers to gain their students’ funds of knowledge they must be
willing to go into the homes and communities of their students. According to Moll et
al. (Gonzalez et al., 1992; Gonzalez et al., 2005; Moll & Diaz, 1987) it is not just
about caring for students; teachers must attempt to learn and understand their students’
personal backgrounds, history, and culture. Most of the research done on funds of
knowledge was through a qualitative approach that is based on understanding
households. Also, their research approach involves studying how household members use their funds of knowledge in dealing with social and economic circumstances.

In the context of the classroom instruction, funds of knowledge represent a positive view of households as containing ample cultural and cognitive resources. Furthermore, Gonzalez et al. (1992) indicated by his research the key to literacy instruction is through home and community resources of students. Gonzalez and Moll called for teachers to broaden their students’ experiences through the community; thus, establishing pedagogical relationships. In order to make learning meaningful in the social context, teachers must abandon the drill and kill method of teaching. Also, they encouraged teachers to help students find meaning rather than learn isolated facts and rules (Gonzalez et al., 1992). It was fundamentally imperative to address the needs of the students by making available the community resources needed to increase student achievement in the EL population.

**What is Reading?**

This study uses the framework for Reading/Language Arts in California Public Schools adopted by the California State Board of Education in 1997 (California Department of Education, 2010e). The purpose of the framework is to provide schools with a blueprint for organizing instruction so that every child meets or exceeds the language arts content standards, including ELs. The California Department of Education defines reading within the English-Language Arts Content Standards specific for each grade level, kindergarten through twelfth grade.
Between 1979 and 2008, the number of school-age children (children ages 5-17) who spoke a language other than English at home increased from 3.8 to 10.9 million, or from 9% to 21% of the population in this age range. However, an increase from 18% to 21% was evident during the time period of 2000-2008. After increasing from 3% to 6% between 1979 and 2000, the percentage of school-age children who spoke a language other than English at home and who spoke English with difficulty decreased to 5% in 2008 (U.S. Department of Education, 2010, Indicator 5).

**Reading Proficiency**

The California English Language Development Test (CELDT) is an English language proficiency measure of English language development standards. The test evaluates linguistic-minority students’ English proficiency level and their annual progress across four areas: listening, speaking, reading, and writing. The results of the test are categorized into five levels: beginning, early intermediate, intermediate, early advanced, and advanced. The test is given to all K-12 EL students and is used to measure Title III’s annual measurable achievement objectives. Furthermore, ELs take the CELDT every year until they are reclassified as fluent English proficient.

Proficiency in decoding and encoding skills is necessary but not sufficient for comprehending and writing about academic subject matter. Students also have to understand, use, and ultimately live the academic language of books and schooling (Biancarosa & Snow 2004; Shefelbine 1998). Academic language refers to the language of literacy and books, tests, and formal writing.
A number of studies and researchers have shown that academic language proficiency and its subcomponents are related to achievement in reading and writing as early as the third grade (Biancarosa & Snow 2004; Gersten & Baker 2000). However, vocabulary is a critical element of academic language proficiency. In a study in which achievement trends of low-income students beginning in the second grade through the seventh grade were observed, a decline in word-meaning scores was identified after the third grade and in oral and silent reading comprehension in the sixth and seventh grades. Difficulties with comprehension were attributed to the challenging texts that “use more difficult, abstract, specialized, and technical words; the concepts used in textbooks also become more abstract, and understanding them requires more sophisticated levels of background knowledge and cognition” (Chall, Jacobs, & Baldwin, 1990, p. 46). Proficiency is based on critical building blocks in each grade. Some of the building blocks (e.g., vocabulary development, analysis of narrative text) span kindergarten through grade three, and others (e.g., phonemic awareness, concepts about print) are mastered in specific grades.

**English Language Development (ELD)**

According to California’s Department of Education, all ELs regardless of grade level or primary language literacy level, must receive reading instruction in English. The ELD standards were designed to assist classroom teachers in assessing ELs’ progress toward attaining fluency in English. These strategies differ according to age at which a student begins learning English, K-12. The goal of these standards is to move ELs to full fluency in English and to proficiency in English language arts.
Figure 3 illustrates the proficiency levels.

![ELD Proficiency Levels Diagram]

*Figure 3. ELD Proficiency Levels.*

The successful learning of second language students requires that the instruction of students be highly integrated to include all language skills and provide challenging activities that focus on subject-matter content (Brinton, Snow, & Wesche, 1989). To ensure all ELs achieve proficiency in English language arts standards, teachers must concurrently use both ELD and English language arts standards.

**Reading Comprehension Strategies**

This section of the literature review delves into the different reading comprehension strategies being provided to ELs and findings on the effects of these strategies on student achievement. It explores the research question, “Which strategies have the most and least significant impact on reading comprehension achievement
among ELs?” The literature identifies several reading comprehension strategies, in addition to distinguishing the link between reading comprehension and other facets of reading. Several strategies were used to analyze the performance of ELs and therefore were included in the Likert scale survey. The strategies selected for the survey were based on several factors including how ELs learn (learning theory), how ELs cultural background relates to their academic success (culturally responsive pedagogy), and reading comprehension instruction. For the purpose of this study, the author focused on the impact of the use of these strategies as reported by the teachers who have knowledge and use them in their classrooms. Reading comprehension is the measure used in this study for determining reading achievement among ELs. While the test scores do not reveal all of the answers as to why ELs may or may not be achieving, it can provide a correlation to specific reading comprehension strategies and achievement.

**Related Literature Review**

According to the 2009 National Association for Educational Progress (NAEP), the mean achievement gap in reading between white and Hispanic students is 24 points. However, reading results for 2008 continued to show gaps in scores between White and Black students ranging from 21-29 points and between white and Hispanic students ranging from 21-26 (NAEP, 2009). From 1992-2007 the NAEP assessment for reading was based on three different contexts for reading comprehension: reading for literary experience, reading for information, and reading to perform a task.
A meta-analysis by The National Reading Panel (NRP) (2000) reported that vocabulary is one of the most important areas of comprehension and should not be neglected. Also, the NRP found a variety of methods by which readers acquire vocabulary to improve their reading comprehension. Although there has been success in teaching a variety of effective text comprehension strategies, the most promising research focuses on teacher preparation to teach comprehension. Research on reading comprehension strategies has dramatically evolved over the past two decades. The focus for researchers back then was on teaching students one strategy at a time. Several years later, many strategies were being taught in combination. However, proficient reading requires constant, on-going adaptation of many cognitive processes (NRP, 2000).

Cheung and Slavin (2005) believe responsive teachers view language minority students as an asset to their classrooms and use the students’ knowledge to develop a more authentic curriculum for all students. Moreover, Genesee, Lindholm-Leary, Saunders, & Christian (2006) found first and second language learners are fundamentally the same as it involves multiple abilities such as: phonological awareness, decoding skills, and comprehension. However, she asserts that second language reading development is different because ELs draw on their first language experiences when learning to read in a second language. Therefore, students from diverse backgrounds may need more opportunities to apply their prior experiences and draw upon their cultural and language strengths to improve their reading. Both ELs and English speaking students need exemplary reading programs that include
developmentally appropriate instruction and materials focusing on phonological awareness, phonics, vocabulary, oral language instruction, and cooperative learning to increase comprehension (Cheung & Slavin, 2005).

According to August and Hakuta (1998) educators should focus on several key teaching principles rather than looking for one program model that works for all ELs. Using several different teaching techniques allows for differentiating instruction according to the needs of the students. Effective teachers of ELs specifically tailor their curriculum to the needs and learning styles of their students by adjusting the level of English vocabulary and structure to match the level of English proficiency. Also, teacher competence in differentiating instruction increases the success of ELs by providing opportunities to meet mandated curriculum demands within a culturally relevant context.

A longitudinal study examined word decoding and reading comprehension among students in first through sixth grade for a sample of Spanish speaking English Language Learners. The sample included 120 boys and 141 girls at the initial data collection beginning with students entering first grade. Both word decoding and reading comprehension scores illustrated quadratic growth over the course of the study. However, the sample’s reading comprehension scores began to decline behind the normative sample in the third grade. While researchers Nakamoto, Lindsey, and Manis (2007) cite past research consistent in phonological awareness, rapid automatic naming and oral language measures were used as predictors and correlated with growth rates.
The study’s purpose was to describe the growth rates in word decoding and reading comprehension among students in first grade through sixth grade; and it investigated the extent to which phonological awareness, rapid automatic naming, and oral language measures predict initial reading status and growth rates.

According to Nakamoto et al. (2007) phonological processing is one of the major cognitive determinants of the development of decoding skills in the early stages of learning to read. Also, phonological access in lexical memory has been linked to word reading skill in longitudinal and correlational studies. Moreover, the oral language used in the study is important for reading comprehension because as children begin to read at higher levels putting a strain on the child’s ability to store and retain information. Therefore, Nakamto et al. (2007) assert achievement may increasingly depend on a child’s ability to retain material in memory while reading so that syntactic and semantic analyses necessary for comprehension can be performed.

The findings from this study showed a relatively large amount of growth in both decoding and reading comprehension scores between the beginning of first grade through the end of second grade, and substantially decreasing growth thereafter. The researchers attribute the growth to normal instructional effects as well as the timing of the sample’s initial exposure to English. The sample’s decoding skills remained in the average range throughout the study. However, the sample’s decline in reading comprehension ability began in third grade as compared to the normative English-speaking sample. The explanation given for the decline in reading comprehension ability focused on oral language ability. While the initial items on the reading
comprehension tasks emphasize decoding ability, the later tasks necessitate higher levels of oral language abilities. The data showed children with high decoding skills and high oral language abilities scored higher on reading comprehension tasks. Those children who performed low decoding skills and low oral language abilities never catch up with their peers.

Researchers Shanahan and Beck (2006) claim there are few existing studies that focus on comprehension instruction for ELs, and they do not offer clear examples of instructional practices that have demonstrated significant benefits for ELs. They argue that it is inevitable that reading comprehension is critical to long-term achievement of ELs. Researchers have demonstrated that ELs may comprehend more than they can orally communicate in English (Garcia, 1991; Moll & Diaz, 1987). Moreover, it is evident that vocabulary is a key factor to ELs' success in reading comprehension (Garcia, 1991; Saville-Troike, 1984).

Additionally, Droop and Verhoeven (1998) and Garcia (1991) recognized that the relationship between ELs’ background knowledge and text content strongly influences their comprehension. They suggest that teachers should provide texts with culturally familiar content in order to improve reading comprehension. However, it is critical for teachers to provide the students with the appropriate background knowledge with unfamiliar content before letting them read independently. Approaches such as Beck and McKeown’s (2006) Questioning the Author and Klingner and Vaughn’s (1999) Collaborative Strategic Reading divide texts into small
sections allowing students to discuss and clarify meanings, and apply specific reading comprehension strategies while reading.

Hill and Flynn (2006) found teaching ELs is no longer the sole responsibility of specialists, but the collective responsibility from all staff that interact with them. They assert the shift in responsibility makes differentiating instruction in the classrooms essential for English Language Learners’ success in language and literacy development. Goldenberg (2006) as cited in Buteau and True (2009), suggests ELs require instructional accommodations that include visual cues, physical gestures, building on students’ prior knowledge in their native language, summarizing text knowledge, repeated readings, targeted vocabulary, and paraphrasing students’ responses. In effect, these skills will help strengthen ELs’ skills in vocabulary development, reading and writing.

Furthermore, Buteau and True (2009) claim the following as best practices and supported by research to be effective strategies for differentiating instruction for ELs:

1. Cognates, used for vocabulary development;
2. All together now, choral readings allow ELs support for their reading from peers and teachers;
3. React and rhyme, letter sound correspondence used for comprehension by mimicking character facial expressions and rhyming;
4. Be a master thespian, acting out stories allows students to make sense of new vocabulary;
5. Create and individualized word library, used for building English vocabulary;

6. Create meaningful partnerships, allows ELs with opportunities to grow socially and academically within the context of school;

7. Create “language free” activities, allows ELs a less prescriptive way to learn vocabulary development and reading;

8. Avoid using idioms, it is too confusing for those students who are not fluent in English; and

9. Recognize cultural differences while encouraging parental involvement, it is important to note the role culture plays in an EL family’s approach to school.

While these strategies are effective for differentiating instruction for ELs, there are many other strategies that serve to enhance their learning experience.

According to Dreher and Gray (2009) understanding text structures can benefit English learners. Research has shown that even though ELs bring a wealth of culture and linguistic knowledge with them they still tend to fall behind their monolingual English-speaking peers (Echevarria, Short, & Powers, 2006, as cited in Dreher & Gray, 2009). Evidence is growing to support that ELs perform at or even slightly above their English-speaking peers in spelling and word recognition, but tend to struggle with reading vocabulary and reading comprehension.

Because vocabulary knowledge is so closely related to reading comprehension, ELs must develop a broad vocabulary base in order to be effective readers in English
Reading comprehension for ELs is interrupted when they encounter too many unknown words. Students can misinterpret the meaning for the text if they do not know one or two words. Tinajero (2001) believes teachers must directly teach vocabulary and provide opportunities for students to demonstrate vocabulary use both orally and in writing. Consistent with Wallace (2007) which he declares the imperative connection to teaching ELs to read is continued attention toward vocabulary development and the important link between vocabulary and reading comprehension. He asserts that ELS need a tremendous amount of vocabulary in order to read effectively. However, a study conducted by Carlo et al. (2004) assessed the impact of English vocabulary enrichment intervention on outcomes for ELs. The study found that a challenging curriculum based on teaching academic words, strategies for inferring word meaning from context, and tools for analyzing cross-linguistic aspects of word meanings did improve the performance of ELs. The second goal of the study was to determine whether improved vocabulary and word analysis skills had any impact on reading comprehension outcomes. They found that the intervention was effective in improving reading comprehension, but the effects were far less than for word knowledge.

Another study conducted by Proctor, Carlo, August, and Snow (2005) also indicated a relationship between vocabulary knowledge and reading comprehension among Spanish-speaking ELs. The results showed an imperative connection between vocabulary knowledge, listening comprehension, and reading comprehension, indicating “strong and significant relationships for all three pairs of variables” (p.
While vocabulary knowledge directly affected reading comprehension, it also had an indirect effect with listening comprehension. Therefore, vocabulary knowledge serves a “predictive role in the reading comprehension among ELs” (Proctor et al., 2005, p. 254).

In response to the struggle for ELs to attain reading vocabulary and reading comprehension skills like their English-speaking peers, researchers have developed programs in hopes to boost ELs students’ reading comprehension ability. Although Dreher and Gray (2009) assert these programs focus on strategies that help facilitate English reading comprehension for ELs, these strategies do not emphasize an essential element critical to comprehending English text or the structure of the text. They continue to claim the importance that young learners, especially ELs, understand the specific structures of informational texts. Research has shown that early experiences with instruction in the use of informational texts support students’ comprehension of these types of texts (Kletzien & Dreher, 2004; Williams et al., 2005, as cited in Dreher & Gray, 2009).

**Instructional Strategies**

According to Levine (2007) EL students go through predictable linguistic stages as they become proficient in English. Research indicates it can take from four to seven years to acquire academic literacy. Particularly, these linguistic stages are correlated to the students’ previous linguistic and life experiences. Each stage is a developmental process that varies from student to student and may take longer or shorter duration depending on their processing skills. The following strategies were
reported by Holmes, Rutledge, and Gauthier (2009) to reinforce language acquisition and proficiency so that students make connections with personal experiences and prior knowledge: (a) Total Physical Response (TPR); (b) Interactive word wall; (c) Dual language alphabet or concept books; (d) Schema stories; (e) Student self-monitoring; (f) K-W-L chart; and (g) Picture and sentence match. The basis for the selection of these strategies is rooted in the elements of an effective language program that values, respects, utilizes students’ differences. The researchers state that when cultural-linguistic differences are used as assets all students, native and non-native English speakers, benefit.

According to Dr. James Asher (1969), *Total Physical Response (TPR)* is based on the premise that the human brain has a biological program for acquiring any natural language. This approach introduces the language through a series of commands that have students demonstrate their understanding through action responses. When using TPR the teacher gives their students commands and models the command several times before asking the students to respond back. The objective for using TPR is to reduce the students’ stress levels while simultaneously building their self-confidence.

TPR is an engaging way to help EL students become proficient in English through physical movement to understand vocabulary and other key concepts. A teacher can use TRP activities to engage students to understand what is being demonstrated and asked through physical modeling. Because research has indicated a need for vocabulary development in order to increase comprehension, TPR provides ELs with opportunities to ‘actively’ build their vocabulary. Asher (1982) suggested
that teachers introduce only three new vocabulary items at a time although students may understand up to 36 vocabulary words in one session.

The next strategy, *Interactive Word Wall* is a word wall tailored to the students’ interest and academic needs, and includes very specific labels that are easy to identify (Gunning, 2010, as cited in Holmes et al., 2009). This strategy enables ELs to recognize, analyze, and utilize words necessary for reading and other academic content areas. According to Brabham and Villaume (2001) word walls have great potential for transferring responsibility for reading and writing from teachers to students. The purpose for word walls varies from teacher to teacher or topic to topic. Some teachers will use word walls to facilitate word analysis or commonly misspelled words, while other teachers use them to build vocabulary skills in their students. Although there are many different ways to use a word wall, most word walls share these characteristics: all are collections of words that are developmentally appropriate for the students in the classroom, words are selected for specific instructional purposes, collections are typically cumulative, and activities that surround the word wall provide conversational scaffolds (Brabham & Villaume, 2001).

In addition to providing conversational scaffolds for reading, word wall activities may increase reading fluency. Reading fluency is a critical element in the reading process. It is the ability to read with speed and efficiency in order to recognize, decode, and comprehend text (Chard & Pikulski, 2005, as cited in Jasmine & Schiesl, 2009). Word wall activities are incorporated for students to demonstrate to use these words in various ways. Then, with enough practice and repetition these
words become anchored in their long-term memory allowing quick and easy access, promoting detection of patterns, and encouraging connections between words (Hall & Cunningham, 1999, as cited in Jasmine & Schiesl, 2009).

An action research project conducted in May 2004 by Jasmine and Schiesl (2009) was designed to improve reading fluency of first grade students by investigating the use of word walls over a four-week period. The students were broken up into groups of four and participated in one 40-minute word wall station per week and a twenty-minute whole class activity three times per week. Results from this study suggest that word walls might be one strategy to increasing reading fluency. Teacher observations and running records showed that all students read more fluently and recognized more high frequency words. Although post running records from the study indicated that some of the students increased their reading rate by a couple of points while other students showed significant results. Moreover, results suggested that despite varied reading abilities, word wall activities were one factor that may have aided to build high frequency word vocabulary.

Subsequently, Dual Language Alphabet or Concept books allows ELs to rely on their experiences from their native country as they learn a new language and experiences unique to their new country (Schecter & Cummins, 2003, as cited in Holmes et al., 2009). Combining reading and writing helps students learn the new conventions of a second language. Both English speaking and non-English speaking students benefit from these books as they learn literacy practices of other cultures.
Later, *Schema Stories* allows ELs to activate and use related schema in order to construct meaning based on their prior knowledge and experiences. The goal is for students to use their prior knowledge and experiences to comprehend meaning of a text by sequencing a story from beginning, middle, and end. In a study by Lawrence Sipe, (2001) children in a combined first/second grade classroom responded to five variants of a *Rapunzel* story. The goal of the study was:

1. to describe the intertextual links made by the children as they listened to each variant;
2. to trace the development of their schema for the tale;
3. testing schemata;
4. consolidating what they had learned into a solid schema; and
5. applying this knowledge to a variant that challenged their developed schema.

The study showed empirically that the use text sets is a powerful way of enabling students to make intertextual connections and to engage in schema building for a specific story. Pedagogically, the range of use for intertextual links suggests the importance of arranging experiences for children to enable the making of these links (Sipe, 2001).

The next strategy, *Student Self Monitoring* seeks to improve reading comprehension by teaching students metacognition and reading fluency. This strategy teaches students to self-reflect and to identify problems and solutions in order to understand the meaning of the passage. Students can use questions to ask themselves
questions about a text to help them understand what they are reading. Self-correction in reading is widely recognized as an important step in the progress of language development. Young readers often use what they have already learned about correcting their speech when they begin to read books (Clay, 2001, as cited in Forbes, Poparad, & McBride, 2004). Research on high achieving readers indicate they self-correct their miscues more frequently than low achieving readers.

Self-monitoring and self-correcting are strategic processes that may lead to megacognition, which is a characteristic of proficient readers (Forbes et al., 2004). Self-correcting behavior benefits both the reader and teacher. For example, observing and tracking students’ reading behavior provides teachers with information that can help them monitor their students’ progress and properly adjust instruction. When teachers value miscues as opportunities for their students to learn, they become eager to use what they know and apply it while reading (Forbes et al., 2004). Teachers can create opportunities for their students to practice self-monitoring strategies that will result in more accurate reading. However, the most effective way to teach self-monitoring strategies is through supportive instruction to small groups and guided reading.

The next strategy, KWL Chart helps students understand text by listing what they Know about the topic, generate questions based on what they Want to know, and after reading the text discuss what they Learned. Carr and Ogle (1987) developed this teaching strategy to engage readers in connecting prior knowledge with textual information, as well as organizing, integrating, and summarizing knowledge acquired
from reading. The primary outcomes from using a KWL chart help students
motivation, background knowledge, making inferences, and self-regulating
comprehension in developing reading proficiency.

A secondary outcome according to Carr and Ogle (1987) is that students will
eventually select and use his strategy because they believe they can comprehend better
if they use it. Using KWL addresses many language comprehension processes such as:
making associations, predicting, generating questions, generating mental imagery,
clarifying, evaluating, elaborating, and summarizing. Furthermore, the primary aim of
this strategy is to activate and build background knowledge. The K step, if done in a
large group setting, can provide students with weaker knowledge an opportunity to
build their understanding before reading. Also, students learn the value of predicting
and generating questions before reading a story. Finally, during the L step, students
are focused on how much they have learned and added to their background
knowledge. This strategy provides a model for activating background knowledge and
self-questioning at every stage in the reading process.

Carr and Ogle (1987) encourage the use of a “strategy sheet” when using
KWL. The strategy sheet consists of three columns representing each of the KWL
steps. During the K step, students categorize what they think they already know about
the topic or story to help them infer connections while they read. During the W step,
students categorize what they would like to know about the topic or from the reading.
Lastly, during the L step, students create a map or graphic organizer of the concepts
and summarize what they have learned. The scaffolding of using this strategy allows
students to access prior knowledge before reading, monitor understanding during reading, and check for understanding after reading by summarizing text.

After that is Picture/Sentence Match. Herrell and Jordan (2007, as cited in Holmes et al., 2009) emphasize visual scaffolding as a way to support word learning through conversation and written text. This strategy promotes vocabulary building and teaches sentence structure by having students pair pictures with written sentences. Also, this strategy is used to promote academic language development by working with the teacher or in pairs or small groups to name the picture and match it to the corresponding sentence.

The growing population of ELs makes it necessary for teachers to learn and use systematic strategies that lead to English proficiency. Although these strategies are not exclusive for ELs, they draw upon the fundamental components of language acquisition. Furthermore, teachers need to present opportunities for students to practice English through extensive reading activities to build comprehension based on the students’ cultural and linguistic background.

Summary

The scope and complexity of how ELs learn and which instructional strategies address their needs has been thoroughly documented in the literature. The challenge for schools across America is teaching language minority students to read and write in English. Literacy in English is a fundamental component to achievement in every academic subject, specifically in reading comprehension. For the 41 states reporting,
only 18.7% of ELs scored above the state established norm for reading comprehension (Kindler, 2002).

Literature that supports best practices in reading comprehension to increase reading achievement among the EL population includes teacher interventions and staff development, student interventions, and assessments. The research provides valuable strategies for educators and policy makers to demonstrate a link between reading achievement to the academic success of the EL population. Despite many efforts by researchers to explore EL reading achievement through reading comprehension and what works, there is not enough research that focuses on instructional best practices to increase achievement for this subgroup. A major concern for schools across California is educating children from immigrant families and ethnolinguistic groups (Garcia & Curry-Rodriguez, 2008). The current policies regarding EL educational outcomes represent forms of interventions for students and teachers to alter the current practices while raising standardized test scores. The causes of the problem are not addressing the needs of the EL population to produce desirable outcomes, which is to increase the number of ELs passing the reading portion on the STAR test. The research for increasing achievement among the EL population merits value, especially because ELs continue to fall below the standard. Finally, there is a growing concern among educators, parents, and policymakers with the percentage of students not proficient in the reading competencies assessed by the STAR, and they should insist that current policy practices need reforming.
Chapter 3

METHODOLOGY

Introduction

The purpose of this study was to contribute to the research on the effective use of instructional best practices in reading comprehension to raise English learners (ELs) reading comprehension achievement. This study also contributes to current research by exploring important issues related to reading comprehension instructional strategies, which ELs are currently assessed in reading by federal mandate under NCLB for language proficiency. It also attempts to fill a gap in preexisting literature on reading comprehension strategies by providing practitioners a vision for making instructional improvements to increase reading comprehension achievement among ELs. Although there are several studies investigating ways to improve EL performance in reading comprehension, there has been little improvement over the years, therefore validating the need for further research.

This chapter describes in detail the research design, data collection methods, setting and sample, and data collection and analysis. Furthermore, this chapter addresses issues of reliability and validity of the study along with addressing the measures taken to protect the rights of the participants.

Research Design and Approach

This study was a quantitative study. The researcher selected a quantitative method to measure the relationship between teacher survey data on instructional strategies in reading comprehension for ELs and reading achievement. Moreover, this
quantitative research was an analytic study into the investigation between effective instructional practices and reading comprehension ability among ELs. The study provided statistical evidence of a relationship between the independent variables (instructional strategies) and the dependent variable (test scores). This study surveyed teachers in grades 2 through 5 from two high performing Northern California elementary schools to identify self-reported instructional strategies they have knowledge about and use in the classroom to teach reading comprehension to ELs. The survey determined whether or not teachers have an understanding of the listed strategies and use them in their classrooms. The survey also reported the teachers’ perceptions on the effectiveness of each strategy. The goal of the study was to determine if there was a correlation between reading comprehension instructional strategies used in classrooms and reading comprehension achievement among ELs as reported on the STAR.

The consenting teacher participants answered survey questions between the dates of December 1, 2010 and January 21, 2011 as to what instructional practices they had knowledge of and used in their classrooms. It is important to note the surveys were distributed by the site principal at each school and not by the researcher.

Findings from these sources of data were compared to the STAR results for the site and grade levels of returned surveys. More specifically, STAR test scores from ELs in grades 2 through 5 were used to composite an average grade level score in reading comprehension. These average percent proficient scores were compared using a regression analysis to the teacher self-reported use of reading comprehension
strategies. The names of the students remained anonymous throughout the study as were the names of all teacher participants. Also, the names of the schools and principals selected in this study have been changed to pseudonyms. The survey was administered once in the fall/winter to the participating teachers to see what, if any, correlation existed between the instructional practices used in the classrooms and EL reading comprehension achievement. These sources of data assisted the researcher in conducting a unique and rigorous study that contributed to a better understanding about how to increase reading comprehension achievement for ELs.

A quantitative rather than a qualitative or mixed method approach was selected to examine the relationship between the teacher self-reported use of specific EL reading comprehension instructional strategies and student achievement test scores in reading comprehension. A quantitative survey approach was selected because it accomplished the study’s purpose and attempted to answer the research questions. A regression was selected to guide this study’s analysis by answering the following questions:

1. What is the relationship between two things?
2. How precise is the estimate of the relationship?

The regression answered the first question by the estimated “coefficient” and the second question in the “t” statistic. However, the estimated relationship between the variables produces either a positive regression coefficient or a negative regression coefficient. A positive coefficient describes how well two things are positively correlated or how well they move together, while a negative coefficient moves in
opposite directions or when one goes up the other goes down. These relationships as well as the results of the analysis are discussed in Chapter 4.

**Context, Setting and Sample**

This study took place at two northern California elementary schools in Placer County. These two sites were selected due to their unique demographic student population and extraordinary achievement and will be referred to as Elementary Schools ABC and XYZ.

School ABC was an elementary school serving students in K-5 with an enrollment of approximately 600 students. During the 2009-10 school year 18% were students with disabilities; 6% or 44 students were English learners; and 21% were socioeconomically disadvantaged. School ABC has developed a positive school environment that encourages and supports all students to be successful. The 2009 API base score for School ABC was 911. The student subgroup performance breakdown was: White (non Hispanic origin) reported an API base score of 921, Socioeconomically Disadvantaged API base score of 901, and English learners API base score was unreported because the EL population was too low at 6% (California Department of Education, 2010c). All of the subgroups, including English learners, met the percent proficient in English Language Arts as measured by the AMOs scored at or above 70%. Students with Disabilities scored the lowest in English Language Arts with a score of 66%. The English Language Arts target was set at 46%.
Table 1

*School ABC Student Enrollment by Ethnic Group*

<table>
<thead>
<tr>
<th>School Enrollment by Ethnic Group 2009-10</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>2.7%</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.6%</td>
</tr>
<tr>
<td>Asian</td>
<td>3.4%</td>
</tr>
<tr>
<td>Filipino</td>
<td>1.3%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>16.6%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>0.2%</td>
</tr>
<tr>
<td>White</td>
<td>71.5%</td>
</tr>
<tr>
<td>Two Or More</td>
<td>2.3%</td>
</tr>
<tr>
<td>None Reported</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

Although school ABC’s EL subgroup was performing above its target, a before school Reading Club was established to boost the mastery of Language Arts standards in grades 4-5. In addition to the before school Reading Club, there was a Reading Rocks program providing mentors to readers in grades 2-3.

School XYZ was also an elementary school serving students in K-5 with an enrollment of approximately 500 students. During the 2009/10 school year, 7% were students with disabilities; 49% or 272 students were English learners; and 7% were socioeconomically disadvantaged. At XYZ school students, parents, and staff are responsible for creating innovative programs and developing a balanced and effective education for all students. The staff was committed to providing a standards-based curriculum, which was differentiated to meet the needs of all students. The 2009 API base score for School XYZ was 808. The student subgroup performance breakdown is:
White (non Hispanic origin) reported an API base score of 829, Socioeconomically Disadvantaged API base score of 783, and English learners API base score of 806 (California Department of Education, 2010c). Among all of the student subgroups the percent proficient in English Language Arts as measured by the Annual Measureable Objectives (AMOs), Hispanic or Latino scored the lowest with 31% proficient. The English Language Arts Target was set at 46%.

Table 2

*School XYZ Student Enrollment by Ethnic Group*

<table>
<thead>
<tr>
<th>School Enrollment by Ethnic Group 2009-10</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>6.4%</td>
</tr>
<tr>
<td>American Indian</td>
<td>0.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>10.4%</td>
</tr>
<tr>
<td>Filipino</td>
<td>5.0%</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>14.7%</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>1.2%</td>
</tr>
<tr>
<td>White</td>
<td>52.7%</td>
</tr>
<tr>
<td>Two Or More</td>
<td>8.1%</td>
</tr>
<tr>
<td>None Reported</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

School XYZ was one of seven elementary schools in the district, and the curriculum was focused on Language Arts, English Language Development, and Mathematics. Before and after school opportunities for tutoring in Reading and Mathematics are available for students. Furthermore, all certificated staff were GLAD (Guided Language Acquisition & Design) certified. While school XYZ reported only
31% proficient in English Language Arts, this study’s focus was to determine which reading comprehension strategies are effective in obtaining the aforementioned test scores for ELs using student percent proficient scores from the STAR test.

This study’s sample was a convenient sample of teachers from both sites in grades 2 through 5. There were 24 teachers that participated in the study. There were 12 teachers that participated from School ABC and 12 from School XYZ. The researcher collected 75% of the surveys from the total eligible population. Language Arts and reading comprehension standardized percent proficient scores were obtained from the participants’ classes to get an average class score.

This study determined whether a relationship existed between the reading comprehension strategies used in the classrooms and the class percent proficient scores in Language Arts and reading comprehension. Furthermore, the study explored this relationship involving the various reading comprehension strategies used in the classrooms to discover which strategies had the most or least impact on the test scores.

**Adult Participants**

The teachers of the schools were invited to participate in the study. The criterion for inclusion was teaching in grades 2 through 5 with an EL student population greater than 5% at each research site. There were no monetary inducements for participation in this study. The teachers were given a consent form at the site if they choose to be included. There were 17 teachers at School ABC that teach in grades 2 through 5; and 15 teachers at School XYZ.
Site Participants

Ms. Anderson, principal at school XYZ, provided a letter verifying that this research in the effects of reading comprehension strategies for ELs is being conducted with the school’s permission. Mr. Johnson, principal at school ABC, also provided a letter verifying that this research in the effects of reading comprehension strategies for ELs is being conducted with the school’s permission. In addition to the site principals’ consent, consent was obtained at the district level. 1

Instrumentation, Materials, Data Collection, and Analysis

The instrumentation selected for this study’s research design was a teacher self-reported Likert scale survey (See Appendix A) and student test score data in Language Arts reading comprehension. The data was collected in January, 2011. Prior to the survey distribution, the researcher met with both site principals to review the survey administration guidelines and to pass out materials. A Likert scale is a psychometric scale commonly used in survey research. For example, a Likert scale is a method of scaling answers to corresponding degrees of measurement such as: I feel grading is the only way to measure student success: 1=Strongly agree, 2=Agree, 3=Disagree, 4=Strongly disagree. Specifically, this survey was a knowledge/use survey that asked participants to assess their knowledge on the strategy before responding to the use of it in their classrooms. In addition, the participants were

1 Entrée into the site/population is via the researcher’s professional relationship with a principal in the Dry Creek Joint Elementary School District and as a colleague in the Independent Doctorate Program. The researcher had no previous relationship with the participants or any affiliation with the above named district.
invited to respond on whether or not they believed each strategy was effective in raising reading comprehension for ELs. The teacher self-reported survey results along with the student achievement data provided answers to the following research questions:

*Research question #1*: What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?

*Research question #2*: Which strategies have the most and least significant impact on reading comprehension achievement among ELs?

The teacher self-reported survey questions were intended to answer the aforementioned research questions. The Likert scale survey results were compared to student scores to help determine which strategies affected student achievement data in Language Arts, reading comprehension. The survey was based on a thorough investigation of peer-reviewed literature to conclude which reading strategies are most effective in raising reading comprehension achievement. For the purpose of this study, consenting teachers responded to questions on the survey about various reading comprehension strategies they had knowledge about and used in their classrooms by selecting the following choices using a five-point scale. The five-point *Knowledge/Use Scale* should be interpreted as follows:
In my role as a teacher (I have knowledge of the following),

1. Low knowledge: I know very little about this topic.
2. Some knowledge: I know something, but not much about this topic.
3. Moderate knowledge: I know something about this topic but I could learn more.
4. Good knowledge: I feel I know more than the average teacher educator about this topic.
5. High knowledge: I know a great deal about this topic.

The five-point Use Scale should be interpreted as follows: In my role as a teacher (I use the following),

1. Low use: I almost never use this component during the week.
2. Some use: I occasionally use this component during the week.
3. Moderate Use: I sometimes use this component during the week.
4. Moderately High Use: I use this component more than others during the week.
5. High Use: I use this component very frequently during the week.

The first section of the survey asked teachers about their knowledge and use of various reading comprehension strategies they teach to ELs. There were seven different strategies in this section that teachers responded to having knowledge about.

The following strategies were identified and surveyed:

1. Total Physical Response
2. Interactive Word Wall
3. Dual Language Alphabet or Concept Books
4. Schema Stories
5. Student Self-Monitoring
6. The K-W-L Chart
7. Picture and Sentence Match
The next section of the survey asked teachers whether they perceived the previously mentioned strategies were effective in raising reading comprehension achievement for ELs. Then, the final two questions in the survey asked for written responses from the participants on further information about effective reading comprehension strategies the survey did not mention. This section was used to assess whether or not these self-reported responses correlate to the student test score data.

The final section to the data collection was the student achievement data in Language Arts and reading comprehension as obtained from the STAR test. The student achievement data provided the researcher with individual student data to calculate a class average test score in language arts and reading comprehension. Therefore, the use of student data enabled the researcher to determine if a correlation between each reading comprehension strategy used in the classrooms and the student achievement data. Previous research studies have addressed various approaches to improving reading comprehension, but few have distinctively considered the impact of individual reading comprehension strategies such as the ones selected in this study.

A statistical analysis using a multiple linear regression was used in this study. The first analysis indicated whether a relationship existed between the knowledge/use of each reading comprehension strategy and student achievement data. The second analysis indicated if there was a positive or negative relationship between the perceived effectiveness of each strategy and student achievement data. Moreover, the analysis provided the researcher with specific data about which strategies (independent variables) have the most or least significant impact on the student
achievement data (dependent variables). The data allowed analyses of which independent variables illustrate a significant relationship to the dependent variables.

**Response Rate**

Survey response rates were important in determining the quality of the survey by taking the number of people who answered the survey divided by the number of people in the sample. The percentage of people who responded to the survey is considered the response rate. A high survey response rate helped ensure that the survey results were representative of the survey population. Moreover, a low response rate can create a sample that demonstrates some level of bias.

For this study, the total number of participants at both sites was 32. The number of participants that responded to the quantitative survey was 24 leading to a response rate of 75%. When looking at the response rate for each of the study’s sample sites, ABC Elementary had 17 eligible participants of which 12 responded; and XYZ Elementary had 15 eligible participants of which 12 responded. The response rate for ABC Elementary was 71%, and the response rate for XYZ Elementary was 80%.

**Issues of Validity**

The researcher worked to ensure the validity of the study was what it was intended to measure through the research methodology. A doctoral dissertation committee as well as a cohort of peers critically reviewed this study’s methodology. The survey questions were analyzed to ensure that all of the questions measured what was intended in order to answer the study’s research questions.
One area of validity that may arise from the researcher’s study was the representativeness of the data. The guidebook for surveys suggest that at least of 60% of the total population’s usable completed surveys should be collected as a minimum standard to ensure the data was valid. However, in this study, 75% of the total sample returned surveys. Even though the percent of representativeness meets the standard, the researcher’s sample is considerably small. Due to the small sample used in this study, the researcher took caution in making appropriate generalizations when reporting the results and making future recommendations. A larger sample would have allowed for a greater reduction in Type I and Type II errors. For example, Type I or “false positive” error may conclude these instructional strategies may have an impact on student achievement when in fact they do not. In a Type II error or “false negative” would be if the regression did not show significance when in reality these strategies do impact student achievement.

**Issues of Reliability**

Reliability is the extent to which the survey yields similar results on multiple trials. There are two types of reliability when using survey data: random error and measurement error. Random error is considered the unpredictable error and occurs in every study. Considerably, random error is primarily affected by sampling techniques. One way to lower the chance of random error would be to select a larger and more representative sample. Since the researcher’s sample size was small, future research on this topic could be broaden to include a much larger sample. Measurement error refers to how well an instrument performs in a given population. The researcher’s survey
instrument has been shown to have minimal measurement error. Surveys were distributed during the same six week period under similar conditions. The researcher was responsible for collecting all survey data and inputting it into a data program. The survey instrument was developed to elicit similar consistent responses from the participants.

**Participants’ Rights and Ethical Protection**

The participants’ rights to privacy and psychological safety were protected in three ways. First, the researcher used pseudonyms for all participants in any documents made public: for example surveys, student achievement data, research papers or presentations. Second, participants had a consent form in which they select which possible ways the survey data can be used. Third, as part of the consent form, participants had the option to withdraw from the study at any time or if they felt any discomfort. Access to data was limited to the researcher and university dissertation committee members and will be destroyed no longer than one year after collection.

Also, district, site, and the university Internal Review Board for Human Subjects approved the researcher’s study before any consent from the participants was acknowledged or data was collected. This includes any/all data pertaining to the study such as: (a) Teacher surveys, and (b) Student achievement data. The University has obtained a Federal wide Assurance for the Protection of Human Subjects from the U.S. Department of Health and Human Services, by agreeing to follow the Code of Federal Regulations: http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm.
All documents containing approval and consent for this study can be found in the appendix.

Chapter 4 provides a comprehensive analysis of the survey data and findings. This chapter presents a brief overview of the data collection procedures before discussing the data analyses and findings. The chapter concludes by answering the research questions that have guided this study.
Chapter 4

ANALYSIS OF THE DATA

Introduction

This chapter provides a detailed description of the data collection procedures, a comprehensive analysis of the survey data, and the findings that emerged from the data. The quantitative data analysis explained in this chapter determined patterns which became apparent and uncovered significant relationships between the independent and dependent variables.

The study used survey research to focus on effective reading comprehension instructional strategies as reviewed in the literature. The survey data was based on self-reported responses from teachers based on the instructional strategies used in the classroom. The self-reported instructional strategies were the independent variable(s) in this analysis, while the dependent variables were the EL students’ STAR average percent proficient scores in reading comprehension. The former were analyzed in relation to the latter to determine if the independent variables could explain any gain or loss in the reading comprehension scores of ELs. The survey also incorporated two open-ended questions in order to elicit answers not included in the survey. These questions were essential in the data analysis to expand the opportunity to understand what was happening in the classrooms in regards to exemplary instructional practices, and to deepen the researcher’s and readers’ understanding of alternative approaches for increasing EL reading comprehension.
The primary purpose of this study was to determine which reading comprehension instructional strategies had an impact on EL students’ reading comprehension achievement. More accurately, the researcher investigated which instructional strategies lead to an increase in reading success. The study analyzed the relationship between the self-reported instructional strategies (knowledge/use and effectiveness) and student achievement, and qualitatively sought out more compelling examples of how to increase EL reading achievement at both research sites. The final goal of the study was to develop detailed recommendations and direction for school leaders to implement when seeking transformation to impact the achievement of ELs and all students. Figure 4 illustrates the research design of the study.

Figure 4. Research Design of the Study.
Figure 4 illustrates the study’s research design used to address both of the research questions. The last portion of the survey included two open-ended questions and was used to enhance the quantitative data. These questions allowed the researcher to gain a more in-depth understanding of which instructional strategies and assessments could be used to increase reading comprehension achievement for ELs. The inclusion of these two questions also allowed the researcher to explore alternative sources for increasing EL reading achievement that was not apparent in the literature. Moreover, these questions provide insight into the limitations of the study and is worthy of further exploration in the future. Since teachers in this study responded to a survey about effective instructional strategies for ELs, their voice was an integral part in addressing EL achievement.

**Research Questions**

The following research questions have guided this study, data collection procedures, and presentation of analysis. The goal of the study was to collect data to find out if a relationship existed between reading comprehension instructional strategies and reading comprehension achievement. In order to do so, the researcher examined literature on how students learn, specifically how ELs learn, and other factors that contribute to their reading success. The following research questions were answered based on the data presented throughout the chapter. The researcher felt the research questions were answered based on the data selected in this study to the extent to which the limitations of the study allowed. However, as a scholar practitioner the
research revealed that there may be suitable alternatives for increasing EL achievement worth investigating in the future.

*Research question #1*: What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?

*Research question #2*: Which strategies have the most and least significant impact on reading comprehension achievement among ELs?

**Methods**

**Data Collection**

This study as presented in Chapters 1 and 3 examined the relationship between teacher reported survey data about instructional strategies in reading comprehension for ELs and achievement. The performance measure used in this study was EL reading comprehension STAR test scores from students in grades 2 through 5 between 2009-2010. A Likert-scale survey was used for the quantitative data collection process. The survey incorporated a *knowledge/use* component for each of the instructional strategies and determined whether or not teachers have an understanding of the listed strategies and use them in their classrooms. The teacher self-reported survey questions were intended to answer the aforementioned research questions. Also, the Likert scale survey provided data in order to determine how teachers perceived effectiveness of each instructional strategy as it correlates to student achievement data in reading comprehension. The survey was based on a thorough investigation of peer-reviewed
literature to illuminate which reading strategies were most effective in raising reading comprehension achievement for ELs.

Explicitly, the survey asked teachers to respond to questions about effective reading instructional practices by answering whether or not they have knowledge of each of the seven strategies. Then, the second part of the survey asked them whether or not they use each of the seven strategies in their classroom.

The next section of the survey asked teachers to rate each of the seven strategies on its effectiveness for increasing reading comprehension scores using a scale of 1-5 (5 being the most effective). Finally, the survey included two open-ended questions (9 and 10 below) to probe any responses not included in the survey (See Appendix A).

9. Please list any strategies NOT mentioned in the survey you find effective for increasing reading comprehension among English Language Learners?

10. In your opinion, what is the best way to assess the reading comprehension of English Language Learners?

Data Analysis

The researcher’s analyses pooled the data from 2009-2010 STAR results and found that, in most estimates, teachers reported knowledge/use of specific instructional strategies were not effective in raising student achievement outcomes for ELs. The study found a statistically significant positive coefficient for student self-monitoring and a negative coefficient for KWL. The average test scores for ELs in reading comprehension were considerably lower than their English-only peers and consistent
with statewide data for this subgroup. Participants in this study were from settings with fewer than 50% of their student population being EL, yet this subgroup was not meeting proficiency standards in reading. The analyses of the data presented a link between the knowledge/use of instructional strategies and the need for teacher professional development which are discussed in Chapter 5.

Data Set

The data set consisted of teacher responses to survey data on instructional strategies and STAR test scores in reading comprehension for ELs in grades 2 through 5 from the academic years 2009-2010. The researcher only pursued an analysis of the perceived effectiveness of reading comprehension instructional strategies based on survey data in grades 2 through 5, because different curricular foci in grades 6 and above would have required a different set of instructional strategies. The analysis measured what, if any, gains from spring 2010 STAR test scores were associated with teacher reported instructional strategy knowledge/use and effectiveness.

Variables

Outcome Variables

In most research, one or more outcomes variables are measured. Statistical analysis was done on the outcome measures, and conclusions were drawn from the statistical analysis. The collection of EL student standardized test score data was a key part in this study’s research design. Other studies have used school summary data or academic performance indexes as outcome measures. In this study, the researcher selected STAR test scores in reading comprehension for ELs as the measure of student
achievement. The STAR is a state-mandated, criterion-referenced test that is administered statewide each spring for grades 2 through 11 beginning 1999 to present. All students, including ELs, must participate in STAR testing each year. In this case, the outcome the researcher wanted to understand was the impact of the instructional strategies on reading achievement. More specifically, the test scores were selected as the measure of EL reading achievement because that is how the district/state determines reading success. Previous research studies have drawn conclusions about the impact of instructional strategies like the ones used in this study, but few have been able to draw specific conclusions about each strategy’s impact on achievement. Hopefully, these conclusions will have implications for more targeted classroom instructional improvement efforts locally and nationally.

Control Variables

A variety of individual, classroom, and school factors can impact student achievement scores. Examples of control variables include: student prior achievement, student demographic characteristics, teacher demographic characteristics, school level demographics, classroom level variables, and teachers’ years of experience and training. In this study the researcher did not control for any of the above-mentioned variables, although the inclusion of a broader range of variables can be used for future research. However, it should be noted that student demographic factors outside of EL classification may impact their learning. Teacher factors such as years of experience and training have also been shown to be a factor in EL achievement. Research has established that teachers with good professional preparation make a difference in
students’ learning (Darling-Hammond, 2002). The inclusion of control variables could provide the researcher with a better understanding of what truly impacts EL reading achievement.

**Analyses**

The researcher’s approach to the analyses as explained in Chapter 3 was to discover if a relationship existed between a particular set of instructional strategies and student test scores. The researcher hypothesized that a relationship was present, but to what “extent” did the instructional strategies impact the test scores. Moreover, the researcher wanted to delve into the relationship between the independent and dependent variables in order to improve academic outcomes for ELs. The survey and test score data used in this study was inputted into a statistical program called Statistical Package for the Social Sciences (SPSS). Descriptive statistics were used in the analysis of some of the study’s data. However, in order to investigate the relationship between instructional reading comprehension strategies and reading achievement, a more complex analysis was used. A linear regression assisted the researcher in the investigation of the aforementioned relationship in attempt to answer the research questions.

Also, the regression analysis allowed the researcher to determine the statistical significance of the data. A regression analysis is more robust in determining how the typical value of the dependent variable changes when any one of the independent variables is varied. It is also an eminently useful statistical technique that can be used for both description of a large variety of data sets and prediction of outcomes in many
situations (Berk, 2004). The analysis informed the researcher about which strategies were influencing student outcomes by chance and which strategies demonstrated a significant relationship to the outcome data. The results indicated that instructional strategies predicted reading comprehension achievement which are analyzed later in this chapter.

The following sections contain descriptive statistics, including a summary of response frequencies for the survey statements about the knowledge/use and effectiveness of each of the instructional strategy on the Likert-Scale Survey. Descriptive statistics served to summarize variable averages and standard deviations. For the purpose of this study the survey questions were divided into two groups: knowledge and use of each of the seven instructional strategies and effectiveness of each strategy. The subsequent section of this chapter describes the responses to the Likert-scale survey questions which were used to address question one and question two of the study. These analyses provided evidence of which instructional strategies had significant impact on the student achievement test scores in reading comprehension. The precise results of the data on test scores are discussed later in the chapter following the descriptive statistics.

Data Analysis: Grade Level Representation

For the purpose of this study, the researcher used demographic variables (grade level representation) from the study’s sample population to assess its comparability and representativeness to the demographics at both sites. Tables 3 and 4 indicate each
grade level in the study’s sample and its comparison to the total population at both sites.

Table 3

*Grade Level Representation for ABC Elementary*

<table>
<thead>
<tr>
<th>Grade Level Variable</th>
<th>Sample Percentage</th>
<th>Total Population Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Grade</td>
<td>75</td>
<td>33</td>
</tr>
<tr>
<td>Third Grade</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td>75</td>
<td>43</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>50</td>
<td>33</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 4

*Grade Level Representation for XYZ Elementary*

<table>
<thead>
<tr>
<th>Grade Level Variable</th>
<th>Sample Percentage</th>
<th>Total Population Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Grade</td>
<td>80</td>
<td>44</td>
</tr>
<tr>
<td>Third Grade</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td>33</td>
<td>14</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 3 and Table 4 demonstrate that many of the study’s grade levels were comparable with and somewhat representative of the total eligible population at both sites. The researcher separated the surveys by grade level to establish if a student in a particular grade was significant in the outcome data. Previous research has stated that 40% of American fourth graders continue to read below the basic level on national assessments (NAEP, 2011). However, in this study grade level was not a significant indicator when investigating the influence on students’ reading comprehension scores.

**Descriptive Univariate Statistics: Quantitative Survey Items on Knowledge/Use**

The purpose of the study was to discern if the reported knowledge/use of instructional strategies impact reading comprehension achievement. In addition to the knowledge/use responses, the researcher determined if the effectiveness responses impacted reading comprehension achievement. The statistics below offer information on the frequency of responses to the seven strategies on knowledge/use of each strategy. In the survey, teachers were asked about their level of knowledge and use of each strategy in their classrooms weekly. After collecting the data at both sites, the researcher entered the data into SPSS to determine the frequency of responses. Upon entering the data it was determined that any responses on the survey receiving a “5” or a “4” out of 5 were found to be present. Therefore, responses receiving a “3”, “2”, or “1” were determined to be not present. The purpose of this was to focus on the high presence of knowledge/use and effectiveness of each instructional strategy to evaluate their relationship to EL reading comprehension outcomes and answer the study’s research questions. According to SPSS, by assigning an interval scale to the survey
assumes that items are equal in distance when in fact they may not be. For example, a “3” on the survey indicated ‘moderate’ knowledge of a strategy but is considered not present when entering the data. It only reveals that the participants with high-numbered responses are more in agreement with the knowledge/use of each strategy than those with lower numbered responses based on this approach.

Table 5 reports the percent of the participants’ responses on their knowledge/use of each strategy.

Table 5

*Summary of Response Frequencies: Knowledge/Use*

<table>
<thead>
<tr>
<th>ITEM: INSTRUCTIONAL STRATEGY</th>
<th>KNOWLEDGE</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Present</td>
<td>% Not Present</td>
</tr>
<tr>
<td>Total Physical Response</td>
<td>75</td>
<td>25</td>
</tr>
<tr>
<td>Interactive Word Wall</td>
<td>79</td>
<td>21</td>
</tr>
<tr>
<td>Dual Language Alphabet or Concept Books</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>Schema Stories</td>
<td>71</td>
<td>29</td>
</tr>
<tr>
<td>Student Self-Monitoring</td>
<td>79</td>
<td>21</td>
</tr>
<tr>
<td>The K-W-L Chart</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>Picture and Sentence Match</td>
<td>71</td>
<td>29</td>
</tr>
</tbody>
</table>
As Table 5 indicated, the majority of the study’s participants reported having some knowledge of every strategy. Of the seven instructional strategies, teachers reported having higher knowledge of six at 70% or better. However, the majority of the study’s participants reported minimal use of each strategy in the classroom. Participants at both sites responded no use of Dual Language alphabet or Concept Books. This could be due to the fact that the creation of these books requires students to communicate with each other to facilitate learning in both languages on a variety of topics, which the study’s population does not include in their literacy curriculum. In the district where teachers from the study work, the adopted language arts curriculum is Houghton Mifflin. According to NRP (2000) Houghton Mifflin Reading provides explicit instruction in skills/strategies to improve student comprehension like the ones used in this study. Houghton Mifflin Reading incorporates the following seven categories of comprehension instruction: monitoring, cooperative learning, use of graphic organizers, question answering, question generation, story structure, and summarization. The researcher feels that the district-adopted curriculum, along with its smaller EL population, could be a significant factor when comparing results to another district with a higher percentage of ELs. The knowledge/use of these strategies may differ in districts with a larger EL population. The subsequent section describes descriptive statistics for the perceived effectiveness of each strategy.
Descriptive Univariate Statistics: Quantitative Survey Items on Perceived Effectiveness

Table 6 reports the percent of the participants’ responses on their perception of the effectiveness of each strategy in increasing reading comprehension scores.

Table 6

Summary of Response Frequencies: Effectiveness

<table>
<thead>
<tr>
<th>ITEM: INSTRUCTIONAL STRATEGY</th>
<th>EFFECTIVENESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Present</td>
</tr>
<tr>
<td>Total Physical Response</td>
<td>100</td>
</tr>
<tr>
<td>Interactive Word Wall</td>
<td>92</td>
</tr>
<tr>
<td>Dual Language Alphabet or Concept Books</td>
<td>58</td>
</tr>
<tr>
<td>Schema Stories</td>
<td>75</td>
</tr>
<tr>
<td>Student Self-Monitoring</td>
<td>88</td>
</tr>
<tr>
<td>The K-W-L Chart</td>
<td>83</td>
</tr>
<tr>
<td>Picture and Sentence Match</td>
<td>71</td>
</tr>
</tbody>
</table>

As Table 6 indicated, the majority of the study’s participants reported these strategies were effective in raising reading comprehension scores. The participants expressed the most effective strategy was Total Physical Response, while the least effective strategy was Dual Language Alphabet or Concept Books. This is consistent with the reported use of the Dual Language Alphabet or Concept Books at 0%.
Quantitative Survey: Summary of Response Frequencies

In separating the knowledge/use and effectiveness of each strategy, the researcher was able to discern the frequency in which the participants indicated they had knowledge of or used each of the seven instructional strategies or thought the strategies were effective. As previously stated the purpose of the study was to determine if these instructional strategies impact reading comprehension achievement.

After analyzing the knowledge/use and effectiveness sections of the survey, the researcher gleaned the following about each strategy. From the summary of response frequencies on knowledge/use of each strategy, it was evident that the participants reported having high knowledge (70% or higher, with the exception of one strategy) but reported low use (60% or lower). For example, participants reported 75% had knowledge in Total Physical Response but only 58% used the strategy. The disproportional pattern of participant responses followed the above example for each of the seven strategies. However, the literature on reading comprehension strategies noted using these strategies was effective in raising EL reading comprehension achievement. In fact, NRP (2000) stated reading comprehension strategies have dramatically changed over the years and the focus has shifted to teaching many strategies in combination of each other. Literature that supports best practices in reading comprehension for ELs includes these strategies, which elicits the question: Why are more teachers not using these strategies in their classrooms, especially when they report having the knowledge to do so? This question could be further scrutinized as an implication for future research.
Another key finding from the survey results was the participants’ responses to the second part of the survey on the perceived *effectiveness* of each strategy. Again, the participants reported each of the strategies were effective in raising reading comprehension scores for ELs. However, this does not match their reported use of each strategy. If these strategies were fundamental to the reading success of ELs, then it would behoove more teachers to use them more frequently in teaching reading comprehension. This *knowledge/use* instrument revealed valuable information about this study’s effective reading comprehension instructional strategies for ELs. In this case, participants reported high knowledge and believed these strategies were effective in raising reading comprehension scores, but did not use them enough to make a statistically significant impact on achievement as shown in Table 7.

**Quantitative Survey: Summary of Descriptive Statistics**

The table below offers a summary of the descriptive statistics used in this study regarding the teacher responses on their knowledge/use of each of the seven instructional strategies. This data was useful in addressing the first research question.

*Research question #1:* What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?

Table 7 reports the descriptive statistics of the participants’ responses on their knowledge/use of each strategy. It should be noted that there were no significant findings on the knowledge/use of each instructional strategy.
Table 7

Summary of Descriptive Statistics: Knowledge/Use

<table>
<thead>
<tr>
<th></th>
<th>TOTAL PHYSICAL RESPONSE</th>
<th></th>
<th>WORD WALL</th>
<th></th>
<th>DUAL LANGUAGE/CONCEPT BOOKS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K</td>
<td>U</td>
<td>K</td>
<td>U</td>
<td>K</td>
<td>U</td>
</tr>
<tr>
<td>Mean</td>
<td>.750</td>
<td>.583</td>
<td>.791</td>
<td>.541</td>
<td>.333</td>
<td>.000</td>
</tr>
<tr>
<td>SD</td>
<td>.442</td>
<td>.503</td>
<td>.414</td>
<td>.508</td>
<td>.481</td>
<td>.000</td>
</tr>
<tr>
<td>t-val</td>
<td>-1.206</td>
<td>.386</td>
<td>.901</td>
<td>-.908</td>
<td>.096</td>
<td>.000</td>
</tr>
<tr>
<td>p-val</td>
<td>.255</td>
<td>.707</td>
<td>.389</td>
<td>.385</td>
<td>.926</td>
<td>.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>SCHEMA STORIES</th>
<th>STUDENT SELF MONITORING</th>
<th>KWL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K</td>
<td>U</td>
<td>K</td>
</tr>
<tr>
<td>Mean</td>
<td>.708</td>
<td>.416</td>
<td>.791</td>
</tr>
<tr>
<td>SD</td>
<td>.464</td>
<td>.503</td>
<td>.414</td>
</tr>
<tr>
<td>t-val</td>
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<td>-.978</td>
</tr>
<tr>
<td>p-val</td>
<td>.292</td>
<td>.780</td>
<td>.351</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>PICTURE/SENTENCE MATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>K</td>
</tr>
<tr>
<td>Mean</td>
<td>.708</td>
</tr>
<tr>
<td>SD</td>
<td>.464</td>
</tr>
<tr>
<td>t-val</td>
<td>.425</td>
</tr>
<tr>
<td>p-val</td>
<td>.680</td>
</tr>
</tbody>
</table>

N=24
Note: R Square .416
*p < .05. **p < .01.

As Table 7 showed, the p value indicated no significant findings in the knowledge/use portion of the survey. In this model, the researcher investigated the knowledge/use variables of seven different instructional strategies to predict other outcome variables such as reading comprehension test scores. The table showed various standard deviations for each strategy. Since the standard deviation is a
measure of variability from the mean, a low standard deviation, like the one shown for student self-monitoring and word wall (.508) in Table 7, designates that the data points tend to be very close to the mean. A higher standard deviation like KWL (.204) indicates that the data are spread out over a large range of values. One of the most notable findings from this table was that none of the participants reported using dual language/concept books.

Another noteworthy finding was the level of knowledge the participants reported versus their use of each strategy. The average percent between what the teachers’ reported knowledge was about each strategy versus their use of each was 32. This number was worth mentioning because many of the teachers reported having high knowledge of each strategy but did not use these strategies to teach reading to their EL population. Moreover, the disparity between the knowledge/use responses could have a negative impact on reading achievement test scores and if the teachers simply increased their use of each strategy then the impact could be positive. Table 8 reports the descriptive statistics of the participants’ responses on the effectiveness of each strategy.
Table 8

Summary of Descriptive Statistics: Effectiveness

<table>
<thead>
<tr>
<th>TOTAL PHYSICAL RESPONSE</th>
<th>WORD WALL</th>
<th>DUAL LANGUAGE/CONCEPT BOOKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EFFECT</strong></td>
<td><strong>EFFECT</strong></td>
<td><strong>EFFECT</strong></td>
</tr>
<tr>
<td>Mean</td>
<td>1.00</td>
<td>.916</td>
</tr>
<tr>
<td>SD</td>
<td>.000</td>
<td>.282</td>
</tr>
<tr>
<td>t-val</td>
<td>-.560</td>
<td>.678</td>
</tr>
<tr>
<td>p-val</td>
<td>.583</td>
<td>.507</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCHEMA STORIES</th>
<th>STUDENT SELF MONITORING</th>
<th>KWL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EFFECT</strong></td>
<td><strong>EFFECT</strong></td>
<td><strong>EFFECT</strong></td>
</tr>
<tr>
<td>Mean</td>
<td>.750</td>
<td>.875</td>
</tr>
<tr>
<td>SD</td>
<td>.442</td>
<td>.337</td>
</tr>
<tr>
<td>t-val</td>
<td>1.23</td>
<td>2.82</td>
</tr>
<tr>
<td>p-val</td>
<td>.235</td>
<td>.012**</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PICTURE/SENTENCE MATCH</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EFFECT</strong></td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td>t-val</td>
</tr>
<tr>
<td>p-val</td>
</tr>
</tbody>
</table>

N=24  
Note: R Square .453  
* *p < .05. ** * *p < .01.

As illustrated by Table 8, the p value indicated most of the strategies were not significant. However, student self-monitoring (.012) and KWL (.010) were statistically significant. Given that student self-monitoring and KWL were statistically significant, a more detailed explanation of how these strategies affect student test scores is discussed later in this chapter. Similarly, the percent proficient scores used in this
Another indication that student self-monitoring and KWL were statistically significant was represented by their t-values. Since the t-values for both strategies were greater than 2 and less than negative 2, it suggests that a significant relationship was present between the independent variables (student self-monitoring and KWL) and dependent variables (student test scores).

**Linear Regression Analysis: Variable Descriptions**

For this study, the researcher conducted multiple linear regression analyses using the SPSS program. This method of analysis was selected in order to determine the relationship between the independent variables (instructional strategies) and the dependent variable (percent proficient test scores in reading comprehension).

A multiple linear regression was conducted to predict the variance in English Language Arts percent proficient test scores for ELs in reading comprehension from the seven instructional strategies surveyed in reading. For elementary and middle schools results in grades two through eight from the CST in ELA are used to determine the percentage of students scoring at the “proficient” level or above. As discussed in Chapter 2, the five performance levels according to the State Board of Education are advanced, proficient, basic, below basic, and far below basic. The independent variables (independent demographic and survey variables) were separated into knowledge/use and effectiveness. Moreover, the independent demographic variables were included in each of the regression analyses in order to determine if
there was a significant relationship among the independent variables (strategies) and the dependent variables (reading comprehension test scores).

The students’ percent proficient scores in reading comprehension were used in the data analysis in this study for each grade level 2 through 5. Tables 9 and 10 display the median student scores in reading comprehension for both sites.

Table 9

*Median Scores at ABC Elementary*

<table>
<thead>
<tr>
<th>Median Score in Reading</th>
<th>% Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td></td>
</tr>
<tr>
<td>Second Grade</td>
<td>50</td>
</tr>
<tr>
<td>Third Grade</td>
<td>30</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td>33</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td>40</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td>49</td>
</tr>
</tbody>
</table>
Table 10

Median Scores at XYZ Elementary

<table>
<thead>
<tr>
<th></th>
<th>Median Score in Reading</th>
<th>% Proficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second Grade</td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>Third Grade</td>
<td></td>
<td>32</td>
</tr>
<tr>
<td>Fourth Grade</td>
<td></td>
<td>71</td>
</tr>
<tr>
<td>Fifth Grade</td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Reading Specialist</td>
<td></td>
<td>49</td>
</tr>
</tbody>
</table>

The median scores represented by both sites is considerably low in third and fifth grade. Both sites have more ELs performing at the proficient level in second grade, and then the scores drop by 20 percentage points or more. This could be due to the fact that the mobility of students dramatically changes from second to third grade. The enrollment trends at both sites could have explained the variance in the median scores from one grade level to the next. However, at XYZ Elementary in fourth grade the median score was 71%. This score is an anomaly considering the other median scores by grade level even as compared to ABC Elementary. Historically, students reading results in fourth grade are lower nationwide. NAEP data indicates the results for reading tests for fourth grade students were below basic scoring at 38%, while only 31% of students were proficient (NAEP, 2011). NAEP also demonstrates a substantial relationship between parent involvement for the school and reading comprehension.
levels of fourth grade classrooms. In schools, where parent involvement was low, the class average reading score is 46 points below the national average; where parent involvement is high, classrooms score 28 points above the national average (NAEP, 2011). Parent involvement may have contributed to the success of fourth grade reading at XYZ Elementary.

**Linear Regression Analysis: Relationship Between Predictors and Criterion Variables**

The first linear regression analysis conducted was to analyze the relationship between the independent demographic and survey variables in *knowledge/use* and the reading comprehension scaled scores. The second linear regression analysis conducted was to distinguish the relationship between the independent variables in effectiveness of the instructional strategies and the reading comprehension scaled scores. The overall strength of the relationship between the predictors (independent demographic and survey variables) and the criterion (reading comprehension test scores) variable was 42% as demonstrated in Table 7. In other words, when considering the $R^2$ value, 42% of the variability in each student’s reading comprehension test score can be explained by the instructional strategies or independent variables. In effect, the adjusted $R^2$ value was -34% for Table 7. This meant that -34% of the variability in the average reading comprehension test score can be explained by the knowledge and use of the EL strategies. A negative $R^2$ of 34% indicated the study had too many predictors (independent variables) in comparison to its relatively small sample size, which may be why no significant variables were found.
Linear Regression Analysis: Significance of Independent Variables

The following tables investigate the significance of the knowledge/use and effectiveness of each strategy. Table 11 explains there are no statistically significant variables in the knowledge/use of the seven strategies. Table 12 illustrates a statistically significant portion of the variability in the dependent variables in effectiveness for student self-monitoring and KWL.

Table 11

Significance: Survey Items Knowledge/Use

<table>
<thead>
<tr>
<th>Model</th>
<th>Std. Error</th>
<th>B</th>
<th>95% Confidence Interval for B</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>12.897</td>
<td>50.000</td>
<td></td>
<td>21.263</td>
<td>78.737</td>
</tr>
<tr>
<td>Total Physical Response (K)</td>
<td>10.311</td>
<td>-12.438</td>
<td>-35.411</td>
<td>10.535</td>
<td></td>
</tr>
<tr>
<td>Total Physical Response (U)</td>
<td>9.311</td>
<td>3.596</td>
<td>-17.151</td>
<td>24.343</td>
<td></td>
</tr>
<tr>
<td>Word Wall (K)</td>
<td>12.659</td>
<td>11.412</td>
<td>-16.795</td>
<td>39.619</td>
<td></td>
</tr>
<tr>
<td>Word Wall (U)</td>
<td>8.856</td>
<td>-8.043</td>
<td>-27.775</td>
<td>11.689</td>
<td></td>
</tr>
<tr>
<td>Dual Language/Concept Books (K)</td>
<td>9.335</td>
<td>.893</td>
<td>-19.908</td>
<td>21.693</td>
<td></td>
</tr>
<tr>
<td>Schema (K)</td>
<td>12.488</td>
<td>13.898</td>
<td>-13.928</td>
<td>41.724</td>
<td></td>
</tr>
<tr>
<td>Schema (U)</td>
<td>8.117</td>
<td>-2.334</td>
<td>-20.420</td>
<td>15.753</td>
<td></td>
</tr>
<tr>
<td>Student Self-Monitoring (K)</td>
<td>10.276</td>
<td>-10.047</td>
<td>-32.943</td>
<td>12.849</td>
<td></td>
</tr>
<tr>
<td>Student Self-Monitoring (U)</td>
<td>9.503</td>
<td>6.716</td>
<td>-14.459</td>
<td>27.890</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>Std. Error</td>
<td>B</td>
<td>b</td>
<td>95% Confidence Interval for B</td>
<td>95% Confidence Interval for B</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------</td>
<td>---------</td>
<td>------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>KWL (K)</td>
<td>17.786</td>
<td>15.073</td>
<td>-.277</td>
<td>-54.702</td>
<td>24.556</td>
</tr>
<tr>
<td>KWL (U)</td>
<td>8.815</td>
<td>6.183</td>
<td>.284</td>
<td>-13.458</td>
<td>25.825</td>
</tr>
<tr>
<td>Picture/Sentence</td>
<td>8.572</td>
<td>3.640</td>
<td>.152</td>
<td>-15.460</td>
<td>22.740</td>
</tr>
<tr>
<td>Match (K)</td>
<td>9.387</td>
<td>-4.313</td>
<td>-.180</td>
<td>-25.229</td>
<td>16.604</td>
</tr>
<tr>
<td>R²</td>
<td>.416</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the model summary above the survey items knowledge/use reported the results of the overall significance test. Table 11 explained each of the predictors (independent variable) on the dependent variable. The regression was not statistically significant and can explain a lack of variability in the student test score variables. In this case, there was no significance found in the reported knowledge/use portion of the survey. Therefore, the knowledge/use of each instructional strategy did not impact EL reading comprehension achievement. It is possible the lack of significance in this model was a function of other instructional strategies influencing student achievement indicating a need for future research. Also, the limitations of the study are aspects to consider when considering these findings since the study was limited by its size and scope.
Table 12

*Significance: Survey Items Effectiveness*

<table>
<thead>
<tr>
<th>Model: Effect</th>
<th>Std. Error</th>
<th>B</th>
<th>b</th>
<th>95% Confidence Interval for B</th>
<th>95% Confidence Interval for B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>7.741</td>
<td>43.366</td>
<td>27.035</td>
<td>59.697</td>
<td></td>
</tr>
<tr>
<td>Dual</td>
<td>5.970</td>
<td>4.050</td>
<td>.183</td>
<td>-8.546</td>
<td>16.646</td>
</tr>
<tr>
<td>pt Books</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schema</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Self</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring**</td>
<td>11.383</td>
<td>32.183</td>
<td>.977</td>
<td>8.167</td>
<td>56.200</td>
</tr>
<tr>
<td>Picture/Sentence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ R^2 \] 

Valid N (listwise) 24

*p < .05. **p < .01.

The model summary listed above showed that an overall significance in the variability in the dependent variable (reading comprehension scaled scores) was explained by the *effectiveness* of the EL strategies, which was 45%. In other words, when considering the R squared value, 45% of the variability in each student’s reading comprehension test score can be explained by the independent demographic and survey variables.

However, Table 12 established each of the predictors (independent variable) on the
dependent variable. The researcher found the following independent variables were significant: student self-monitoring and KWL. The perceived effectiveness of the instructional strategies was a significant predictor of reading comprehension achievement for ELs in both student self-monitoring and KWL. Student self-monitoring showed significant positive effects on reading comprehension achievement. KWL showed significant negative effects on reading comprehension achievement. Overall, most of the strategies were not effective in raising reading comprehension achievement, except student self-monitoring ($p < .01$).

The investigation into significance begins with a description of the significant independent variables. These variables address research question #2 and explain student test score variability. The researcher is 95% confident that student self-monitoring was effective and raised reading comprehension test scores. The average variability was an increase of 32 percentage points. The confidence interval for this variable revealed that the researcher could conclude with 95% confidence that the student test scores explained an increase between 8 and 56 percentage points. For every value of student self-monitoring a student’s test score will increase by an average of 32 percentage points.

The second significant strategy was KWL, which showed a negative effect on reading comprehension achievement as shown in Table 12. This variable was significant at .010. In this case, the researcher is 95% confident this variable predicts the decrease in student test scores. In essence, KWL predicts a decrease in student test scores. The confidence interval for this variable revealed the researcher could
conclude with 95% confidence that the student test scores decrease ranging from 61 to 10 percentage points. This data is inconsistent with the literature reviewed in Chapter 2 and other literature (Cunningham & Allington, 2003; McKenna & Robinson, 2002; Rasinski & Padak, 2004). Research has demonstrated the use of these strategies, including KWL, have a positive impact on reading achievement. Nonetheless, KWL had a negative impact on reading comprehension in this study. This section of the analysis suggests that students of teachers who believe KWL to be effective are likely to have lower reading comprehension test scores than teachers who reported differently.

Tables 11 and 12 also included information on the significant and non-significant instructional strategies variables from the survey instrument. This data assisted the researcher in addressing the research questions about which instructional strategies explain test score variability. The first significant variable was the effectiveness of student self-monitoring. This variable was significant at .012. It predicted an average positive test score variability of 32 percentage points with 95% confidence. For every value of this variable, the researcher is 95% confident that the student test scores will increase between 8 and 56 percentage points. On the other hand, KWL had a negative impact on student comprehension scores. KWL predicted an average negative test score variability of -35 percentage points with 95% confidence. While only a couple of variables demonstrated significance in their relationship to EL reading comprehension scores, many variables did not show
statistical significance. These findings are significant and are consistent with this study’s purpose.

Survey Analysis: Open-Ended Survey Questions

This section reviewed the themes that emerged from the two open-ended survey questions. The following questions were as follows:

9. Please list any strategies NOT mentioned in the survey you find effective for increasing reading comprehension among English Language Learners?

10. In your opinion, what is the best way to assess the reading comprehension of English Language Learners?

Table 13 summarizes the strategies that emerged from the open-ended question #9.

Table 13

<table>
<thead>
<tr>
<th>Question 9: Strategies NOT Mentioned in the Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC Elementary</td>
</tr>
<tr>
<td>Realia</td>
</tr>
<tr>
<td>Visual Cues</td>
</tr>
<tr>
<td>Front Load the Story</td>
</tr>
<tr>
<td>Modeling</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
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<td></td>
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<tr>
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<td></td>
</tr>
</tbody>
</table>
The table showed many strategies not included in the survey that the participants felt were also effective in increasing reading comprehension scores. The Guided Language Acquisition Design (GLAD) strategies are a proven model for EL language acquisition and literacy (Project Glad, 2011). The strategies and model promote English language acquisition, academic achievement, and cross-cultural skills. XYZ Elementary implements the GLAD principles into their language arts curriculum. The key features of the GLAD program are:

- A unique blend of academic language and literacy that marries the research from many fields and organizes the strategies and classroom implications into a process.

- The model is not only firmly rooted in research, but it has been field tested both in district and out for the past 16 years. It has been found useful as a trainer of teachers and as a trainer of trainers.

- A classroom environment that values the student, provides authentic opportunities for use of academic language, maintains highest standards and expectations for all students, and fosters voice and identity.

- Primary language can be provided by trained bilingual teachers, trained bilingual aides, trained parents, or cross-age/peer tutoring. The unique aspect is that with this model both languages complement each other through integrated themes.
The amount of oral language for negotiation for meaning and cross-cultural interaction is extensive.

The training model is successful because it values teacher’s time, viewpoints, and expertise of the teachers, as well as promoting collaboration and peer coaching.

Three participants said the GLAD strategies were effective for increasing reading comprehension scores. The GLAD strategies have been proven to be successful for ELs acquiring English and should be incorporated into future research. Two participants said using pictures was an effective tool when working with ELs. Also, two participants noted Daily Oral Language and Think Alouds as effective strategies not included on the survey. Many other responses were given by the participants that represented varied instructional strategies effective for increasing reading comprehension scores.

Table 14 summarizes the alternative methodologies to assess ELs from the open-ended question #10.
The table showed a variety of ways to assess ELs. Two participants said oral reading of the story in English was a good way to assess ELs. Also, two participants said the best way to assess ELs was to use a variety of assessments. This is congruent with literature on various learning theories from Chapter 2 that supports using a variety of assessments to increase EL achievement.

**Linear Regression Analysis: Research Conclusions**

The researcher concludes this chapter by reviewing the research questions posed in order to determine if the questions were answered through the regression analyses.

_Research question #1:_ What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?
The survey asked the participants to mark whether they had any knowledge about the seven instructional strategies in reading. Then, the participants marked how much they use each strategy in their classrooms. The researcher used the regression analysis to determine to what extent the seven instructional strategies in reading explained a statistically significant portion of variability in student reading comprehension scaled test scores. When the participants reported a high level of knowledge/use with a specific instructional strategy, this explained a statistically significant portion of variability in student outcomes. The overall relationship was not significant at .847. For these variables, teachers responded on the survey to their knowledge and use of each instructional strategy. Moreover, when the participants reported each of the instructional strategies as being effective in increasing reading comprehension scores, the overall relationship was significant at .078. The relationship between these variables and reading comprehension scores explained a range of variability in student test scores.

**Research question #2:** Which strategies have the most and least significant impact on reading comprehension achievement among ELs?

The linear regression showed which strategies had the most and least significant impact on reading achievement. The first linear regression on the knowledge/use of each of the instructional strategies was not statistically significant. On the other hand, the second regression model about the perceived effectiveness of each of the instructional strategies was significant at .078. Also, within this regression student self-monitoring was significant (.012) in increasing the average reading
comprehension test score by 32 percentage points. KWL was also significant (.010) in decreasing the average reading comprehension test score by 35 percentage points.

Survey results from the study were not statistically significant, with the exception of two strategies: Student self-monitoring and KWL. The study’s significant findings were consistent with Gay’s (1994, 2000, 2002) extensive research on Culturally Responsive Pedagogy as reviewed in Chapter 2. In order to make learning more appropriate and meaningful, Gay (2000) posits using the cultural knowledge, prior experiences, and performance styles of diverse students. This theory is congruent with the instructional strategies selected for this study to reinforce language acquisition and proficiency so that students make connections with personal experiences and prior knowledge. Research has shown that the use of these instructional strategies makes a difference in reading comprehension achievement (Holmes et al., 2009). The majority of the participants’ responses were high in knowledge and effectiveness. However, the majority of the participants’ responses were low in use of the strategies. The researcher believes the low use of the strategies reported in this study could have a negative impact on reading comprehension scores. If the participants increased the use of these instructional strategies, then the reading comprehension scores may increase. Even though the study’s participants represent high performing sites, the EL subgroup continues to fall below proficiency standards. The use of the strategies is one of the components necessary for increasing reading comprehension test scores. The level of success, or failure, that these strategies have
on EL student outcomes is dependent on the collective use of the strategies and the frequency by which they are used.

In addition to the regression analyses to answer the second research question, the researcher also used the qualitative data to assist in answering this research question. In regards to the regression data, two of the instructional strategies (student self-monitoring and KWL) explained student test score variability. The qualitative data provided the researcher insight on which other strategies may impact EL reading comprehension scores. The most frequent response was the use of GLAD strategies.

These findings are reflective of the research questions it sought to answer and exemplifies the need to provide ELs with proper reading instruction in order to be successful. Previous research has established a link between reading achievement and the academic success of ELs. Researchers Shanahan and Beck (2006) claim it is inevitable that reading comprehension is critical to long-term achievement of ELs. However, vocabulary development continues to play a vital role in reading comprehension. Another possible explanation for the lack of statistically significant findings from this study is the absence of vocabulary development. According to Tinajero (2001) since vocabulary knowledge is so closely related to reading comprehension, ELs must develop an extensive vocabulary base in order to be successful readers in English. This is consistent with Wallace (2007) in which he asserts attention toward vocabulary development and the important link between vocabulary and reading comprehension.
The data analysis completed in conjunction with the literature made it possible to answer the study’s research questions. Understanding that every student learns differently and possesses unique qualities has implications for instructional design, especially those with diverse needs and backgrounds as ELs. This research validates learning theories posited by Caine and Caine (1991), Gardner (1983), and Guild (1997). Using brain based approaches, funds of knowledge, multiple intelligences, and culturally responsive pedagogy can impact the learning process and outcomes for ELs.

The researcher’s study on effective instructional strategies in reading concludes with Chapter 5. This chapter provides a brief overview of the study, review of research questions, and discussion of findings. The findings are interpreted by the researcher to address the research questions. The study’s findings are related back to the body of literature on effective instructional strategies in reading. Finally, Chapter 5 investigates the implications for school leaders, limitations, organizational improvements, transformational leadership, policy, equity, and provide recommendations for future action.
Chapter 5

SUMMARY AND CONCLUSIONS

Overview of Study and Research Questions

There have been many studies done on reading comprehension strategies for ELs. However, studies on the effectiveness of specific strategies compared to student outcome data have usually been limited. Research in reading comprehension for ELs has been limited to how ELs learn, or the focus on reading is through the developmental stages of reading and vocabulary development. This investigative study used research based instructional strategies to investigate the outcome data in reading comprehension for ELs. The researcher elected to explore this topic due to a personal desire and passion for increasing EL achievement along with enhancing learning for all students. This chapter is organized through the presentation of key findings, revisiting the theoretical framework, addressing limitations, providing recommendations for practical applications and future research, and a closing discussion on implications for educational settings.

Below the researcher addresses each research question and summarizes its investigation in this section.

*Research question #1:* What is the impact of teacher reported use of EL reading comprehension instructional strategies on EL reading comprehension achievement?

This research question was investigated using a Likert-scale survey with items addressing seven instructional strategies used for reading comprehension for ELs.
Each teacher’s survey responses were used in a regression along with each grade level’s average standardized test score in reading comprehension. The researcher wanted to determine what, if any, relationship existed between teacher reported use of survey effective reading strategies and the students’ test scores in reading comprehension.

*Research question #2:* Which strategies have the most and least significant impact on reading comprehension achievement among ELs?

Again, this research question was considered using Likert-scale survey items to investigate which strategies have the most or least impact on reading comprehension achievement. The regression analysis helped the researcher to discover which of the seven strategies explained variability in student achievement. The selection of independent variables (instructional strategies) was guided by a thorough review of literature on instructional strategies in reading comprehension.

**Summary of Findings**

This study provides a quantitative analysis into the complexity of reading and learning on achievement from the perspective of a second language learner. It conveys to the reader a vital sense of urgency to address the achievement gap between EL and English-only students. From the analysis of the survey data, the researcher was able to identify three statistically significant findings in the regression analyses conducted.

Figure 5 illustrates the key findings from this study followed by a more detailed narrative.
As Figure 5 illustrated, two strategies were statistically significant and had an influence on EL reading comprehension test scores. Student self-monitoring had a significant positive impact on EL reading comprehension test scores, while KWL had a significant negative impact on test scores. These two variables demonstrated significant test score variability. Past research on the effectiveness of these strategies
has supported the researcher’s conclusions on how these strategies result in higher reading comprehension test scores (August & Hakuta, 1998; Cheung & Slavin, 2005; Hill & Flynn, 2006). One way to close this achievement gap emanates from this study’s findings to use these strategies in combination—not in isolation—with the exception of student self-monitoring. However, in this study KWL had a negative impact on EL reading comprehension test scores, a finding which will be discussed later in this chapter.

**Finding 1: Student Self-monitoring**

Through the regression analysis of the perceived *effectiveness* of each strategy, student self-monitoring was significant and explained a variability in test scores. Specifically, the results indicate that successful student self-monitoring could account for an average increase in the score by 32 percentage points. This strategy had a positive effect on the variability in reading comprehension test scores ranging from 8 to 56 percentage points. This range is broad enough to boost a student from one proficiency level to the next on future assessments. Research on high achieving readers indicate they self-correct and monitor their miscues more frequently than low achieving readers. The data from this study is consistent with the literature (Forbes et al., 2004; Pritchard, 1990) that self-monitoring may lead to megacognition and increased reading comprehension. Therefore, students need time during instruction to self-reflect and practice identifying problems and solutions in order understand the passage. Teachers can create these opportunities for their students to practice that will result in better reading comprehension.
Finding 2: KWL

Another statistically significant finding was the self-reported *effectiveness* of the strategy KWL. In other words, this strategy had a negative effect and would decrease the average test score by 35 percentage points. This strategy had a negative result on the variability in reading comprehension achievement by as many as 61 to 10 percentage points. The majority of research literature on specialized reading strategies does not support this finding. The developers of KWL, Carr and Ogle (1987), developed this strategy as a way to engage readers in connecting prior knowledge with textual information. Since one of the primary outcomes of KWL is the use of background knowledge to achieve reading comprehension, the researchers feel it is important to take into consideration the child’s cultural background and prior knowledge before implementing this strategy into their reading repertoire. The theoretical framework used in this study reaffirms this and is based on research that all students learn differently, especially ELs whose diverse needs and backgrounds require more appropriate instructional practices.

According to Culturally Responsive Pedagogy (Gay, 2000), culture should be what drives curriculum, instruction, administration, and assessment. Moreover, Gay asserts the academic achievement of students from culturally and linguistically diverse backgrounds would improve if educators would teach and modify classroom structures in a manner that is responsive to the students’ home cultures. This would benefit teachers who teach KWL to students. The K step is fundamental for students’ success in reading because it provides them with an opportunity to build their understanding
before reading. The researcher firmly believes that what students know is directly related to their cultural background and could explain test score variability when using this strategy.

The negative impact KWL had on EL reading comprehension achievement in this study could be related to the teachers’ reported use of this strategy. In fact, the teachers’ reported use of this strategy was 50% while their reported knowledge was 96%. This was the highest variation between the reported knowledge and use of any of these strategies at 46%, indicating a need for teachers to use this strategy more often in their classrooms. If the subjects in this study had used it at a level that matched their knowledge of the strategy, the negative impact might have been eliminated or reversed.

It is also possible that the subjects did not teach KWL as thoroughly as they should have. Research has found that declarative (what the strategy is), procedural (how it should be used), and conditional (when and why it should be used) knowledge is necessary for students to be able to use strategies effectively, and when any one of them is missing – typically procedural and/or conditional – student use of the strategy can actually interfere with comprehension (Chamot, 2009; Paris et al., 1983; Pritchard & Breneman, 2000). Future research in this area may be desirable considering the negative outcome it had on student achievement.

**Finding 3: Use of All Strategies**

The model summary of the effectiveness of all of the strategies was statistically significant (.078). This meant that the teachers reported and believed all of these
strategies were effective in increasing EL reading comprehension achievement, even though student self-monitoring and KWL were significant within the model. The findings of this study supports the literature on the power of teaching several reading comprehension strategies which show that teaching strategies in combination may be more important than teaching any specific individual strategies (Fitzgerald & Graves, 2004; Pressley, 2000). They are also consistent with findings from previous literature that uses several teaching techniques for ELs (August & Hakuta, 1998; Cheung & Slavin, 2005; Hill & Flynn, 2006).

Furthermore, the findings of this study provide insight into how teachers may differentiate instruction for ELs struggling to meet reading comprehension proficiency. Hill and Flynn (2006) state it should no longer be the responsibility of a specialist, but the collective responsibility of all school staff to ensure the success of ELs. They emphasize the use of differentiated instruction as an essential component to ELs’ success in literacy development.

Other researchers such as Goldenberg (2008), Buteau and True (2009), and August and Hakuta (1998) also claim effective teachers differentiate instruction to meet the needs and learning styles of their students. Most importantly, August and Hakuta concluded differentiating instruction increases the success of ELs by providing opportunities to meet mandated curriculum demands within a culturally relevant context.

The researcher feels this is a necessary component to teaching ELs how to read due to their culturally and linguistically diverse backgrounds. A concern is that
teachers are not equipped to teach using the cultural knowledge, prior experiences, and performance styles of its diverse student population in order to make learning more effective.

**Discussion of Findings**

This study elucidated the knowledge/use of EL instructional reading comprehension strategies and its multifaceted approach to reading as a dimension in the development of successful learning for ELs in two high performing Northern California schools. Although a number of studies have found that these instructional strategies have an impact on EL achievement, few have been able to examine student-level test data and its relationship to the strategies. The strategies used in this study reinforce language acquisition and proficiency so that students make connections with personal experiences and prior knowledge to increase reading comprehension achievement. The findings from the survey data on knowledge/use of each strategy were not statistically significant in increasing the average students’ test scores. However, the researcher’s study found using all of these strategies together as self-reported by the participants was effective and impacted reading comprehension achievement. Therefore, the need for ELs to attain English proficiency and literacy makes it necessary for teachers to learn and use systematic strategy instruction. Other proven, research-based approaches such as Beck and Mckeown’s (2006) *Questioning the Author* and Klingner and Vaughn’s (1999) *Collaborative Strategic Reading* divide texts into small sections allowing students to discuss and clarify meanings, and apply
specific reading comprehension strategies while reading. The use of strategies like these needs to be expanded with EL reading instruction.

The findings from the researcher’s study answered the research question of the impact of the use of specific instructional reading comprehension strategies on achievement. In addition, the findings answered the research question of which instructional strategy has the most and least significant impact on reading comprehension achievement. The results confirmed not all of the independent variables (strategies) were significant, but two of them were statistically significant. Student self-monitoring was statistically significant in raising reading comprehension scores by 32 percentage points, while KWL decreased test scores by 35 percentage points. The test score variability for student self-monitoring ranged from a low of 8 percentage points to a high of 56 points. An increase of this magnitude can allow EL students to move up a proficiency level. The test score variability for KWL ranged from a low of -61 percentage points to a high of -10 points. Alternatively, the negative impact of using this strategy could bump students down a proficiency level.

The results also demonstrated a disconnect between the participants’ knowledge and use of each strategy. Given the results of this study, the researcher feels this is especially alarming because the participants are not using what they report they know about each strategy. Research has shown that these strategies impact EL student achievement. The researcher believes if the participants in this study increased the use of these strategies, therefore it would have a greater impact on reading comprehension test scores.
These findings indicate that these seven strategies were not statistically significant in the knowledge/use portion of the survey. Despite these statistical results, the researcher believes that the proper use of these strategies does impact reading comprehension achievement. Therefore, this finding could be the result of teachers not using the strategies enough in their classrooms to make a significant impact on test scores. However, on the effectiveness portion of the survey student self-monitoring and KWL were found to be statistically significant. The researcher feels that the strategies selected in this study are important in increasing reading comprehension for ELs, but other instructional strategies may also impact reading achievement. The examination of alternative instructional strategies should be considered for future research. As this study demonstrated they do express a significant value (.078) when used all together in a classroom. It is not just the use of one strategy that makes a difference in EL learning, but also the use of many of these strategies during instruction in combination.

Also, these findings suggest there may be alternative strategies to pursue in raising reading comprehension achievement for ELs, e.g., *Questioning the Author* and *Collaborative Strategic Reading*. In order to close the learning gap for ELs teachers and administrators need to address their language, literacy, and content instructional needs. Nationally and locally, ELs continue to perform lower on state mandated standardized tests than their English-only counterparts. More specifically, in the state of California during the 2009-2010 administration of the California Standards Test in English-Language Arts, 60% of White students scored proficient or above while only
14% of ELs scored proficient or above (California Department of Education, 2010d). Research supports the researcher’s claims about effective reading strategies for ELs and the positive impact it has on reading comprehension achievement. The researcher firmly believes it is the job of educators to not only understand how language is used for a variety of purposes in the classroom, but to help ELs develop language effectively in order to become fluent readers in English. This information about the achievement gap between ELs and English-only is astonishing and must result in a greater sense of urgency among educators, administrators, and policy-makers to increase reading achievement for ELs. The state of California cannot afford for this gap to grow any larger and must make EL reading achievement a top priority.

Even though this study focused on instructional reading comprehension strategies rather than more specific vocabulary building ones, some of the strategies used (Total Physical Response, Interactive Word Walls, and Dual Language/Concept Books) have vocabulary and concept development components, which decades of research have shown to be an important factor in EL literacy development (Garcia, 1991; Proctor et al., 2005; Saville-Troike, 1984). Saville-Troike (1984) claimed over 25 years ago that English vocabulary was strongly associated with second to sixth grade ELs’ performance on standardized testing in reading. Garcia (1991) found the lack of familiarity with vocabulary in test passages and questions was a powerful factor in ELs reading comprehension performance. Thus, creating culturally relevant vocabulary would increase EL comprehension achievement.
Another study by Carlo et al. (2004) examined the effects fifth grade ELs and English-speaking peers academic vocabulary and strategies for inferring word meanings. The researchers found similar results for both ELs and non-ELs in knowledge of taught words and other word elements such as word parts and multiple meanings. However, data from a number of sources (AIR, 2006; California Department of Education, 2010a; U.S. Department of Education, 2010) still reveal an achievement gap between ELs and non-ELs. ELs continue to perform below their English-speaking peers, especially in reading across all grade levels. Strategies that focus on vocabulary development can be enhanced for ELs that lead to English proficiency. Although many of these strategies are not exclusive for ELs, they draw upon the fundamental components of language acquisition and the use of real objects, visual images, and graphic organizers to enhance meaning of unfamiliar words.

Brain based learning theories as discussed in Chapter 2 were also validated by some portions of this study. Levine (2003) suggests using brain based approaches such as anticipatory sets for learning through interactive activities, using graphic organizers, tapping into a student’s prior knowledge, and encouraging student participation can motivate ELs. Caine and Caine (1991) assert activities such as cooperative learning, jigsaw puzzles, rituals, games, and talking for social interaction can improve EL learning. They also posit effective EL teachers use graphic organizers, prediction strategies, introducing vocabulary, and pair-shares to prepare the brain for new knowledge. Since the brain continues to grow throughout life, ELs benefit from instruction that includes multiple learning strategies and modalities like
the ones used in this study. Culturally Responsive Pedagogy, along with the brain-based learning theories, multiple intelligences, and funds of knowledge was used to support this study’s conclusions on the knowledge/use of specific instructional strategies to increase reading comprehension achievement for ELs.

Using the survey analysis, the researcher concluded that student self-monitoring and KWL explained test score variability. In addition to those two strategies, the regression on the effectiveness of all seven strategies was statistically significant. As previously mentioned in the chapter, these conclusions were supported by peer-reviewed literature. In most cases, the level of variability had a positive impact on reading comprehension achievement. Only one statistically significant variable had a negative impact on reading comprehension achievement. In addition to the possible explanations already offered this could be due to the fact that the study had too many predictors and a small sample.

The qualitative analysis indentified what instructional strategies, not included in the survey, teachers believe could be effective in raising reading comprehension test scores. The strategies provided insight and detail to enrich the research conclusions. A broad body of research supports the following strategies to be effective in raising EL reading comprehension (Chamot, 2009; Fitzgerald & Graves, 2004). Examples of the responses from this section of the survey included the following:

- GLAD strategies
- Realia
- Daily Oral Language
Finally, participants offered examples of what they believed to be the best ways to assess reading comprehension of ELs. The participants identified the following:

- Test orally
- Test in home language
- Story on tape and answer verbally
- Give opportunities to tell what is learned
- Using picture/drawings to assess
- Oral reading of story in English

In summary, many of the 24 participants indicated alternative instructional strategies and different means of assessing its EL population. These responses varied from teacher to teacher. Again, the qualitative responses shed light into using various forms of assessments using a full range of auditory, visual, and kinesthetic approaches to tap in to the best of the brain.

However, the researcher was a bit surprised that the average reading comprehension scores were not as affected by the instructional strategies selected in
this study. This could be due to the fact that the data analysis revealed a disconnect between the participants’ knowledge and use of each strategy. It is possible the participants were not using the strategies enough or using them correctly to have a statistically significant influence on the students’ reading comprehension scores. A high percentage of responses were reported in knowledge and effectiveness of each strategy, but the participants’ use of each strategy did not match their knowledge. Moreover, if the participants use the strategies more often it could result in an increase in EL reading achievement. The greater research literature points to the importance of having teachers present opportunities for students to practice English through extensive reading activities to build comprehension based on the students’ cultural background. Cheung and Slavin (2005) believe responsive teachers view language minority students as an asset and use their knowledge to develop a more authentic curriculum for all students. The overall data suggested that the effectiveness of the strategies was paramount when used altogether.

**Revisiting the Theoretical Framework of the Study**

The study’s conclusions were consistent with the tenets of Culturally Responsive Pedagogy as thoroughly disclosed in Chapter 2. As demonstrated in the literature, teachers needed to use and incorporate students’ cultural background in order to increase EL achievement. The sample used in the study was selected from schools where EL enrollment ranged from 5% to 50% of the total student population, and EL students were not achieving as well as their English-only peers. Again, this data is congruent with statewide EL performance data. This theory and its relation to
how teachers instruct ELs were significant to the researcher’s study. ELs need culturally responsive classrooms that foster their development in reading, which will effectively help their reading comprehension. These classrooms recognize different cultural elements of their students’ behaviors to enhance their reading skills. The qualitative portion of the survey revealed that teachers use the GLAD strategies as evidence of culturally responsive practices.

Some portions of this study were congruous with other learning theories that were described in Chapter 2. For example, Levine’s (2003) brain based approach to learning is key for understanding why children struggle in school. In this case, ELs continue to struggle academically especially in reading.

**Limitations**

The following limitations of this study may have affected the results within the research design that may be advantageous for others pursuing answers in this field. This study has the following limitations. First, it did not control for all student demographic and background variables (i.e. home, school climate, and motivation) that were likely to have an impact on student achievement, including reading. For the purposes of this study, the researcher only investigated the impact of specific instructional strategies on reading comprehension achievement. Moreover, background knowledge, life experiences, exposure to literacy in home language before attending school, and individual teaching styles and strategies may have influenced this study.
A second limitation for this study was the sample size. The sample size used in this study was fairly small. The researcher selected the research sites based on their unique demographic student population and extraordinary student achievement. However, in spite of the high API scores of 800+ at both sites, the EL population continues to perform below its English-only peers in reading, thus validating the need to investigate EL reading comprehension achievement. As such, the study’s findings may not be applicable or generalizable to a different population where ELs are more prevalent.

A larger sample size that included more ELs from a more diverse district could have provided a more global picture of EL student performance in reading comprehension. Notably, for the field of education a replicable study that includes a larger sample with a more diverse student population would be worth exploring. The small sample size may have affected the power of the statistical analysis used for this study. Even though this study’s sample size was small (n=24) and the results may not lend itself to generalizability, it did answer the research questions set forth and accomplished its goal of contributing to the body of research on effective instructional reading comprehension strategies for ELs.

A third limitation for this study was a lack of a comparable control group to assess students who received instruction on the specific strategies used in the study to those who did not. Given the time limit of the study it was not feasible to include a comparable control group, but would be worth investigating in future research. Also, the study did not control for all teacher demographic and background variables (i.e.
certification). Research has shown that teachers’ certification and preparation matter when teaching unique groups of students.

Lastly another limitation was the short-term nature of the study. Data was collected and analyzed over a two-month period of time. However, data collected over a longer period of time (beginning and end of year) may have been more insightful and yielded different results. It would be fascinating to assess ELs’ reading progress throughout the year using a pre and post assessment, instead of the snapshot of EL reading comprehension achievement used in this study. Although the results of the researcher’s study were not highly generalizable, the findings from this study serve as basis for further investigation into reading comprehension success for ELs.

**Recommendations for Action**

Based on the findings of this study, several recommendations can be made in areas of practice and future research. The following recommendations can be implemented at the school in which the study was conducted, but also other schools with similar demographics. These findings can assist teachers, administrators, and policy-makers in closing the achievement gap between EL and English-only students. Teachers who use a variety of instructional strategies and teaching techniques that address their students’ cultural background and learning style can improve their reading achievement. The following table lists the instructional strategies and general recommendations for increasing reading achievement for ELs. A narrative of the recommendations follows Table 15. Table 15 lists the general recommendations.
### Table 15

**General Recommendations**

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<thead>
<tr>
<th>Instructional Strategies</th>
<th>Recommendations</th>
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<tr>
<td>Total Physical Response</td>
<td>Professional Development Opportunities</td>
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<td></td>
<td>Qualified Teachers</td>
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<tr>
<td>Interactive Word Wall</td>
<td>Increased Instructional Time</td>
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<td></td>
<td>Adequate Materials and Safe Environment</td>
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<td>Dual Language or Concept Books</td>
<td>Equitable Assessment</td>
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<td>Schema Stories</td>
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<td>Student self-monitoring</td>
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<tr>
<td>KWL</td>
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<td>Picture and Sentence Match</td>
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Table 15 above listed recommendations for increasing reading comprehension achievement for ELs. School leaders can hold teachers accountable for engaging ELs in meaningful learning through evaluative feedback as well as provide them with the resources and supports needed to increase EL achievement. They can also provide professional development opportunities on how to teach reading and working with ELs. A number of studies have demonstrated that quality professional development provides teachers with strategies for better meeting the needs of their students (Herman & Aguirre-Munoz, 2003; Herman, Goldschmidt & Swigert, 2003). Findings from these studies suggest not enough emphasis is placed on the specialized needs of teachers of ELs. Very seldom does professional development address specific linguistic needs of ELs. Therefore, whenever appropriate professional development activities should include a separate component for teaching ELs.

Another recommendation is the problem of finding and retaining qualified teachers to teach ELs. Close to half of all new teachers recruited to urban districts with high EL populations leave the teaching profession within five years (Darling-Hammond, 2002). Stability in both leadership and teaching staff continues to be a problem facing urban districts. The instability of teachers and leadership provides a vulnerable environment for learning for ELs. These students need dependable teachers they can rely on in order to be successful. Administrators and policy-makers can have a significant impact on these decisions. More specifically, the district level must ensure it hires and retains qualified principals to lead schools of diversity. Policy-makers must find incentives to retain its teachers and principals, especially in an era of
budget cutbacks in California. In turn, principals must support their teachers and provide extra time during the school day to meet and discuss effective reading strategies for ELs.

A significant body of research shows a clear relationship between increased time engaged in academic tasks and increased achievement. This research suggests that there is a relationship between time and learning, and that learning increases when students are actively engaged in learning activities for longer periods of time. Teachers must be given more instructional time to adequately address the needs of their ELs.

In addition to providing teachers with additional instructional time, all students must have appropriate instructional materials. Oakes and Saunders (2002) have demonstrated a link between appropriate materials and curriculum and student academic outcomes. Moreover, ELs need additional instructional materials that are developmentally appropriate to learning English and to master the English Language Development Standards. Teachers with both high and low populations of ELs should have equitable access to these materials. Policy-makers also have an influence on the conditions and safety of its schools. However, not only do they have an influence on these conditions, they ought to make it a priority to ensure all schools are safe and clean. Teachers often complain about the poor working condition of schools and do not want to work in a dirty and dangerous environment.

An additional recommendation is to provide equitable assessments for ELs. Unfortunately, the current system of measuring academic success under NCLB for ELs is not meeting their needs. Teachers should be supported in creating alternative
forms of assessment for its EL population that showcases what they truly know, understand, and can demonstrate. Today, educators are faced with many challenges and accountability at both the state and federal levels. They are challenged with high stakes testing for all students, including ELs. The relationship between effective instructional strategies and reading comprehension achievement for ELs has been revealed by the researcher to explain some test score variability. The researcher’s study concluded that a couple of instructional strategies did predict test score variability. With these aforementioned recommendations, it is possible to continue to improve reading comprehension achievement for ELs.

**Recommendations for Practical Applications**

With regard to the conclusions of the study, the following recommendations for practical applications are offered:

1. Results from the study uncovered that data played an important role at both ABC and XYZ Elementary Schools to reveal a correlation between instructional reading comprehension strategies and reading comprehension achievement. Study findings suggest that teachers who responded with having high knowledge of each strategy, but low use of each, ought to use the strategies more frequently. Organizations with a culture of evidence demonstrate using data to understand where students are experiencing problems, and in the case of ELs it is the growing achievement gap in reading comprehension. A strong culture of evidence designs strategies for solutions to those problems, evaluates the effectiveness of those
solutions, and institutionalizes the use of data analysis as the basis for program improvement.

2. The study’s findings uncovered no significance in the knowledge/use portion of the survey. However, if school leaders provided teachers with extensive knowledge on how to implement specific reading strategies, then EL reading achievement may increase. ELs need school leaders who can think outside the box to provide its teachers with the necessary tools to pursue the highest level of instruction specific to their students’ needs. School level leadership should provide its teachers with opportunities to learn and apply best practices in reading comprehension to increase EL reading achievement. Transformational leadership that truly sets out to change or alter student-learning outcomes requires commitment to establish sound learning communities. According to Glanz (2007) as transformational leaders we must think and act out of the “proverbial box” (p. 128). Leadership is about reflection and action as much as it is to empower change. Transformational leaders consider and solicit the participation of other key school personnel to share in the development of the institutional mission and vision. Again, Glanz (2007) emphasizes when school leaders want to transform their schools on a deeper level it takes time and effort within a collaborative and empowering paradigm (p. 132).

3. The successful performance of ELs is currently measured by assessing language, literacy, and content knowledge using summative assessments as required under NCLB. However, a variety of on-going assessments is what ELs need in order to be successful. It is important for the state of California and ABC and XYZ
Elementary Schools to adopt new policies or research best practices when it comes to assessing its rapidly growing EL population. The state must go beyond the “one size fits all” approach to testing ELs in creating appropriate assessments for this subgroup.

4. The district should implement effective instructional strategies for ELs to all schools in the district, especially schools with a high EL population. The findings from this study support teachers and administrators incorporating some of the instructional strategies into the curriculum, policies, and future dialogue about how to best serve its EL population. The process involves assessing various reading programs and strategies for ELs. Instruction at California’s schools should revolve around reading and the implementation of effective reading strategies.

**Recommendations for Future Research**

The results of this study invite further reflection, discussion, and inquiry on the many unanswered questions about successful instructional reading strategies for ELs. Future studies on effective reading comprehension instructional strategies for ELs should involve samples throughout the state and nation to incorporate learning processes on student achievement.

Other studies should be conducted to determine which instructional strategies are most effective for the greatest number of students. The relationship between the researcher’s selection of specific instructional strategies in the study and the impact on student achievement should be investigated further. There are many more instructional strategies that may be influencing student outcomes that could be investigated on a larger scale. Studies conducted in urban areas with a highly diverse student population
could offer further data on successful reading strategies. In addition to continuing research on effective instructional reading strategies, further attention must be given to studies that incorporate multiple research methods for better understanding of the problem of overall school improvement and closing the achievement gap. Such methodologies would include qualitative and experimental studies in order to contribute to the body of knowledge on the construct of reading comprehension. Also, a qualitative follow up through a series of interviews and focus groups would expand this study’s findings.

Research should also extend to the primary and secondary level since reading and academic achievement is tracked through the K-12 pipeline, and there is little research teaching reading comprehension to students in K-2. More research emphasis is placed on phonics and word recognition at the primary level. Lastly, more research is needed on the effects of the reading-writing connection and its impact on reading comprehension.

It can be concluded that these seven instructional strategies merit consideration and have been used in classrooms across the country, but were not statistically significant in this study in raising reading comprehension test scores for ELs. This would allow consideration for other research questions: What other strategies are effective? What are the cumulative effects of using specific strategies over multiple years? How much impact does teacher certification have on EL reading achievement? What is the impact of teacher-student relationships on reading achievement? Do early
reading interventions have an impact on reading achievement? How much impact does vocabulary development have on reading comprehension?

**Implications for Educational Settings**

This study explored the relationship between reading comprehension strategies and reading achievement for ELs. While this study only focused only on seven distinct strategies, there are other strategies worth pursuing in the broader scope of closing the achievement gap. Longitudinal studies that observe developmental trends in EL learning and reading processes to distinguish short from long-term phenomena would contribute immensely to the field. The findings from this study have implications for school and classroom improvement as well as school leadership. The test score variability was explained by a linear regression analysis. These conclusions can assist school leaders and classroom teachers in raising reading comprehension achievement for ELs.

This study also provided evidence that when teachers used the aforementioned instructional strategies in combination, this can explain the positive variability of their standardized test scores in reading comprehension. School leaders can hold teachers accountable for using these strategies in the learning process to teach reading to ELs through evaluative feedback and coaching on the various reading instructional strategies. Also, school leaders can provide more opportunities for professional development in reading instruction for ELs in order to improve reading achievement. Through the extensive literature review, theoretical framework, data analysis and discussion, the following implications are optimal for understanding ELs.
**Intervention Implications**

The researcher’s study has implications for interventions for ELs. Data reveals that ELs continue to lag behind their English-speaking counterparts in reading. Multiple factors can contribute to persistent low reading achievement outcomes, including a lack of qualified teachers, school readiness, instructional settings, inadequate professional development opportunities, and inappropriate assessments (Gandara et al., 2003). According to Gandara et al. (2003), “there is no research support for using English language tests to assess students who do not speak English” (p. 37). Current federal and state mandates require ELs to take assessments just like any other student and pass it. However, policy-makers should develop an assessment system that is responsive to the needs of ELs. Teachers can implement interventions and assess them using many informal assessment techniques. Administrators can help teachers implementing interventions to organize their teaching by eliminating “dead time” that ELs spend waiting for specific instruction (p. 38).

Numerous research studies (e.g., Simmons, 2000; Tinajero & Hurley, 2001; Zelasko & Antunez, 2000) indicate that young children who acquire early literacy skills have the tools to exponentially grow in their knowledge and skills while those who do not develop early skills fall further and further behind. Reading intervention programs help prevent reading failure from occurring early on if correctly implemented.
Policy Implications

Unfortunately, the conclusions from the researcher’s study do not come without policy implications. Policies can be created to address the growing achievement gap for ELs in reading, but interventions that truly make a difference are costly to implement. In a highly prescribed time of accountability, teachers and school leaders must comply with federal/state mandates for improving student achievement. However, in times of fiscal uncertainty teachers and administrators are doing more with less resources than ever before. Policy-makers aiming to improve schools on a large scale invariably assume that the success with which their policies are implemented has much to do with the nature and quality of local leadership, especially leadership at the school level (Brown, Anfara, Hartman, Mahar & Mills, 2002). However, the policy implications go beyond the quality of local leadership to implement interventions for ELs.

California’s reform efforts must go beyond providing professional development for its teachers to extend to raising the achievement of its EL population. The EL population continues to grow and policy-makers need to understand the urgency to address their needs and invest in raising achievement. The bottom line is ELs are not proficient in reading under the current mandates imposed on the schools for assessing this subgroup. As exemplified in Chapter 1, statistics on EL performance over the last seven years has remained stagnant. Policy addressing instructional practices and assessments needs to be aligned with how ELs learn and acquire language.
Leadership Implications

There are also implications for transformational leaders who seek to improve reading achievement for ELs. Transformational leaders should communicate any changes to teaching practices and curriculum involving ELs to all stakeholders by using John Kotter’s reframing change stages. According to John Kotter (as cited in Bolman & Deal, 2008) too many change initiatives fail because they rely too much on “data gathering, analysis, report writing, and presentations” instead of a more creative approach aimed at grabbing the “feelings that motivate useful action” (p. 8). An example of Kotter’s fifth stage relies on removing obstacles and empowering people to move forward. Structurally, this calls for removing or altering structures and procedures that support the old ways. School leaders would have to identify rules, roles, procedures, and patterns that block progress and then work to realign them to close the achievement gap. Transformational leaders need to be careful when instituting change and attempt to communicate with all stakeholders before implementing any new interventions or programs.

Conclusions

Empowerment of the teaching profession produces good results. Professional teachers should have space for innovation, because they should try to find new ways to improve learning. Teachers should not be seen as technicians whose work is to implement strictly dictated syllabi, but rather as professionals who know how to improve learning for all. All this creates a big challenge . . . that
certainly calls for changes in teacher education programs. Teachers are ranked highest in importance, because educational systems work through them.


This study was driven out of the researcher’s fervor for EL achievement, school wide improvement, transformational learning and leadership, and organizational change. The research findings left the researcher with renewed energy in search of instructional best practices that not only benefit ELs but all students. Teachers are an important piece to the puzzle of closing the achievement gap between EL and English-only students. They have the ability to make learning how to read meaningful while engaging students in the learning process every day. These teachers are remembered for how they touched the lives of their students, and it is this kind of dedication and passion to the profession that will naturally lead to successful classrooms across the country. In order for teachers to be successful in teaching ELs, they need a support system extending from the district to the site level.

Many studies have focused on the lack of reading comprehension achievement for ELs, still these studies have yet to create favorable conditions for improvement in reading instruction. There is no doubt that reading comprehension is a complex process. Comprehension is often viewed as the “essence of reading” (Durkin, 1993). Furthermore, reading comprehension can be defined as “intentional thinking during which meaning is constructed through interactions between text and reader” (Durkin, 1993). Readers typically acquire reading comprehension strategies informally.
However, comprehension strategies require specific procedures that guide students to become aware of how well they read and write. These strategies need to be taught by a teacher through demonstration, modeling, and guiding the students in their acquisition of a text. Eventually, the students become independent readers and can effectively comprehend the text without the teacher’s guidance.

Vocabulary continues to play a vital role in reading comprehension. The National Reading Panel (2000) found a variety of vocabulary methods through explicit instruction to improve reading comprehension. The panel also concluded that teaching a variety of effective comprehension strategies leads to improved comprehension, although the focus was on teacher preparation in order to teach comprehension. The findings from the researcher’s study do not hold the key to reading comprehension success for ELs, but petitions for the question for further research: What, if not these strategies, makes for effective reading instruction? As ELs continue to fall below the standard in reading as well as below their English-speaking peers academically, it is imperative for educators to stop this downward spiral of achievement.

Being an effective teacher requires a cultural understanding of students in order to deliver culturally responsive instruction. Teachers, school leaders, and policymakers must be more involved in the continuous improvement of the education of ELs. This level of commitment requires all school level employees be dedicated to closing the achievement gap between EL and English-only students. Teachers who engage in culturally responsive classrooms improve the academic success of all students. This study, albeit limited in time and scope, has demonstrated that when
teachers have knowledge and use specific instructional strategies it is meaningful to classroom learning and reading for ELs. Thus, this study with the primary research urging all teachers to teach in a manner that is responsive to their students’ cultures and to use their voice and practice to transform the policies of the school to enhance learning for all students.
APPENDIX A

Quantitative Likert-scale Survey
Appendix A: Knowledge/Use Survey

The survey is anonymous to protect your responses to each question. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study.

The five-point **Knowledge Scale** should be interpreted as follows: In my role as a teacher (I have knowledge of the following),

1. **Low knowledge**: I know very little about this topic.
2. **Some knowledge**: I know something, but not much about this topic.
3. **Moderate knowledge**: I know something about this topic but I could learn more.
4. **Good knowledge**: I feel I know more than the average teacher educator about this topic.
5. **High knowledge**: I know a great deal about this topic.

The five-point **Use Scale** should be interpreted as follows: In my role as a teacher (I use the following),

1. **Low use**: I almost never use this component during the week.
2. **Some use**: I occasionally use this component during the week.
3. **Moderate Use**: I sometimes use this component during the week.
4. **Moderately High Use**: I use this component more than others during the week.
5. **High Use**: I use this component very frequently during the week.
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<th>Instructional Strategy</th>
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<tr>
<td><strong>1. Total Physical Response (TPR)</strong>. Students are actively and physically engaged in activities to help them better understand vocabulary and other concepts.</td>
<td>Knowledge Scale</td>
<td>1 low  2  3  4  5 high</td>
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<td>Use Scale</td>
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<td><strong>2. Interactive Word Wall.</strong> Teachers create several word walls as students encounter words from a variety of oral and written sources that include the words of their peers, teachers, books, and labeled pictures.</td>
<td>Knowledge Scale</td>
<td>1 low  2  3  4  5 high</td>
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<td><strong>3. Dual Language Alphabet or Concept Books.</strong> Students read books about the same topics written in both English and their native language, allowing them to combine what they already know about their native country as they experience and learn the language of their new country.</td>
<td>Knowledge Scale</td>
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<td><strong>4. Schema Stories.</strong> Students use their prior knowledge and experiences to comprehend meaning and develop an understanding of story grammar as they put chunks of a story into proper sequence (beginning, middle, and end).</td>
<td>Knowledge Scale</td>
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<td><strong>5. Student Self-Monitoring.</strong> Students are provided with activities, which allow them to self-reflect, identify problems, and follow a course of correction when necessary in order to improve reading comprehension.</td>
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6. **The K-W-L Chart.** Students list what they Know about a topic, generate a list of questions about what they Want to know, and finally discuss what they have Learned.

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7. **Picture and Sentence Match.** Students pair pictures that illustrate written sentences, which help build vocabulary skills and sentence structure.

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8. Do you think these are effective strategies for increasing reading comprehension among English Language Learners?

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9. Please list any strategies **NOT** mentioned in the survey you find effective for increasing reading comprehension among English Language Learners.

10. In your opinion, what is the best way to assess the reading comprehension of English Language Learners?

Please feel free to write in this space if you do not have enough room to respond to questions 9 & 10.

THANK YOU.
APPENDIX B

Human Subjects Approval
May 14, 2010

To: Sunny Carder  
787 Knight Lane  
El Dorado Hills CA 95762  

From: María Dinis, Chair  
Committee for the Protection of Human Subjects  

Re: Protocol 09-10-115 (Apr)  
"The Effects of Reading Comprehension Strategies on Achievement for English  
Language Learners (Els)"

The Committee for the Protection of Human Subjects conditionally approved your  
application as "No Risk" at its April 19, 2010 meeting. With the additional materials you  
have provided, your project is now approved as No Risk.

This IRB approval is with the understanding that you will promptly inform the  
Committee if any adverse reaction should occur while conducting your research (see  
"Unanticipated Risks" in the CPHS Policy Manual). Adverse reactions include but are  
not limited to bodily harm, psychological trauma, and the release of potentially damaging  
personal information.

The approval applies to the research as described in your application. If you wish to  
make any changes with regard to participants, materials, or procedures, you will need to  
request a modification of the protocol. For information about doing this, see "Requests  
for Modification" in the CPHS Policy Manual.

Your approval expires on May 30, 2011. If you wish to collect additional data after that  
time, you will need to request an extension for the research. For additional information,  
see "Requests for Extension" in the CPHS Policy Manual.

If you have any questions, please contact me at 278-7161 or the Office of Research  
Administration at 278-7565. Thank you.
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