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Recommended Citation

Diaz-Peterson, G. (2019). *Improving Literacy Outcomes for Adolescent English Language Learners* (Thesis, Concordia University, St. Paul). Retrieved from https://digitalcommons.csp.edu/teacher-education_masters/11

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Improving Literacy Outcomes for Adolescent English Language Learners

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June 20, 2019

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Abstract

As the population of English Language Learners in United States public schools has risen significantly in recent years, the unique academic challenges these students faced, particularly in middle and high school, became more apparent. A widening reading and vocabulary gap between English Language Learners and their native English-speaking peers posed particular barriers in secondary content area classes, where many teachers reported feeling ill-prepared to meet the specialized linguistic needs of their English Language Learner students. This paper analyzed a mix of recent, available qualitative and quantitative research on best practices to improve literacy outcomes for adolescent English Language Learners. As a result of the research, this paper identified several strategies that have been found to be successful in increasing English Language Learners' reading, vocabulary and content comprehension through secondary content area classes, namely explicit reading comprehension strategy instruction, a focus on vocabulary and academic language, reading engagement strategies, and finally the integration of literacy and content. This paper concluded by outlining specific applications of the results for secondary school content area teachers to ensure that the academic literacy needs of their English Language Learner students are being met.

Keywords: English Language Learner, secondary school, literacy, reading comprehension, vocabulary

Improving Literacy Outcomes for Adolescent English Language Learners

The number of adolescent students who were identified as English Language Learners (ELL) has notably increased in secondary schools across the United States in recent years (Franquiz & Salinas, 2013, p. 339), and by 2014 they represented at least 10% of the school age population of students (August et al., 2014, p. 55). By 2017, over 11 million students in United States public schools came from families whose home language did not match the language of instruction in schools (Haager & Osipova, 2017, p. 7). These students, who were learning English in schools as an additional language to their native or home language, and who have also not yet met proficiency criteria on a test of the English language, have been designated with the term *English Language Learners* (Haager & Osipova, 2017, p. 7). The increasingly diverse population has brought unique academic literacy needs into content area classes. While ELLs have faced academic difficulties from the onset in elementary school, the rigorous literacy demands required of secondary students in content area classes in middle and high school represented distinctive challenges for this particular population. This issue has been exacerbated by the widespread approach in secondary schools which isolated English language development from content area instruction, as well as the common misconception that a precursor to being able to access content was having a proficient foundation in the English language (Franquiz & Salinas, 2013, p. 341). In addition, many content-area teachers in secondary settings were not well-versed in strategies that would facilitate their ELL students' academic success.

While diversity among adolescent learners in the United States has been increasing, the proficiency gap between ELLs and their non-ELL peers has been widening. The 2009 National Assessment of Educational Progress scores indicated that the reading and science scores of ELLs fell notably short of the scores of their English-proficient peers (August et al., 2014, p. 55). The

achievement gap between ELLs and their non-ELL peers in reading has been well-acknowledged and pervasive: in 2016, only 7% of ELLs in fourth grade met or exceeded proficiency in reading, with the percentage declining even more by the end of middle school, with only 3% of ELLs in eighth grade reaching proficiency (Haager & Osipova, 2017, p. 8). Even among former ELLs, 85% were still not reaching proficiency in reading (Cisco & Padron, 2012, p. 2). While the term *crisis* has been applied to the state of reading among middle school students in the United States, the situation has been even more dire for ELLs in secondary settings, whose lack of proficiency in literacy has not allowed them to have the reading comprehension skills necessary for the increasingly intensive demands and rigor of middle and high school (Cisco & Padron, 2012, p. 2).

As these students entered into secondary school settings, the nature of academic tasks expected of them grew increasingly complex and sophisticated in their content area classes. Each specific content area exacted its own unique literacy demands, such as in social studies or science, where students were often required to read and understand rigorous expository textbooks with unfamiliar general academic and content-specific vocabulary, which posed barriers to accessing the content for ELLs. As the literacy demands of these students increased as they moved through secondary school, the language support often decreased, leaving students without the necessary scaffolding to facilitate their academic success. For many ELLs, their lack of proficiency in academic language and content-specific academic text hampered their ability to engage with secondary level texts and the literacy tasks expected of them (Vaughn et al., 2009, p. 298). Instruction in secondary settings has emphasized content-specific instruction, typically driven by state standards, and not on language and literacy focused instruction. Because ELLs typically have been shown to require a longer amount of time than non-ELLs to reach academic

language proficiency (Irby et al., 2018, p. 2), it became even more important for them to continue to receive opportunities throughout secondary school to develop their language proficiency. However, in many middle and high school settings across the United States, this has not been the case, and continues to be a relevant issue.

Not only has the instruction in secondary schools emphasized content over language, but oftentimes content area teachers in these settings were not familiar with strategies that were effective to meet the language needs of their ELLs. Although federal mandates existed, and still exist, which state that ELLs must receive specialized services in education, the majority of ELLs in schools across the United States received their instruction from educators who were not trained in teaching ELLs or have not taken any professional development on the specific language needs of ELLs (Irby et al., 2018, p. 2). According to the Education Commission of the States in 2014, 30 states did not mandate *any* professional development to classroom teachers on best instruction for ELLs (Irby et al., 2018, p. 2). This lack of awareness has caused teachers to feel unprepared and have low self-efficacy beliefs around teaching ELLs (Bravo & Cervetti, 2014, p. 231). Moreover, most secondary teachers viewed themselves to be teachers of their content area, as opposed to literacy teachers. Even English Language Arts has traditionally stressed literary response and analysis in favor of reading comprehension, and many teachers believed that reading instruction is a task belonging to elementary schools to prepare students for middle and high school (Lesaux, Kieffer, Faller, & Kelley, 2010, p. 200). In short, attention to addressing the specific literacy needs of adolescent ELLs in content area classes among content area teachers in secondary settings has been lacking.

This paper posed a research question grounded in this relevant issue, and then sought to understand the question by conducting a literature review, examining fifteen pertinent research

studies. Additionally, this paper provided a synthesis of the information from each study, sharing insight from the research, and used it to develop a response to the proposed research question. Finally, it concluded by providing a discussion of the insights gained from the literature review and developed application of the research with examples of how the inquiry should inform instructional and educational practices.

This leads to the research question which guided the direction for the literature review: *In light of what we know about how children learn and the best practices in literacy instruction, what are the most effective strategies to increase literacy outcomes among adolescent ELLs?* This research question aimed to investigate which strategies and practices could be used in secondary school content area classrooms to increase literacy outcomes for adolescent ELLs, furthering their English language development at the same time as furthering their content knowledge. This literature review was organized around several key topics which arose from the research as best strategies for improving literacy outcomes for ELLs in secondary settings, including the following, explicit reading comprehension strategy instruction, a focus on vocabulary and academic language, reading engagement strategies to boost motivation and reading self-efficacy, and finally the integration of literacy, language and content instruction.

Chapter Two: Literature Review

The question investigated in this paper is: *In light of what we know about how children learn and the best practices in literacy instruction, what are the most effective strategies to increase literacy outcomes among adolescent ELLs?* A review of research has identified several ways that secondary school content teachers could improve the literacy outcomes for ELLs. Despite the many challenges that ELLs face in middle and high school settings, particularly in content area-classes, several strategies have shown to hold promise for their academic achievement, including explicit reading comprehension instruction, an emphasis on vocabulary and academic language, reading engagement strategies, and the integration of literacy and content standards. The following portion of this paper reviewed fifteen recent research studies and highlighted key findings from each which help to answer the research question.

Explicit Reading Comprehension Strategy Instruction

Taboada and Rutherford (2011) conducted a mixed-method experimental study comparing two different instructional frameworks, each framework differing from the other in the explicitness of the vocabulary and reading comprehension strategy instruction (p. 113). Both instructional interventions were created to be content-area literacy units, centered around the state standards for living systems (p. 120). The first, titled Contextualized Vocabulary Instruction (CVI), incorporated the reading comprehension strategies of activating background knowledge, questioning the text, graphic organizers, and comprehension monitoring (p. 120). A new strategy was taught to students every two weeks over the course of eight weeks, focusing on teacher modeling, scaffolding, and student independent practice of the strategy. In addition, academic vocabulary in the CVI framework was taught in a contextualized, embedded fashion, as words came up in the context of the text and questioning (p. 121). In comparison, the second

intervention framework, called Intensified Vocabulary Instruction (IVI), was based on much more explicit and direct instruction of academic vocabulary, with preselected target words taught in a language-rich context. Students had multiple opportunities to discuss the meanings of the words and participate in a variety of activities to deepen their understanding of the words and make connections between words (p. 122). While the IVI intervention group relied on the same textbooks as the CVI intervention group, the IVI framework did not explicitly teach students reading comprehension strategies.

Taboada and Rutherford (2011) conducted their research in an elementary school in an urban area in the mid-Atlantic United States (p. 123). They selected 20 students from fourth grade who had been identified as ELL, ranging from level one to level four on the English Proficiency Scale. Ten of the 20 students participated in the CVI intervention, while the other ten participated in the IVI intervention group. An even amount of language proficiency levels were represented in each group, to aid comparison purposes. Of the 20 students, 90% were Hispanic and 10% other, and the majority of the students had been in the United States two to eight years. The two teachers were both science teachers, both with limited experience in literacy teaching experience, but both had about six years of teaching experience in elementary school, and prior experience working with ELLs (p. 124).

Both qualitative and quantitative data were collected in this study. Quantitative data measured academic vocabulary, reading comprehension, and expository writing, via experimenter-designed tests (Taboada & Rutherford, 2011, p. 124). This data was collected at four different times throughout the study: once at baseline, once after the fourth week of intervention, once after the eighth week of intervention, and once finally three weeks after the

intervention had concluded. Qualitative data included classroom observations and interviews with the teachers (p. 125).

Results showed that among lower reader students in the CVI treatment, the mean score of their reading comprehension assessment increased from a baseline of 3 to 12 in the three weeks after intervention, as opposed to lower reader students in the IVI treatment whose mean baseline score of 2 increased to only 6 in the three weeks after intervention data collection (Taboada & Rutherford, 2011, p. 129). In terms of higher readers, students in both the CVI and IVI treatment groups started out with mean baseline scores of 4 in regards to measures of reading comprehension, but students' scores in the CVI group increased a statistically significant 6 points more than students in the IVI group. Both intervention frameworks had similar gains for ELLs in academic vocabulary, with students in the IVI treatment experiencing slightly higher gains in academic vocabulary. However, as demonstrated by the data above, when it came to reading comprehension, students in the CVI intervention experienced significantly higher gains than students in the IVI intervention as the intervention progressed among both higher and lower readers (p. 130). More specifically, students in the CVI intervention were able to more successfully answer inferential test items on the reading comprehension assessment, and the researchers concluded this may be due to the fact that the CVI intervention caused students to develop more mastery of content than the IVI intervention (p. 134).

The first limitation addressed by Taboada and Rutherford (2011) was the limited sample size of only 20 students (p. 146), as generalization was difficult despite the researchers' attempt to counteract this with the experimental design of the study and the collection of both quantitative and qualitative data. Secondly, the researchers were not able to explore long term impacts of the interventions beyond the last data point, which was three weeks post the

conclusion of intervention. Despite these limitations, this study demonstrated the effectiveness of explicit reading comprehension strategy instruction in improving ELLs' literacy outcomes, and specifically their reading comprehension.

Vaughn et al. (2009) conducted two quantitative, experimental studies with seventh-grade social studies classrooms on improving ELLs' vocabulary and comprehension through explicit strategy instruction (p. 297). Both experimental studies were conducted using the same treatment, the first study from the 2006-2007 school year, and the second from the following school year (p. 303). The participants from the two studies were very similar in population. In the first experiment, the participants were taken from two different middle schools in a central Texas school district with significant numbers of ELLs, primarily Latino and Spanish-speaking. Out of 15 seventh-grade social studies classrooms, seven were assigned to the treatment, and eight to comparison, making up 381 total students, 25% of whom were ELL. In the second study in the follow-up school year, two middle schools from very similar school districts in central Texas participated, with very similar demographics to the student population in the first study (p. 304). In the second experiment, 17 sections of seventh-grade social studies were split into nine treatment sections and eight comparison classrooms, making up 571 students, 21% of whom were ELL.

Teachers in the treatment groups underwent professional development on specific instructional practices shown to benefit ELLs: explicit vocabulary and concept instruction, strategic use of video and discussion to build background knowledge (Vaughn et al., p. 299), graphic organizers for writing, and purposeful peer-pairing for collaborative work (p. 300). These strategies were incorporated daily and intentionally into the lesson framework, providing students with multiple opportunities to apply and practice these explicit skills (p. 306). In

addition, teachers in the treatment received in-class support and coaching opportunities from the researchers to support the implementation of the multi-component intervention (p. 305). Both treatment and comparison classrooms used the same textbooks and covered the same material and content, but instruction for teachers in the comparison classrooms continued with business as usual (p. 302). The intervention was implemented over a nine to 12-week period, occurring daily within the 50-minute social studies classroom (p. 305).

Observations by the researchers were conducted in both treatment and comparison classrooms to ensure fidelity of implementation of the intervention, and to ensure that teachers in the comparison were not implementing similar interventions (Vaughn et al., 2009, p. 308). Observers also noted classroom management, such as student off-task behavior, and gave each teacher an overall instructional rating. Before and after the intervention, both groups were given researcher-created content-based assessments to measure growth, assessing students on their comprehension of the content covered over the 9-12-week period (p. 309). The assessment included vocabulary matching and comprehension questions.

In the first study, ELLs in the control group increased their mean score on the comprehension measure from 1.17 to 1.93, compared to ELLs in the treatment group, whose mean score increased from 1.18 to 3.32 (Vaughn et al., 2009, p. 311). On vocabulary measures, the mean score of ELLs in the control group increased from 6.54 to 7.27, compared to ELLs in the treatment group, whose mean score increased from 6.88 to 10.57. In the second study, control group ELLs' mean score for comprehension measures increased from 0.49 to 1.36, while treatment ELLs' mean score increased from 0.80 to 3.18 (p. 315). The mean score of ELLs in the control group on the vocabulary measure increased from 5.00 to 9.47, while the mean score of ELLs in the intervention increased from 7.61 to 12.25. As the data shows, ELLs in the

treatment classrooms in the first and the second study demonstrated higher growth and outcomes on both measures of vocabulary and comprehension compared to ELLs in the comparison classrooms.

One limitation the researchers mentioned was that the measure of vocabulary assessment used did not provide for students to demonstrate deep-level understanding of the vocabulary, as students were required to simply match target vocabulary words with definitions (Vaughn et al., 2009, p. 319). A second limitation of the study was that it did not measure students' comprehension of vocabulary and concepts in the long-term, as the studies were only 9-12 weeks long (p. 320). Despite these limitations, this study demonstrated that explicit reading comprehension strategy instruction had a positive effect on outcomes for ELLs in middle school social studies classrooms.

Peercy (2011) conducted a qualitative study, examining the instructional practices of two junior high school ELL teachers as they taught sheltered classes of intermediate and advanced ELLs, concentrating on the best strategies used to prepare students for mainstream content classes (p. 324). The two teachers selected to participate in the case study had both recently graduated from a teacher preservice program and were teaching ELL in junior high schools with similar demographics, within the same school district (p. 330). The first teacher, a 34-year-old White woman, taught one section of intermediate ELLs, and contained 24 students, ranging from grades seven to nine (p. 331). The researcher described the first teacher's teaching style as being less structured and at times it appeared like the classroom was disorganized. The second teacher, a 30-year-old White man, taught a Beginning/ Intermediate Oral Skills class with ten students, an Intermediate Reading and Writing Skills class with 24 students, as well as an Advanced Reading and Writing Skills class with 31 students, all with ELLs (p. 332). The researcher described the

second teacher's teaching style as being highly structured. At both schools, the ELLs were typically from lower socioeconomic backgrounds, primarily Hispanic (p. 333).

Peercy (2011) observed both teachers in their classrooms over the span of a 4-month time period, typically two to three times per week, with the observations lasting the entire class period (p. 334). During the observations, the researcher took extensive notes on the teachers' instructional practices, as well as interacting with students at various occasions to help them, clarify questions, and engage in small talk about their personal lives. At three different occasions, once at the beginning, middle, and end of the study, Peercy interviewed each teacher in a semi-structured format, audiotaping each interview and later transcribing them (p. 335). Lastly, both teachers gave a variety of materials and documents to the researcher such as assignments, rubrics, and student work samples. After data collection, Peercy used the constant comparative method to look for themes emerging from the two case studies. Five themes were identified, including academic language, support in students' first language, explicit reading strategies, culturally responsive practices, and attention to mainstream content.

While specific findings were described for each of the five themes which emerged from the data collected, for the purpose of this literature review the author will highlight the findings related to explicit reading strategies. Both teachers engaged in explicit instruction of reading strategies to aid students' comprehension (Peercy, 2011, p. 344). For example, the first teacher spent a significant amount of time reading *Summer on Wheels* to students, chapter by chapter, demonstrating to students how to use and apply specific reading strategies during reading, such as identifying the most important details from each chapter in order to create a plot summary (p. 345). Based on the student work collected, Peercy concluded that the majority of students were able to successfully summarize each chapter in three to four sentences, showing they could

identify the main idea. Another explicit reading strategy taught and modeled by the first teacher was how to use context clues to help understand unfamiliar vocabulary encountered. In addition, the first teacher employed prediction strategies and helped students make text-to-self, text-to-text, and text-to-world connections. In the second teacher's classroom, many similar reading strategies were employed, including attention to text structure and features, using inferences to build meaning, monitoring comprehension during reading, questioning, making connections, and prediction (p. 346). The second teacher used both fiction and non-fiction expository text in the instruction. Both teachers reported that incorporating explicit reading comprehension strategies into their instruction was crucial to their students' academic achievement.

Limitations were not mentioned within the study, but a primary limitation could be the limited nature of the study, as it was a case study of only two teachers and their ELL classrooms, preventing the findings and results to be generalized. A second limitation could be the nature of the data collection did not allow for the researcher to make definitive, quantitative-data-based connections between the instructional practices of the teachers and the students' academic achievement. Student success was reported more anecdotally by teachers and researcher. However, this qualitative study adds to the body of research on best practices for ELLs in middle school, demonstrating the impact of attention to teaching explicit reading strategies for ELLs' academic success.

Vocabulary and Academic Language

A quantitative study conducted by August et al. (2014) examined the effectiveness of an instructional intervention focused on ELL strategies, specifically academic language, to aid middle school ELLs in meeting the Common Core State Standards for Literacy in *Science*. In this study, the intervention, called Quality English and Science Teaching 2 (QuEST 2), was

randomly assigned to treatment classrooms out of 60 total middle school science classrooms taught by 15 different teachers (p. 59). At the end of the intervention period, treatment and control groups were tested for comprehension of both academic language and science concepts.

This study was conducted in a large Texas school district in the Rio Grande Valley which was high poverty and contained a high percentage of Latino ELLs (August et al., 2014). Out of the total 1,309 total sixth-grade students, 353 students were officially labeled as ELLs based on their language proficiency (p. 58). Seven total middle schools in the district participated in the study, and the study was comprised of a total of 60 sections of science classrooms taught by 15 different teachers, who were each certified to teach science at the middle school level (p. 59). Each teacher participating in the study had two of their sections of science randomly assigned to the control group, and two to the treatment group. The treatment and control sections did not vary in demographic composition.

While the control groups used the school district's existing science curriculum, for the treatment groups, teachers used in addition to the district's science curriculum a specialized, inquiry-based curriculum which explicitly addressed the academic language needs of ELLs. This specialized curriculum, called QuEST 2, was supported by ongoing professional development for participating teachers (August et al., 2014). Teachers were observed as they delivered instruction for their control and treatment sections, twice in each section. The first collection of observation data occurred within the first five weeks on instruction, and the other set of observation data occurred during the second 10 weeks of instruction. The purpose of the observations was to examine the overall quality of instruction in both control and treatment sections, as well as fidelity of implementation of QuEST 2, and general recording of instructional practices taking place. Students were also assessed at pre-and post-test points for academic

vocabulary using the GRADE Vocabulary assessment, as well as a curriculum-based measure (CBM) of academic vocabulary assessment, and assessed on science knowledge using a CBM Science.

Researchers found that the mean score for ELLs in the treatment group increased by 6.3 points on CBM academic vocabulary, as opposed to gains of 4.17 made by ELLs in the control group (August et al., 2014, p. 70). On the GRADE vocabulary assessment, the mean score for ELLs in the treatment group increased by 0.78 while the mean score for ELLs in the control group increased by 0.62. When it came to the CBM science, there was also little difference in ELLs' performance between the control and the treatment group, although all students did show improvement on the CBM measure for science concepts (p. 68). However, researchers estimated that if QuEST 2 had been implemented to fidelity, the effect size would have much higher among ELLs on their GRADE academic vocabulary performance (p. 73).

August et al. (2014) noted a primary limitation within their study, which was that the QuEST 2 intervention was not implemented to fidelity within the treatment classrooms, based on the researchers' observations, and it was noted that the 15 teachers varied significantly (p. 75). In addition, researchers mentioned when describing participants that some of the teachers who participated in the study were selected to participate by their principals because the principal viewed the teacher as needing more support, which may have contributed to varying degrees of instructional quality among teachers. Overall, the study's results showed that an explicit focus on vocabulary did prove to be beneficial to ELLs' understanding of both academic and content-specific vocabulary.

In an additional quantitative study, Ardasheva, Newcomer, Firestone, and Lamb (2017) explored the impact of general academic and science-specific vocabulary on science reading

comprehension among ELLs in grade seven. It has been well established that ELL students have struggled with the academic and domain-specific language demands presented in secondary content classes such as science. Ardesheva et al. highlighted the vocabulary gap which existed between ELL students and their non-ELL peers, persisting beyond elementary school (p. 666). In addition, the limited vocabulary knowledge of ELL students in both the general academic and content-specific realms have posed barriers to their comprehension of the content, and content instruction must address these needs at the secondary level for ELL students to engage in the content literacy tasks. This study focused on these pertinent issues.

The study was conducted with a group of seventh-grade students at a Pacific Northwest urban middle school as part of a larger study (Ardasheva et al., 2017). In total, the sample included 86 current ELL students and 83 former ELL students (p. 667), 99% of whom were Spanish-speaking.

Data for this study was gathered by teachers in the middle of the school year, in December, during their unit on Earth systems (Ardasheva et al., 2017, p. 667). Several sources of data were collected. First, data was collected from teacher-created, curriculum-based assessments which assessed students' general academic vocabulary knowledge, science specific vocabulary knowledge, and science reading comprehension (p. 668). Students also took the General Academic Vocabulary Measure (GAVM), the Vocabulary of Science Scale (VSS), and the Science Reading Comprehension (SRC), gauging student performance with different objective measures. Researchers used the parallel mediation model (p. 669) to extrapolate results on the mediating effects of the two different types of vocabulary (general academic and science) on ELLs' science comprehension.

Ardasheva et al. (2017) reported on several significant findings of their study. To begin, students' ELL status was a large predicting factor in both their general academic vocabulary knowledge and science-specific vocabulary knowledge, accounting for 25% and 19% of the variance, respectively (p. 669). In addition, both of these types of vocabulary also predicted science reading comprehension. The mediating effect of science vocabulary on science reading comprehension was 2.17, while the academic vocabulary effect was slightly less but still statistically significant at 1.17 (p. 670), causing the researchers to suggest that *both* types of vocabulary are important factors at work among ELLs' science reading comprehension.

A limitation mentioned in the study was that another linguistic feature of science texts may be a factor to comprehension in addition to general academic vocabulary and science-specific vocabulary, which is syntactic features and the passive voice found in science expository text (Ardasheva et al., 2017, p. 671). This type of vocabulary was not explored in this current study but may be an additional barrier to ELL's reading comprehension of science texts as it poses a unique set of challenges. Nonetheless, the results of this study helped explain the large role that academic vocabulary played in the literacy achievement of ELLs.

A qualitative study by Harmon, Antuna, Juarez, Wood, and Vintinner (2018) investigated high school social studies teachers' understandings of vocabulary instruction and learning, as well as looked at how teachers supported their students' vocabulary learning within their content area class (p. 271). Participants were selected using purposeful sampling, and included 25 high school social studies teachers who taught at five different school districts, both urban and suburban areas in Texas and North Carolina (p. 278). Classes taught by this group of teachers included United States History, Macroeconomics, Psychology, World History, European History, Government, and Comparative Religions. The primary methodology for data collection was

multiple, face-to-face interviews led by the researchers. Researchers asked questions regarding teachers' use of texts in their classrooms and their vocabulary instruction methods (p. 279).

They also had teachers read a passage from a social studies textbook, select vocabulary words they would emphasize for their students and then describe how they would teach the words they chose (p. 280). The researchers scribed notes from each interview as well as recorded them, then analyzed the data using a constant comparative approach (p. 281).

Several findings stood out. First, Harmon et al. (2018) reported that the majority (17 out of 25) of the participating teachers relied heavily on a textbook as the primary source of information for teaching their classes (p. 283). Secondly, much variation existed in how participants reported they supported students in reading and comprehending the texts (p. 284). For example, several teachers expected their students to read much of the text outside of class, while others provided time and instruction in class. In terms of vocabulary instruction, the participants reported they did not rely on the textbook's pre-selected list of vocabulary but rather on their own personal choice, citing challenges that ELLs and lower readers have with academic and domain-specific vocabulary (p. 286). However, much variation was also reported in how teachers incorporated specific vocabulary instructional practices. Several reported that they pre-taught vocabulary (p. 287), while others reported teaching vocabulary in a more contextualized way, as the words came up in the text (p. 288). Despite the variation, most participants said they used visuals to teach vocabulary, and some also provided opportunities for students to engage in discussion and structured talk (p. 289). All participants reported focusing on domain or content-specific vocabulary, and many reported challenges and time constraints in addressing general academic vocabulary (p. 290). Key challenges noted included students' lack of background knowledge, limited reading strategies, and lack of understanding of word morphology (p. 291).

One teacher mentioned that some of their students could not even differentiate between words such as *increase* and *decrease*, pointing out the wide vocabulary gap many students face in general academic vocabulary alone.

Harmon et al. (2018) pointed out three main limitations of the research. First of all, the small number of participants (25 teachers) made generalization of results difficult (p. 281). Secondly, the diverse nature of the different social studies courses, ranging from Psychology to United States History to Macroeconomics, also complicated the results, as each course exacted very different demands of students. Finally, Harmon et al. acknowledged that the self-reported nature of the data collection (teacher interviews) may not have given researchers the full picture, as classroom observations of instruction were not included. The qualitative findings from this study demonstrated the wide variation in how content area teachers taught academic vocabulary and the challenges they identified in making the text accessible to their lower readers, and specifically ELLs. This study verified the importance in teachers' attention to academic vocabulary to aid ELLs in accessing mainstream content.

Lesaux, Kieffer, Faller, and Kelley (2010) conducted a quasi-experimental, mixed-methods study investigating the effectiveness of an academic vocabulary intervention designed for implementation in mainstream content class in a linguistically diverse, urban middle school (p. 196). Participants included 21 sixth-grade classes, 13 treatment classrooms which received the academic vocabulary intervention in the English Language Arts (ELA) classes for a total of 18 weeks, and 8 control classrooms, which continued with business-as-usual district ELA curriculum. The academic vocabulary intervention, Academic Language Instruction for All Students (ALIAS), was a text-based language program featuring short engaging texts designed to be relevant to youth culture (p. 203). From each text the researchers selected around eight or

nine general academic vocabulary words which commonly showed up in expository text. Vocabulary instruction was integrated in meaningful and authentic ways into the ELA content, and multiple exposures to each vocabulary word was provided, building students' vocabulary knowledge incrementally (p. 207). Instruction consisted of a variety of methods including whole-group, small-group, and independent activities.

The 21 classes represented a total student population of 467 students, 346 being ELLs (Lesaux et al., 2010, p. 207). Researchers used classroom observations and teacher logs to ensure that the academic vocabulary intervention was effected with fidelity. They also used a battery of measures to assess students' language, including the Stanford Achievement Test-10th Edition: Reading Vocabulary Subtest (SAT-10), a researcher-created word mastery assessment (p. 208), and a Morphological Decomposition Task. To assess students' reading comprehension, researchers used the Gates-MacGinitie Reading Test, Fourth Edition: Reading Comprehension (p. 209). These measures were taken to assess language and reading levels both before and after intervention (p. 212).

Lesaux et al. (2010) found that on the SAT-10, the mean score of ELLs in the treatment group increased by 15.86, compared to 4.87 in the control group (p. 214). On the Target Word Mastery assessment, the mean score of the ELLs in the treatment group increased by 5.25, compared to an increase score of 1 in the control group. On the final measure of vocabulary, the Morphological Decomposition task, the mean score of ELLs in the treatment group increased by 3.74, as opposed to 1 in the treatment. In terms of reading comprehension, ELLs in the treatment groups' mean score increased by 5.08, while ELLs in the control groups' mean score declined by 6.81. The researchers concluded that the effect of the ALIAS on the treatment group was visible and positive. Effect sizes were found to be comparable for ELLs and non-ELLs. The qualitative

survey and interview data revealed several themes, most notably that teachers felt the ALIAS intervention helped them to meet the instructional challenges their students faced, and the teachers also commented that the text-based format of the intervention was influential in sparking high quality discussions and engaging in rich vocabulary learning opportunities (p. 217).

The researchers pointed out that causal inferences should not be made due to the quasi-experimental nature of the study (Lesaux et al., 2010, p. 214), as it was possible that outside factors could have impacted the quality of instruction from the teachers in the treatment group and as opposed to the teachers in the control group, and these differences in the quality of instruction could have played a role in the differing outcomes for students. No further limitations were mentioned. The overall findings from this study demonstrated the favorable results of a targeted academic vocabulary intervention for linguistically diverse middle school students in their content area classes in increasing both ELL and non-ELLs' academic language and reading comprehension.

Reading Engagement Strategies

In a quantitative study conducted by Barber et al. (2015), the researchers examined how a specific intervention called the United States History for Engaged Reading (USHER) impacted the reading comprehension, reading self-efficacy beliefs, and engagement in social studies of middle school students, of whom approximately 50% were ELLs (p. 43). The researchers looked at changes in these three areas for both ELLs and English native speakers. The USHER program was based on the reading engagement model, which underscored student reading engagement, conceptual knowledge, and cognitive strategy use (p. 36). The study focused on adolescent learners, specifically within the content area of social studies, and curriculum adaptations that

would support ELLs in these contexts, increasing their reading comprehension, self-efficacy beliefs around reading, and engagement. Barber et al. compared the intervention group to a different set of participants from a neighboring school with similar demographics who did not receive the USHER intervention (p. 43).

The USHER intervention group consisted of 13 social studies teachers and their classes, which were comprised of 10 grade six classrooms and three grade seven classrooms (Barber et al., 2015, p. 43). There were 378 grade six students, of whom 189 identified as ELL, and 84% of the ELL students' native language was Spanish. In grade seven, there were 106 students, and 47 students identified as ELL, with 85% of these ELL students' native language being Spanish.

Another middle school in the same region also participated in the study as the comparison group, not receiving the USHER intervention. The participants were not randomly assigned to comparison and intervention group, as the comparison group had to be the other middle school in the different school district. Therefore, students in the first school district were assigned to receive the USHER intervention and were compared to students at a similar middle school in the same region. For the comparison group, data was collected from 14 classes, consisting of 133 grade six students and 154 grade seven students (Barber et al., 2014, p. 44). Gender, language, and racial demographics were also detailed for the comparison group and were almost identical to the intervention group's demographics. It should also be noted that the researchers did not include data from any Special Education students, so as not to muddle their results.

Barber et al. (2015) used a variety of instruments to collect data in their study. Prior to USHER implementation, researchers administered a Gates MacGinitie Reading Assessment, a History Comprehension Assessment, a Reading Self-Efficacy of Beliefs survey, a Behavioral and Emotional Engagement survey, and a Student Perceptions of Teacher Support survey to the

USHER treatment group (p. 45). In addition, they used students Measure of Academic Progress in Reading (MAP) scores as an initial data point. After the seven weeks of social studies instruction using the USHER model, the intervention group was again measured using all of the above instruments. The comparison group at the school not participating in USHER only took a Reading Self-Efficacy of Beliefs survey and Behavioral and Emotional Engagement survey at the pre-and post-data points.

With multiple data sources, this study had a range of findings. First of all, grade 6 ELLs in the treatment group showed a statistically significant increase on the historical comprehension assessment, with mean scores increasing from 16.60 before USHER implementation to 19.15 post USHER implementation (Barber et al., 2015, p. 56), while English native speakers did not show that change (p. 68). In addition, students in the USHER intervention group in grade six showed an increase in their reading self-efficacy after the seven weeks, but results showed that English native speakers' reading self-efficacy was higher than those of the ELLs (p. 69). As far as emotional and behavioral engagement in social studies, ELLs' in sixth grade emotional engagement decreased from 0.72 to 0.66 (p. 65), and ELLs' in seventh grade emotional engagement decreased from 0.74 to 0.62 (p. 66). For ELLs in grade seven but not for native English speakers, reading self-efficacy scores correlated with a change in their reading MAP scores, with the overall variance attributable to differences among the group being 0.74 (p. 63), demonstrating the role that reading self-efficacy may have in increasing reading comprehension for ELLs (p. 70).

The study did have several limitations that were noted. The researchers acknowledged that they did not control for additional sources of instruction the students may have received over the course of the seven weeks of the USHER program to which an increase in reading

comprehension could have been attributed (Barber et al., 2015, p. 70). Secondly, they admitted that teachers of grade seven students in the intervention group were not as acquainted with literacy/ language arts practices as the grade six teachers, which could have contributed to differences in performances by seventh and sixth grade students (p. 69). Finally, the researchers recognized that grade seven teachers were working on a semester-long social studies curriculum basis, as opposed to a year-long social studies curriculum basis in sixth grade. A limiting factor not mentioned by the researchers was the fact that the control group who did not receive the USHER intervention did not take many of the measures such as the reading assessments, and therefore were not able to be compared with on many levels. This study showed that reading engagement strategies, which include the motivational component of reading, was an influential factor in increasing ELLs' reading comprehension in their content area classes.

In a more recent quantitative study conducted by Barber et al. (2018), the effect of the USHER intervention was examined in social studies regards to ELLs' history comprehension, strategy use, reading self-efficacy, and reading engagement (p. 79). The goal of the USHER intervention was twofold: to increase ELLs's reading comprehension in their social studies content class, and to support their reading engagement through motivational practices (p. 81). The data presented in the paper was from the second year of a three-year study, conducted with seven sixth grade teachers and their students in a suburban school district in the mid-Atlantic region of the United States (p. 83). Each of the seven teachers taught two classes, either language arts or social studies, and the participating students were their 14 total classes, totaling 203 students, 40% of which were Spanish-speaking ELLs. Three of the teachers and their classrooms were assigned to Sequence A implementation curriculum, while the other four teachers and their classrooms were assigned to Sequence B implementation curriculum.

The seven teachers participated in professional development and were given USHER curriculum materials, along with trade books and lesson plans, to use in their classroom during the course of the study (Barber et al., 2018, p. 84). Teachers in the Sequence A implementation curriculum used USHER unit plans related to interactions between the Native American and White European explorers, while teachers in the Sequence B implementation curriculum used USHER unit plans related to colonial United States and the events prior to the American Revolutionary War. The instructional delivery of the USHER curriculum lasted for five weeks and consisted daily of 45-50 minute lessons (p. 92). Teachers used the USHER model to build motivational habits in the students, including supporting students' self-efficacy, allowing for student collaborative work, and providing relevant materials. A variety of measures were used to assess the effectiveness of the USHER intervention, including a history reading comprehension assessment, a strategy use assessment, a reading self-efficacy beliefs survey, and a teacher-based rating of their perceived students' reading engagement (p. 86).

Results demonstrated that post USHER treatment, ELLs in Sequence A made gains on the measure of history reading comprehension, with mean scores increasing from 10.9 to 16.09, and ELLs in Sequence B also experience gains, with mean scores increasing from 11.11 to 15.05 (Barber et al., 2018, p. 87). In terms of reading engagement, the mean scores of Sequence A students increased from 2.7 to 3.24, and the mean scores of Sequence B students increased from 3.18 to 3.48. The mean of teacher-reported student reading engagement scores increased in Sequence A ELLs from 3 to 3.2, and for Sequence B ELLs from 2.7 to 3.3, supporting the researchers' premise that the USHER intervention would enhance ELLs' reading engagement (p. 90). In terms of reading self-efficacy, the mean scores of ELLs in Sequence A increased from 75.55 to 81.10, compared to ELLs in Sequence B increasing from 75.86 to 83.31.

Barber et al. (2018) mentioned several limitations in the research, including the brevity of the intervention length, the fidelity of teacher implementation, as well as the sample size (p. 92). Barber et al. acknowledged that changing teachers' instructional practices, such as incorporating literacy into content classes, takes time, and the data used in this study was taken during only the second year of the USHER implementation. This research showed the benefit of a literacy intervention for ELLs that focused not just on the cognitive aspect but also the motivational aspect, in boosting students' reading comprehension in content classes as well as their engagement.

A qualitative study conducted by Protacio (2017) examined the reading engagement of four ELLs in middle school in their ELL classroom, looking at their motivation to read, their strategy use while reading, construction of meaning from the text, and participation in social interactions around reading (p. 1). Conducted in a diverse, suburban middle school in the Midwestern United States (p. 3), the study focused on just four students in seventh and eighth grade.

The first student, Farshad, was an ELL in seventh grade, originally from Afghanistan, and he had been in the United States for six years (Protacio, 2017, p. 4). The second student, Jonathan, was a former ELL in seventh grade, originally from China, and had been in the United States for four years. Nabila, the third student, was an ELL in eighth grade, born in Afghanistan and having been in the United States for six years. The last student, Oliver, was also an ELL in eighth grade, originally from the Congo, and he had been in the United States for a total of eight years. The students first languages were Farsi, Mandarin, Dari, and French, respectively, and each had varying levels of literacy in their native language. Their teacher, Mrs. Blake, taught a sheltered ELL class for seventh graders, giving the students rigorous instruction in English, as

well as a mixed seventh and eighth grade ELL class. The first half of the mixed grade level class was spent on academic vocabulary instruction, and during the second half of the class, students who were English proficient enough to receive a mainstream English Language Arts class went to the library for extra academic support while lower proficiency students remained with Mrs. Blake for further ELL instruction.

Protacio (2017) utilized a variety of data collection methods to obtain information on the four students' levels of reading engagement, including classroom observations two to four times weekly, four semi-structured interviews with each student, the Qualitative Reading Inventory-5 (QRI-5) administered four different times, and a variety of student artifacts (p. 6). Key findings of the study reported that students had higher motivation to read and engage with texts when they felt invested in the text through personal choice and interest (p. 7). For example, student Jonathon loved to read mystery series, and reported reading a 156-page book in one day due to his intrinsic motivation. All four of the students, however, demonstrated an overall lack of motivation to read academic texts in their content classes, finding them to be irrelevant and boring. Students with higher reading engagement were found to demonstrate more reading comprehension strategies on the QRI-5, but less when they were reading independently for pleasure (p. 8). In addition, the amount of background knowledge the students had relating to the topic of the QRI-5 text impacted their ability to exhibit strategic knowledge (p. 9). Students with higher reading engagement also scored higher on measures of reading comprehension. Protacio (2017) also observed significant identity struggles within each student (p. 11). Nabila, for example, expressed feeling different from the mainstream students because of the fact she wore a hijab, and her social interactions at school were primarily with other Muslim students. Jonathan struggled to toggle between being *American* at school but *Chinese* at home (p. 12),

while Farshad expressed being embarrassed by his ELL status. The study concluded that the tension each student felt around being ELL, and figuring out where to fit in the broader sociocultural context of school had a significant impact on their reading engagement (p. 11).

Limitations to this study were not discussed, but the small sample size of only four students poses limits for generalization of results. In addition, the four ELLs represented, while admittedly representing a set of four diverse ELL students, only represent a fraction of the ELLs' experiences and backgrounds, as the term ELL can encompass a huge range and variety of students with different countries of origin, home languages, level of literacy in home language, and time spent in the United States. Despite the limitations, the qualitative results bolstered the correlation between ELLs' reading engagement and reading comprehension in content area classes, pointing out that the cultural tensions faced by ELLs may also factor in to their engagement.

Integration of Literacy and Content Instruction

Francquiz and Salinas (2013) investigated in a qualitative research study how one high school social studies teacher in Texas was able to integrate language and content standards in their classroom. The teacher used historical inquiry and document-based questions to allow newcomer ELLs to demonstrate their understanding in culturally relevant ways (p. 342). The study made the case for the importance of integrating language standards as well as content standards and the importance of teachers' flexibility to adapt the social studies curriculum to become more relevant to the students. Students in the teacher's class were able to demonstrate their increasing understanding of both English literacy as well as history due to the dual language and content instructional opportunities provided by the teacher.

The study focused only on the experience of one teacher and the newcomer students in the social studies classroom, a very small yet purposive sample size, which was a sheltered social studies class at Burlson High School in Texas, where the students in the class all consisted of newcomer ELLs (Franquiz & Salinas, 2013, p. 343). The teacher was an English as a Second Language certified social studies teacher, purposefully selected because of their fifteen years of experience working in high school newcomer classes, in addition to their wide knowledge of the state's social studies standards. The students in the classroom studied were also described. The researchers profiled three sample students in the classroom, highlighting their academic backgrounds, to demonstrate the range of academic and schooling experiences represented in this sheltered newcomer social studies classroom. In total, there were only 11 students in the classroom, and 7 out of these 11 students were Mexican, whose dominant language was Spanish (p. 342). The researchers did not describe the students' ages or grades at the various data points or the origins of the four non-Mexican students in the class.

The study examined student work and writing as well as interviews with the cooperating teacher over the course of several years, and interspersed within the narrative of the study were student work samples and quotes from the teacher (Franquiz & Salinas, 2013). The researchers compared two sets of data, the first collected in the spring of 2010 during three 90-minute classes as students were working past the traditional Black-White racial binary typically presented in United States history, and learning about topics about Mexican-Americans struggle for civil rights (p. 346). This data set was gathered after state level social studies exams had been given to students. The second set of data was collected in the spring of 2012, before the state level exams had been delivered, while students were focusing on the Cold War. Researchers not only interviewed the teacher extensively, but also audio-recorded classes as well teacher planning and

debriefing times. Student written artifacts were also collected, providing researchers with a varied set of data sources to analyze.

The results of the study indicated a difference in the learning between the times when the ELL students in the class were able to see themselves reflected in the curriculum, and the times when the learning seemed more disconnected from their lives (Franquiz & Salinas, 2013, p. 347). For example, when prompted to create a telegram to President Eisenhower in response to the Little Rock Nine, students demonstrated they could draw on their cultural and linguistic resources better as the topic more closely aligned with issues familiar to them, such as rights, fairness, public education, racism, and discrimination (p. 348), as opposed to when students were directed to create a graphic blog, or Glog, of the major events during the Cold War, a topic much less familiar to students (p. 352). Historical inquiry was used to extend learning beyond the traditional textbook to include primary sources and photographs, reducing the intensive literacy demands of reading a social studies text, but still allowing students to build content knowledge and respond in writing. Although historical inquiry was used in both data sets to engage students in writing and reflection of learning, historical inquiry in and of itself did not seem to hold great promise in aiding to construct new content knowledge of the ELL newcomer students, when it was isolated from culturally relevant pedagogy.

Franquiz and Salinas (2013) noted several limitations in their work. First of all, their initial data collection in the spring of 2010 was conducted *after* the students had already taken their state-level social studies tests (p. 346). Therefore, their teacher was using their professional latitude and extending the content instruction to beyond the required state content standards for World Geography Studies to include culturally relevant topics that connected to her students' lives such as *el Movimiento* and the Mendez vs. Westminster case. Upon the second data

collection in the spring of 2012, during the students' United States history course, the teacher had not yet administered the state level exams and was therefore focusing the content instruction on the state-mandated standards of the Cold War. The researchers acknowledged that this shift in content instruction changed the way the students were able to engage in the literacy tasks, albeit the teacher was implementing the same types of literacy scaffolding and support strategies. In addition, the researchers noted that as in any qualitative study, their findings should not be extrapolated from the specific context of the particular school, classroom, and curriculum (p. 354). Finally, they pointed out that the study examined students' engagement at several specific points (spring of 2010 and spring of 2012), and they did not conduct a study looking at engagement over a more prolonged period. This qualitative study revealed how content and language standards could be integrated in culturally relevant ways to facilitate ELLs' ability to demonstrate their understanding.

In addition to social studies, science is a content area that has exacted taxing literacy demands of ELLs particularly in the realm of academic and technical language. In further research, Irby et al. (2018) conducted an experimental quantitative study exploring the instructional differences between sixth grade science teachers who received in depth training and professional development (PD) on specific ELL strategies, in a program called Project Middle School Science for English Language Learners (MSELL), and teachers who did not receive any PD on ELL strategies. Project MSELL was literacy-based science instruction which included five specific ELL strategies including: hands on activities, cooperative learning, dialogic and questioning strategies, scaffolded learning, and integrated technology (p. 7).

This study was conducted in a large urban school district in southeast Texas, and the treatment, Project MSSELL, was implemented in four intermediate schools where different

teachers were randomly assigned to treatment (Project MSSELL) or control (normal science instruction) (Irby et al., 2018, p. 10). The school district had a large population of Spanish-speaking ELLs, over 45%. While Project MSSELL was implemented in fifth as well as sixth grade classrooms, Irby et al. focused on the results from only the sixth grade in their longitudinal study. At each school, teachers were selected randomly for participation in the treatment of Project MSSELL. In the sixth grade, four teachers participated in the treatment and four were in the control group (p. 11). On average, the teachers had 8.4 years of teaching experience. In the sixth grade, there were 160 ELLs, with 105 in the treatment, and 55 in the control group, and 116 non-ELLs, with 48 in the treatment, and 68 in the control. No further details were provided for participant demographics.

Teachers in the Project MSSELL treatment group received PD twice a week with researchers who were experts in science and ELL strategies (Irby et al., 2018, p. 11). Each professional development session lasted 90 minutes and focused on upcoming instruction in the science classrooms and in depth exposure to the ELL engagement strategies. In the Project MSSELL treatment classrooms, students received 85 minutes of daily literacy-based science instruction, connected to state and national science and reading standards. Compared to treatment teachers who used scripted Project MSSELL curriculum, teachers in the control group followed the school district's typical science instruction and curriculum and only attended 30 hours of state-mandated PD each year. The researchers used the Transitional Bilingual Observation Protocol (TBOP) to observe the content delivery of teachers in the treatment and control groups where trained researchers noted all instructional practices and any ELL strategies taking place every 20 seconds (p. 13). Observers conducted a total of 1,380 rounds of

observation in the sixth-grade classrooms, which included both the treatment and control groups, spending on average around 55 minutes observing each teacher (p. 14).

One of the primary findings from this study was that the teachers in the treatment group of Project MSSELL spent more instructional time incorporating ELL strategies: 24% in collaborative/ cooperative grouping, as opposed to 2% in the control group, 16% in questioning strategies as opposed to 10% in the control group, and 9.3% in academic language scaffolding compared to 7% in the control group (Irby et al., 2018, p. 14). Notably, Irby et. al reported that students in the treatment groups outperformed the control students on measures such as curriculum-based science tests and reading and also on standardized assessments of science and reading, although specific student achievement data was not analyzed in this paper (p. 15).

Irby et al. (2018) did not mention any limitations of their research study, but possible limitations could include the fidelity to which treatment teachers implemented Project MSELL, as well as individual differences between teachers such as teaching style or prior trainings or experience with literacy strategies or ELL strategies, which may have skewed the results. The findings of this study showed how the integration of content and literacy standards, supported by intentional PD opportunities for teachers, provided ELLs with more scaffolding in their content area classes and increased their academic outcomes.

Another quasi-experimental, quantitative study conducted by Hinde, Osborn-Popp, Jiminez-Silva, and Dorn (2011) also investigated the interaction between content standards and literacy standards with ELLs, focusing on the impact of a geography-based literacy curriculum, *GeoLiteracy for English language learners* (p. 47). Researchers wanted to find out the effects that integrating geography content, literacy instruction, and ELL-specific strategies would have on the reading comprehension of ELLs among older elementary and middle school students (p.

54). A total of 35 teachers from three different states participated as part of the intervention group, implementing the *Geoliteracy for ELLs* curriculum in their social studies classrooms, while a comparison group made up of 40 teachers continued instruction in their social studies classrooms as usual, following state and district standards. The comparison group did not implement the *GeoLiteracy for ELLs* curriculum. Both intervention and comparison classrooms were comprised of similar demographics of students. Students from both treatment and comparison groups ranged from grades three to eight, for a total of 1,431 participating students, and approximately 28% to 39% of the students in each grade level were classified as ELL.

Teachers in the intervention group taught three to five GeoLiteracy lessons in their classrooms over a three to five-month time period (Hinde et al., 2011, p. 54). The duration of each lesson lasted two to three instructional days, occasionally longer if the teachers supplemented with other materials. Lessons were delivered at the rate of one every other week during the three to five-month timer period (p. 55). *GeoLiteracy* curriculum provided a variety of different lessons for each grade level, but all lessons were based in geography content and stressed explicit reading strategies such as summarizing, finding the main idea, making inferences and coming to conclusions, following directions, as well as reading graphs and tables. At both pre- and post-intervention points, students in treatment and comparison classrooms took reading assessments which were based on the reading skills mentioned above, and not on geography specific content (p. 56). The GeoLiteracy reading assessments were designed to look similar in design to standardized reading assessments.

Findings indicated that ELLs in grade eight of the intervention group's mean score at pre-test of 4.19 increased to 5.17, compared to ELLs in grade eight of the comparison group, whose mean score decreased from 3.46 to 3.44 (Hinde et al, 2011, p. 58), a statistically significant

higher achievement noted in the treatment group. Among fifth grade ELLs in the treatment group, their mean score increased from 3.30 pre-test to 4.28 post-test, compared to fifth grade ELLs in the comparison group, whose mean score decreased from 4.45 to 3.94. In addition, the ELLs in the treatment group in grades three, four, and seven showed higher achievement gains than their non-ELL counterparts (p. 57).

A limitation pointed out by Hinde et al. (2011) was the possible variability that existed in teachers in their differing levels of instructional expertise and their varied pedagogical styles (p. 60). Teachers were also not completely randomly selected to participate in the study. Despite these drawbacks, this study showed the positive influence of *GeoLiteracy for ELLs*, a comprehensive, integrated geography content and reading skills curriculum, on a measure of ELLs' reading comprehension skills.

In another quasi-experimental quantitative study conducted by Bravo and Cervetti (2014), the effectiveness of an instructional model which integrated science, literacy, and language learning targeting ELLs was tested (p. 230). ELLs in fourth and fifth grade were subjected to two types of science curriculum, the first group receiving the integrated instructional model curriculum, and the second group receiving instruction based on *hands-on* science with equivalent content. Ten fourth and fifth grade teachers from two different states participated in the study and were randomly assigned to the treatment group or control group (p. 234). Each of the teachers' classrooms had at least 25% or higher populations of ELLs, for a total of 115 ELLs, the majority of whom spoke Spanish as their native language (p. 235).

The researchers constructed the integrated science-literacy curriculum around a Space Science unit, emphasizing the cooperation of both science and literacy (Bravo & Cervetti, 2014, p. 235). The curriculum consisted of a 40-session unit which incorporated literacy via reading,

writing, a focus on academic vocabulary, and discussion. Within each hour-long session, one to three specific ELL scaffolds were built into the lesson, supporting ELLs' language needs as well as content needs. The participating teachers in the treatment group did not attend training on how to implement the integrated curriculum but did receive a guidebook along with the fully developed curriculum materials for students to use (p. 236). Researchers measured students in both the treatment and control groups' science understanding, science vocabulary, and reading comprehension before the intervention as well as ten weeks later, after the intervention had concluded (p. 237). In addition, researchers conducted classroom observations of both the treatment and control classrooms, as well as interviews with each teacher (p. 239).

Bravo and Cervetti (2014) found that scaffolding and support for ELLs' language development was higher in the treatment classes, as evidenced by significantly higher scores of teacher-student or student-student talk time, with a t value of 2.38 (p. 239). ELLs in the treatment classrooms also exhibited significantly higher scores for Science Understanding, increasing by a mean score of 5.07 compared to 2.34 in control classrooms, and Science Vocabulary, which increased by a mean score of 5.13 compared to 2.63 (p. 240). However, Bravo and Cervetti (2014) did not find any statistically significant difference in the performance between groups for measures of Science Reading (p. 241), hypothesizing that the limited length of the study (eight weeks) may have been too brief of a time period to show an effect (p. 242).

One limitation addressed by Bravo and Cervetti (2014) was that the classrooms in the study represented a homogeneous ELL population, which nearly all the ELLs coming from Spanish-speaking backgrounds (p. 242), and they acknowledged that the ELL population in the United States was much more multilingual and diverse than the students in their sample size. Therefore, they cautioned against results being generalized across all ELLs without further

research. In addition, they mentioned the fidelity of implementation of the curriculum as a second limitation, as the researchers were only able to conduct three classroom observations to assess the level of fidelity to which the integrated curriculum was employed (p. 243). Overall results from this study indicated that when the content and literacy curriculum were merged, the content understanding of ELLs increased.

A final qualitative case study examined the collaboration between a mainstream English Language Arts teacher and an ELL teacher as they worked to increase literacy opportunities for ELLs in mainstream classes (Russell, 2014, p. 1189). The purpose of the study was to investigate how a collaborative literacy team could better support the academic needs of ELLs in their mainstream content classes (p. 1192). The study was conducted at a small high school in an urban school district in Washington State. A total number of 350 students attended the school, and 30% of the student population was identified as ELL, coming from families with origins in nearly every continent, creating wide linguistic diversity among the ELLs. The most common native language for the ELLs was Spanish or Amharic. Russell focused on the partnership between the ELL teacher, Sarah, who had nine years of classroom teaching experience and served both as an ELL teacher as well as ELL facilitator at the school, and Hilary, an Advanced Placement (AP) ELA teacher with five years of experience (p. 1194). They met as a literacy team to plan and collaborate twice a week as well as Sarah and Hilary co-taught an AP ELA class together.

The study was conducted over the time period of a year, over which Russell (2014) analyzed data from multiple sources, including three interviews with the teachers, observations of co-planning time, classroom teaching time, staff meetings, and casual conversations, and documents to investigate the collaborative literacy work taking place (p. 1193). One key finding

from the qualitative data showed that the literacy collaboration between the two teachers had beneficial effects for the ELLs at the school by increasing their engagement and academic success in the mainstream AP ELA classes, according to anecdotal evidence from teachers as well as students' grades (p. 1195). Sarah also reported that the ELLs demonstrated higher self-confidence levels in their abilities to complete rigorous literacy tasks such as essays and other assignments (p. 1196). In addition, the collaboration allowed the mainstream content teacher, Hilary, to provide meaningful supports and scaffolds to the ELLs in her classes through instructional strategies that met their language and literacy needs, including during units with more demanding content and language levels such as the Hamlet unit (p. 1200). Another outcome of the collaboration was that it supported the inclusion of more ELLs in the AP section of ELA, because of the built-in support that the ELL teacher was able to provide ELLs in the sections she was co-teaching. Overall, the collaborative efforts of Sarah and Hilary allowed the ELLs to receive integrated language and literacy support in their mainstream ELA class as well as individualized support for their specific needs (p. 1197).

No limitations were mentioned by Russell (2014) in this study, however due to the qualitative nature of the study and the small sample size (two teachers and their classrooms), the results could not be generalized to the broader context. In addition, results in regards to students' academic performance focused more on anecdotal evidence and not quantitative data showing literacy growth. Finally, it should be acknowledged that not all schools are able to replicate the type of collaborative work demonstrated by Sarah and Hilary due to scheduling and other constraints. This qualitative study demonstrated that collaboration between content and ELL teachers allowed ELLs to experience more literacy success in rigorous content classes at the high school level.

In summary, this Literature Review examined fifteen relevant research studies which highlighted most effective strategies to increase literacy outcomes among adolescent ELLs. The four themes that arose from the research review were explicit reading comprehension instruction, an emphasis on vocabulary and academic language, reading engagement strategies, and the integration of literacy and content standards. The following chapter will review the stated research question, summarize the findings from the research studies and then come to a synthesized conclusion of how the research helps to answer the research question.

Chapter Three: Research Summary and Conclusions

As the population of students in United States secondary schools classified as ELL has increased, the unique challenges these students faced particularly in their content area classes, such as science, ELA, or social studies, have become more apparent. Each content area exacted its own distinctive literacy demands, from rigorous technical text to domain-specific vocabulary. The reading achievement of ELLs has persistently lagged behind their non-ELL counterparts, and yet many middle and high school ELLs receive instruction from content-area teachers who are not knowledgeable nor comfortable with instructional practices that benefit ELLs' literacy growth and development. This paper investigated this significant issue, and attempted to answer the research question: *In light of what we know about how children learn and the best practices in literacy instruction, what are the most effective strategies to increase literacy outcomes among adolescent ELLs?* The review of 15 pertinent studies explored the research on best practices and strategies, and four topics emerged, including explicit reading comprehension strategy instruction, attention to vocabulary and academic language, reading engagement strategies, and finally the integration of language and content standards. The following chapter will summarize the findings from each topic, connecting back to the research question.

Explicit Reading Comprehension Strategy Instruction

The first topic which emerged was the importance of explicit reading comprehension strategy instruction to increase ELLs' reading achievement, supported by both qualitative and quantitative research. Many content area classes in secondary settings placed heavy reading and literacy demands on ELLs, and the students often did not have the necessary background knowledge or awareness of reading comprehension skills to begin to access the content. When teachers explicitly taught reading comprehension strategies and skills as an intentional and daily

part of their lesson framework, ELLs showed increased literacy outcomes. In successful interventions, direct strategy instruction was embedded into ongoing content instruction, helping students to activate their background knowledge, question the text, use graphic organizers, monitor their comprehension, find main ideas, summarize, make predictions, make connections, and read and understand text features. In addition, these explicit skills were taught using the gradual release model, where teachers modeled the reading comprehension strategy, provided scaffolded practice for students to apply the skill with teacher and peer support, often in collaborative groups, and also gave independent practice time for students to employ the strategy on their own. The studies emphasized the importance of not just explicitly teaching the reading comprehension strategies, but of giving students multiple opportunities to apply and use the skills in content-based settings.

Vocabulary and Academic Language

The second topic which surfaced from the literature review was attention to vocabulary and academic language. Teaching vocabulary within content level classes at the secondary level was reported by teachers in one study to be challenging because of limited time constraints and the overwhelming amount of both general academic vocabulary and domain-specific vocabulary. Historically, within content area classes, teachers have emphasized more domain-specific vocabulary, but the studies showed that both types of vocabulary posed barriers to ELLs to accessing the content and comprehending the required reading and concepts. Not only did both types of vocabulary create difficulties for ELLs, but the unique linguistic features of content-specific science or social studies textbooks, also within the realm of academic language, posed added challenges. Research also pointed to a significant vocabulary gap which has emerged between ELLs and non-ELLs, persisting into middle school and beyond, and ELL status has

been shown to be a large predicting factor in vocabulary knowledge as well as outcomes for reading comprehension. When academic vocabulary instruction was embedded into content instruction in meaningful and authentic ways, ELLs' vocabulary as well as reading comprehension increased. Teachers used content-based texts to teach both general and content-specific vocabulary, providing students with multiple exposures to words, and building progressively on vocabulary knowledge. The variety of exposures allowed students to practice with the academic language in whole group, small group, and independent settings, further reinforcing word understanding. The continued practice with academic language in the context of content allowed ELLs to not only be able to access the required content but also better demonstrate their comprehension.

Reading Engagement Strategies

Not only did the research demonstrate the positive impact of explicit reading comprehension and academic vocabulary instruction, but several studies indicated that the motivational and engagement aspect of reading were also influential factors for ELLs' academic outcomes. In a qualitative study, the ELL participants expressed an overall lack of motivation and engagement in reading in their content area classes, highlighting the struggle that many ELLs faced in secondary science, social studies, or ELA settings when accessing content was challenging. The reading engagement model was implemented in several studies, an intervention which not only focused on cognitive strategies, but also on increasing students' self-efficacy and reading beliefs as well as boosting their reading engagement. Several of the ways this was accomplished was by allowing students opportunities to work in collaborative, cooperative group settings with their peers, providing relevant texts for students to read, and also giving students explicit cognitive strategies to help them feel successful as they completed literacy-based tasks.

When used as an intervention for ELLs in content classes, the reading engagement model was found to increase ELLs' comprehension of content as well as increase their reading engagement. Students who were exhibited higher reading engagement also exhibited more use of cognitive strategies, showing a correlation between engagement and comprehension. Reading self-efficacy was also found to have a significant predicting role in students' reading comprehension achievements, revealing the importance of the motivational component of reading.

Integration of Literacy and Content Instruction

The final topic which emerged from the research was the integration of literacy and content instruction. Traditionally, in secondary content area classes, content standards have been taught in isolation from language standards, and many content area teachers have felt that students, including ELLs, should arrive to middle or high school already prepared to learn their content, whether that be science, social studies, or ELA. However, the rigorous content demands of each particular subject area without any language support proved challenging for ELLs. When teachers integrated literacy instruction and content instruction, ELLs were more successful in demonstrating their understanding. Reading, writing, and academic vocabulary was embedded into science, social studies, or ELA, building in language scaffolds that met ELL's literacy and content needs. This synergy of explicit reading strategies and literacy skills alongside content instruction led to an increase in ELLs' achievement on both curriculum-based measures as well as standardized measures of both content and reading. When teachers received PD that focused on ELL-specific strategies to incorporate into their content classes, more instructional time in the teachers' classrooms was spent on practices that benefitted ELLs' outcomes, such as collaboration, questioning, and scaffolded learning. Lastly, when content

teachers collaborated with ELL teachers on integrating literacy within their content classes, ELLs' engagement was found to increase as well as their overall academic achievement.

In summary, the need to explore best practices for improving literacy outcomes for ELLs has been significant. Based on the synthesized research of 15 pertinent studies, several of the key ways that teachers helped to improve literacy outcomes for this group of students was by explicitly teaching reading comprehension strategies, emphasizing vocabulary and academic language, incorporating reading engagement strategies, and integrating literacy with their content instruction. The following chapter will offer a discussion on the insights gained from the research, examples of how the research should inform instructional practice and how it could be applied in classrooms and schools, and conclude with suggestions for possible future studies.

Chapter Four: Discussion and Applications

Several insights can be taken from the research which lead to applications for how teachers in secondary school settings can improve their instructional practice. First of all, when it comes to instruction for ELLs, content standards must live in conjunction with language and literacy standards, as the integration of both language and content is crucial to facilitate ELLs' comprehension of both the subject matter as well as general reading comprehension. Content area teachers at the secondary level must explicitly teach and address language and literacy skills so that ELLs can engage in richer comprehension of the particular discipline. No longer can science, social studies, or ELA be taught in isolation from language standards. It is critical that teachers intentionally teach students the reading comprehension strategies needed to grasp the rigorous and sometimes technical text they read. These explicit reading comprehension skills and strategies should be incorporated daily within content instruction and ELLs must have multiple opportunities to watch teachers model these skills as well as practice these skills themselves, both collaboratively and independently. Every student, including ELLs, should have an entry point to the content through this scaffolded model of instruction.

This insight can be applied immediately, but requires content area teachers in secondary settings to undergo a mindset shift in how they view their classes. Rather than focusing solely on content standards prescribed by the state or the school district, teachers must also identify specific language and literacy standards that are necessary for success in their classes, and find ways to incorporate those into daily practice. For each content-based task teachers ask students to engage in, teachers should critically examine the literacy skills required of students in order to complete the task, and explicitly address those skills as well. In order to do this, content area teachers, experts in their own discipline, should reflect on the processes and strategies that they

themselves use in order to read and comprehend their discipline-specific texts, and find ways to make these processes and strategies visible to students. After modeling for students, teachers should build in time scaffolded practice time for students apply these skills both collaboratively and independently as they are exploring the content. This cycle should be repeated time and time again with every literacy-based task students are asked to complete.

Another insight from the research is that teachers must be aware of the range of academic language, both general academic language as well as content-specific vocabulary, required of ELLs in order for students to engage meaningfully with the content. Classes like social studies, science, or English Language Arts, while not typically thought of as language classes, pose huge language barriers to ELLs. Not only must teachers be aware of the language demands of their content area, but teachers must also directly and purposefully teach both types of academic vocabulary, allowing students repeated exposures to the vocabulary and giving students an array of ways to interact with the words in context.

Applying this insight, teachers need to examine their content and the reading required of students within their content and select the most important vocabulary, both general academic vocabulary and domain-specific vocabulary, and develop a plan for how to deliberately and incrementally teach these words to students within the unit and lesson framework. This does not mean simply providing students with definitions at the outset of a unit, but rather continually circling back to the words in contextual ways that allow student to develop a rich, nuanced understanding of the words. Focusing on academic language also means teachers need to thoroughly understand the distinctive text structure and features of their specific content and teach students how to navigate these. For example, a Chemistry textbook will have unique syntactic and structural features, compared to an AP World History textbook, and both should be

approached and read in a different way. Teachers should not assume that students already know how to do this, but rather give students the tools to attack each type of text.

Additionally, the role of student motivation and reading self-efficacy should not be overlooked. The data showing ELLs' motivation and engagement decreasing in content classes is alarming, and it is the responsibility of teachers to figure out how to reverse this trend. Teachers must couple explicit cognitive strategies with motivational and engagement strategies, creating culturally responsive content for students, engaging students in relevant texts, and building in ample opportunities for peer-to-peer collaboration. These practices will build students' reading self-efficacy and produce improved motivation and engagement in literacy tasks, increasing students' academic achievements as well.

A key application of this insight would mean that teachers build on students' motivation and engagement by designing content that is relevant and engaging. Typically, science, social studies, or English Language Arts standards in and of themselves are not directly relevant to students' daily lives unless teachers find ways to build those connections into instruction. Teachers should familiarize themselves with the interests and culture of *all* of their students, including ELLs, to create content that reflects their interests and cultural backgrounds in hopes of motivating students to engage and participate more fully. When students see the relevance and significance of a topic or task in their own life, they are more likely to engage. Teachers must also provide constant opportunities for ELLs to feel successful at reading tasks in order to develop and strengthen their reading self-efficacy. Because many ELLs already have low reading self-efficacy, they may avoid reading intensive tasks. If teachers ensure that all reading tasks are appropriately scaffolded, ELLs will begin to experience more success with reading and develop a more positive self-image of themselves as a reader.

A final insight from the research is that ELLs who are integrated into mainstream secondary content classrooms may have distinctive instructional and language needs in content area classrooms, and could need even more specialized instructional strategies to be able to access content. This was evidenced by data which showed increases in achievements for both ELLs and non-ELLs, yet ELLs still consistently lagged behind their non-ELL counterparts in performance even after interventions. The implemented interventions benefitted both ELLs and non-ELLs, and while this showed that good instruction for ELLs is good instruction for all, it did not provide ways for adolescent ELLs to ever catch up, thereby closing the achievement gap.

A possible application of this insight is for secondary schools to build in more intentional collaboration between content teachers and their ELL counterpart colleagues to deliver more specialized instruction to ELLs, not only helping content area teachers improve in the areas of explicit reading comprehension and academic vocabulary, but giving ELLs more direct access to the specific instruction they need through more contact with the ELL teacher. School districts and schools must build in purposeful collaboration time for interdisciplinary groups of teachers to meet, plan, and discuss ways to improve literacy outcomes for their ELLs. ELL teachers at the secondary level should be able to co-teach with content area teachers to strengthen this collaboration and provide ELLs with even more embedded support. This collaboration must be ongoing and frequent, and the school schedule should support this model. Ideally, every content area class should have a section or sections which would co-taught where ELLs in highest need of additional support could be strategically placed. At the very minimum, each content teacher would have time weekly to cooperate with an ELL teacher to receive feedback on instruction in areas of reading and vocabulary as it relates to their content.

While research existed which helped to answer the proposed research question, many gaps in the research also became apparent, which could offer suggestions for future studies to further the investigation on this particular issue. While many studies demonstrated the benefits of integrating language and content standards, few addressed the effectiveness of collaboration between ELL teachers and content teachers through co-teaching as a method to support ELLs in secondary schools. This type of collaboration, if standard practice, may help content teachers feel more prepared to teach ELLs as well as give ELLs themselves increased access to scaffolded support within their content area classes. A possible study could compare the reading and content comprehension outcomes for ELLs in sections of co-taught ELA, science, or social studies, to ELLs in comparable sections of traditional, content-teacher-led ELA, science, or social studies, either at the middle or high school level.

A second suggestion for a future study would be a study that focused specifically on the motivational aspect of reading, and how that may influence ELLs' engagement and ultimately achievement outcomes for content measures as well as reading. From the research, it was apparent that ELLs' experienced much lower levels of engagement and motivation when it came to reading than their non-ELL peers, with some studies even showing ELLs' engagement decrease over the course of intervention, but few studies explored the reasons behind this or provided specific interventions to counteract this. This study could be a mixed-methods study and collect both qualitative and quantitative data which would test an intervention designed to boost ELLs' reading motivation through the use of culturally responsive teaching and texts. The quantitative data could examine the specific reading outcomes for students, and the qualitative data, possibly in-depth interviews and observations of students, could provide a clearer picture of the factors which influence students' reading motivation or lack thereof.

A third study to enhance the body of research would be a study which explored a reading and vocabulary intervention aimed to *close* the reading and vocabulary gap between ELLs and their non-ELL peers. While many studies showed data pointing to various interventions which were successful in boosting ELLs' literacy achievement, none were able to increase ELLs' achievement to the point of being on par with non-ELLs. In fact, the majority of interventions have been found to benefit both ELLs *and* non-ELLs alike, and so this third proposed study would examine interventions specifically and exclusively for long-term ELLs who show stubborn resistance to growth. This study would follow an intervention designed to target the unique academic needs of long-term ELLs from sixth to eighth grade, a three-year course, as it is unlikely that significant growth would be seen after a year or less when studying this particular sub-group. The intervention would not be limited to just one content area, but would be implemented within all content areas. A measure of students' reading comprehension would be taken before the intervention, during the intervention, and after the intervention, and then could be compared to ELLs within a comparable setting who had not received the intensive treatment.

A final proposed study would examine the different and unique literacy needs within the classification of *ELL*, as ELLs are an extremely heterogeneous group. For example, ELLs may speak any number of native or home languages, from Somali to Spanish to Chinese and more, and for some ELLs, English is not the second language they are learning, but their second, third or even fourth language. ELLs may or may not be literate in their home language, a major factor in their English literacy success as well, not typically examined in studies. Some students classified as ELL in the United States, particularly long-term ELLs who have been in the country for a long period of time or even since birth, may only know their home language in a conversational setting and have no background in academic language in either their home

language or English. Much of the existing research focuses on ELLs whose home language is Spanish, a language with many linguistic similarities to English. ELLs who speak Somali as their first language may experience unique challenges in learning English as Somali has no morphological similarities whatsoever with English. The immense diversity within the term ELL makes generalizations about best practices for ELLs challenging, and more research must be done to explore specific instructional strategies for each sub-group within the category of ELLs. One example of a study that could be done could focusing on the Somali ELL population within Minneapolis Public Schools, and quantitative data collected to examine the effectiveness of a language intervention on their reading comprehension outcomes. Because of the fact that many Somali students come from a non-Western culture with a language which was historically primarily oral, their academic needs may prove to be distinctive to other ELLs. As little to no research exists which examines this question, this future study could explore this gap.

In conclusion, this literature review explored the issues facing ELLs in secondary settings in their content-area classes. This issue rises in consequence as the population of ELLs in the United States grows, particularly as “the number of adolescent ELLs who comprehend English texts at a limited level is alarming” (Cisco & Padron, 2012, p. 2). The statistics are dire: NAEP results showed that nearly 100% of ELLs in eighth grade, for example, fell below the proficiency mark for English reading, a statistic repeated across grade levels and one that is persisting. This problem is exacerbated by the fact that many content area teachers report feeling ill-prepared to teach ELLs, leading to inappropriate instruction. Due to the urgent nature of the state of education for ELLs in secondary school, this paper examined fifteen relevant studies in order to find best practices to improve literacy outcomes for adolescent ELLs. In addition, insights from each study were synthesized. Finally, this paper concluded with a brief discussion of

implications for how research should be applied to instructional settings, providing specific examples of applications and suggestions for future studies. Unless more thorough attention and research is focused on adolescent ELLs and their specific strengths and challenges, ELLs will continue to struggle in content area classes, and the achievement gap will persist.

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