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The Effects of Sheltered Instruction Observation Protocol Strategies on the Reading Proficiency of English Language Learners

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Abstract

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MA, Concordia University, 2007

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

English language learners (ELLs) need additional support to achieve academic success. The problem addressed in this study was the need to know if the sheltered instruction observation protocol (SIOP) support for ELL students was effective in improving their reading achievement. The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between ELLs who received the SIOP support and those who did not. SIOP provides a framework for teaching both language and content instruction. Krashen's language acquisition theory was used as the theoretical framework for this study. The research questions compared grade 3, 4, and 5 ELLs from three urban schools on the dependent variables of test results on the state's English Language Development Test (CELDT) for both reading and comprehension as well as the iReady Diagnostic assessment. The convenience sample included 50 ELLs from each school for the treatment group (n = 150) and 50 ELLs for the control group (n = 50). One-way ANOVA was used to analyze student scores from the CELDT and iReady Diagnostic administered in 2013 and 2015. The findings showed a statistically significant difference for ELLs who received SIOP support ($p < .05$) for all grades in all tests, except the CELDT comprehension, where the third grade mean differences were not statistically significant ($F = 0.016$, $p = .889$). A professional development project was created to help teachers use SIOP strategies with fidelity. Positive social change can be facilitated when ELL instruction improves fluency and academic outcomes for students whose primary language is not English.

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Dedication

I dedicate this study to my loving family, who has supported me through this process with their encouragement and belief in me. To my children, who have limitless talents, I hope they know how much they can accomplish and that we will support them in every way to do so. To my husband, who has given me the greatest gift by asking me to marry him. He is the love of my life and my inspiration.

Acknowledgments

I would like to acknowledge my chairs Dr. Amy White, and Dr. Donald Poplau for their continuous support through this process. Their expertise, direction, and feedback made this a meaningful and challenging journey – one that I will treasure as I move forward in my career.

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Section 1: The Problem

Students whose primary language is not English often need additional support to navigate their education and achieve academic success. There is a critical need for increased research on and application of effective instructional strategies with regard to the reading development and unique difficulties faced by English language learners (ELLs). ELLs have a two-fold challenge in education: They are tasked to master grade level content for reading, language arts, mathematics, social studies, and science as well as simultaneously mastering the English language. Teachers are faced with providing effective instruction to ELLs that not only develops their English language skills but also advances their content knowledge. ELLs are annually expected to achieve correlative scores with English-only students on annual grade level state standards-based assessments while they concurrently acquire English language skills (Baecher et al., 2014; Echevarria et al., 2014). On nearly every measure of state and national assessments, ELLs demonstrate significant achievement gaps compared to their native-English-speaking peers because they must take subject area tests using English before they are proficient in their new language (Short et al., 2012).

The Local Problem

The problem for this study was the need to evaluate the effectiveness of the sheltered instruction observation protocol (SIOP) in promoting ELL students' language growth over the past 4 years. The school district highlighted in this study is located in an urban area in the Southwestern portion of California. The ELL population in grade levels K to 5 account for an average of 31.7% of the district's student according to the district's

enrollment population. The percentage of ELLs in fifth grade was 24.1%; 3.9% of whom reclassified from English learner to fluent English proficient status. Elementary schools in this district have been implementing SIOP strategies to support their ELL students' language growth for the past 4 years. However, no research has been conducted to determine if ELL students participating in the SIOP are making sufficient progress toward grade level reading mastery. Their overall performance in school is affected by their English language proficiency (Baecher et al., 2014; Echevarria et al., 2014). Subsequently, the impact of lower reading scores of ELL students has an overall negative affect on the school's proficiency levels. The district in this study would benefit from knowing if the SIOP strategies that they have implemented are making a positive difference in the reading achievement of their ELL students. High school content is presented in a reading level that ELL students need access to in order to achieve academic success (Short et al., 2012). High school graduation is a critical indicator of success in adulthood (Balfanz et al., 2016).

Evidence of Problem at a Local Level

ELLs often demonstrate significant achievement gaps compared to their English-speaking peers (Abbott et al., 2018; Guzman, 2015). ELL students represent 25% of the three schools' total population, so determining how to better close their achievement gap is an important issue. The percentage of public school students in the United States who are ELLs has increased from 3.8 million students in the year 2000 to 4.8 million students in 2015 (U.S. Department of Education, 2013). These students currently comprise more than 20% of the U.S. K to 12 student population, and this number is expected to continue

to grow in coming decades (Abbott et al., 2018; August et al., 2015). In California, ELL students constitute 29% of public school enrollment. In four states, Texas, New Mexico, Nevada, and California, 14% or more of the public school students are ELLs. California's ELL enrollment is the highest in the United States, at 29% (U.S. Department of Education, 2013).

According to the U.S. Department of Education (2013), 25% of the state's fifth grade students were ELLs. While all fifth-grade students scored 57.4% at or above proficiency in reading, the ELL population achieved only 23.6% proficiency. The state's fourth grade ELL students earned 33.8% reading proficiency as opposed to all students' scores of 61.5% at or above proficiency. The third graders' scores had similar gaps comparing all students to ELL students' achievement for reading: All students were at 43.1% at or above proficiency in contrast to ELL students' 22% scores.

The assessment results of three elementary schools in an urban area of the Southwestern portion of California, Garner, Moren, and Endeaver (pseudonyms), mirror the state data in the lack of improvement for reading proficiency of ELLs. According to the state-wide English learner assessment of English language fluency and the California English Language Development Test, ELL students both district-wide and at Endeavor School, for example, are not showing growth year-to-year, particularly in reading. In 2015, 75% of the district's third grade ELL students scored below proficiency, as well as 64% of its fourth graders and 55% of its fifth graders. The lowest CELDT scale score in each grade level was in the reading strand of this assessment. Since 2013, 43.98% of Endeavor School's ELL students have not progressed to the next proficiency level on the

CELDT for 2 years. To address this problem, the district began teacher training and implementation of the SIOP. The purpose of this study was to determine if there is a significant difference in reading achievement scores between ELLs who received SIOP instructional strategies in the classroom and those who had not.

Evidence of Problem at the Professional Literature

There are several approaches to teaching language to ELL students. These approaches include (a) bilingual primary language education, (b) English language development, and (c) sheltered instruction (Daniel & Conlin, 2015; Fillmore, 2014; Marian et al., 2013). A bilingual primary language instructional program uses the student's first language to deliver content and language until an adequate level of English proficiency is reached. Bilingual instruction programs offer advantages over those that use English, but there is an effort to move away from using a child's first language to instruct (Marian et al., 2013). This effort can be attributed to the increased emphasis on high stakes standardized assessments for all students in English. ELL students often struggle to perform successfully on these assessments given their limited English proficiency. However, there are researched-based programs that increase students' language proficiency while concurrently learning academic content. These programs have proven to increase ELL language proficiency as well as support students in their need to access curriculum equally with native English speakers. Their academic expectations are the same, so their instruction needs to reflect as such.

The SIOP is an effective method to provide the instruction of content knowledge while implementing strategies to facilitate the acquisition of the English language

(Echevarria et al., 2014). By consistently utilizing SIOP strategies, teachers ensure that ELL students continue in the progression toward English proficiency, while acquiring the necessary CALP language skills in order to read at grade level and access grade level curriculum. SIOP provides a learning environment that provides equal access to content as well as the English language. In this model, the student receives explicit academic content-vocabulary instruction in English (Guzman, 2015; Vogt & Echevarria, 2015). English learners often struggle with learning academic vocabulary, and teachers need to provide explicit instruction that includes process and function words in addition to content words for all disciplines (Barrett, 2015; Calderon & Slakk, 2018).

Research into language acquisition has shown the efficacy of comprehensible input during instruction, and SIOP uses this language acquisition device throughout its protocol (Echevarria et al., 2014). Krashen (1987) expounded upon evidence showing that core comprehensible input for reading is associated with greater competence in vocabulary and spelling. The fundamental principle in second language acquisition is that when comprehensible input is presented, acquisition is inevitable. Krashen posited that second language is developed by "understanding messages or by receiving comprehensible input," (Krashen, 2017, p.206). In teaching second language learners, emphasis should be placed on providing substantial language input "plus one," in which ELLs progress in their learning as they comprehend written and spoken language at a level that is slightly more advanced than their current level (Krashen, 1987; Short, 2016). By scaffolding the language that students receive, continually challenging them at level upon level, they will acquire academic language effectively through instruction. Mullin

and Oliver asserted, "The teacher provides roughly-tuned comprehensible input to continually extend the learner's understanding of more complex language" (p.155). According to Krashen (1987), beginning second language students in comprehensible input-based instructional methods courses consistently outperform students using skill-building based methods. Krashen's research is the basis for the development of ELL instruction strategies, such as SIOP, designed to increase ELLs' proficiency with reading grade level text. The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between elementary ELLs who received SIOP instructional strategies in the classroom and those who had not.

Definition of Terms

The following terms have been defined for their use in the study:

Affective filter: The atmosphere and environmental comfort level in a classroom as it pertains to acceptance of different cultures and languages (Krashen, 1987).

Bilingual education: An instructional strategy that incorporates a student's primary language to teach content as well as the language arts while at the same time developing proficiency in English (Krashen, 1994).

California English Language Development Test: Assessment that provides teachers and administrators with detailed information about individual ELL students' English language proficiency (California Department of Education, 2016).

Comprehensible input: One of the eight components of SIOP, which means that language must be presented to students in a way that they can understand it, including the use of visuals and other context clues (Echevarria et al., 2014).

Differentiated instruction: Various strategies used to change the delivery of instruction to make it more accessible to students with varied learning needs (Rogers & Christensen, 2011).

English language development: A curriculum to develop English language proficiency in ELLs (Avalos, 2003).

English language learners: Students for whom English is their second language and are attaining English language proficiency (Echevarria et al., 2014).

ESL programs: Content based ELD that uses sheltered instruction as a means to provide comprehensible input in content instruction (Avalos, 2003).

Immersion: A strategy that teaches ELL students in English, using sheltered instruction and comprehensible input so that they can learn content and their new language concurrently (Crawford & Reyes, 2015).

iReady Diagnostic Assessment: Assessment with detailed information about individual students' reading proficiency (Educational Research Institute of America, 2016).

Limited English proficient (LEP): English learners who have not achieved fluent English proficiency (Echevarria et al., 2014).

Primary language instruction: Using a student's first language to teach content until English proficiency is acquired. Bilingual education is another term to describe this instruction (Echevarria et al., 2014).

Protocol: A rubric used in SIOP that allows teachers to present material and give students support until they can apply new skills independently (Echevarria et al., 2014).

Scaffold instruction: A method that allows teachers to present materials and give students support until they can apply new skills independently (Echevarria et al., 2014).

Specially developed academic instruction in English: Strategies and techniques used to make content more comprehensible for ELLs. This term is also used concurrently with sheltered instruction (Echevarria et al., 2014).

Sheltered instruction: Strategies and techniques used to make content more comprehensible for ELLs. This term is also used concurrently with specially developed academic instruction in English (Echevarria et al., 2014).

Significance of the Study

Due to ever increasing populations of ELLs in United States classrooms, schools are faced with teaching ELLs to meet the same academic requirements as other students. SIOP should be effective in instructing ELL students and addressing their needs for oral and written language (Barrett, 2015; Calderon & Slakk, 2018; Guzman, 2015). Meeting the needs of their oral and written language acquisition is necessary to ensuring that ELLs achieve academic success as they navigate their education through elementary school. Currently at three of the district's elementary schools, similar in size and ELL population, the stated benefits of SIOP are not quantified. The findings of this study may help school leaders determine whether the SIOP protocol has a positive effect on ELL students' development of English language reading proficiency.

Research Questions and Hypotheses

The purpose of this causal-comparative study was to determine if there is a significant difference in reading achievement scores between ELLs who received SIOP

instructional strategies in the classroom and those who had not. The guiding research question for this study was as follows: Has the use of SIOP instructional strategies been effective in improving the reading achievement of ELLs, as measured by CELDT and iReady Diagnostic assessments? Analyzing the data will show whether there is a significant difference between groups of the independent variable based on the dependent, criterion measure.

The following research questions guided this study. Their related hypotheses were tested to answer the research questions:

Research Question (RQ)1: Is there a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT reading assessment?

H_{01}: There is no statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT reading assessment.

Ha_1: There is a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT reading assessment.

RQ2: Is there a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT comprehension assessment?

H_{02}: There is no statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT comprehension assessment.

Ha_2: There is a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the CELDT comprehension assessment.

RQ3: Is there a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the iReady Diagnostic assessment?

H_{03}: There is no statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the iReady Diagnostic assessment.

Ha_3: There is a statistically significant difference between Grades 3, 4, and 5 ELL students who were taught with SIOP strategies verses those who were not, as measured by the iReady Diagnostic assessment.

Review of the Literature

This literature review consists of four main topics. The first is a review of the conceptual framework of language acquisition. The second topic is a review of current literature analyzing the effectiveness of bilingual education on ELL reading levels. The third topic examines literature regarding sheltered instruction in relation to the learning needs of ELLs as they relate to increased reading proficiency. The fourth topic reviews current literature about SIOP and its impact on raising the reading achievement of ELLs.

The last topic examines the validity and reliability of assessments used to measure linguistic and academic progress of ELLs.

Several internet search engines were used to conduct this literature review: Google Scholar and ResearchGate. The key words I used to conduct this study were *English language learners, language acquisition, bilingual education, sheltered instruction observation protocol, ELL student achievement, reading proficiency,* and *ELL assessment*. Several electronic databases were accessed through the Walden University Library, such as SAGE, ProQuest, and ERIC.

Theoretical Framework

A thorough understanding of language acquisition theory is vital to understanding and improving the learning process of ELLs. Acquisition refers to the process by which students naturally obtain language without conscious effort. Processing and using language involves intentional and purposeful instruction and learning (Christoun, 2015; Ellis, 2015). While many researchers have focused on a learners' ability to produce a second language feature, it is a complex issue to determine whether a learner comprehends the language features (Christoun, 2015; Ellis, 2015; VanPatten & Williams, 2019). Implicit acquired knowledge, the processes of learning, and explicit learned knowledge, the products of learning, are related but distinct concepts, (Ellis, 2015). Ellis (2015) stated, "It is possible that learners will reflect on knowledge that they have acquired implicitly and thus, subsequently develop an explicit representation of it" (p. 6).

ELLs need to not only learn the structures of the English language; they need to understand the context as well. The theoretical underpinnings of this study are found in

the second language acquisition learning theories of Krashen (2013). His hypotheses have been influential in the study of language acquisition and how this informs instructional practices for ELLs. According to Krashen, language is acquired naturally and over time. He developed a group of hypotheses explaining how a second language is acquired. Krashen claimed that language is acquired by the subconscious and that conscious learning cannot be used as a source of spontaneous language production. He also posited that learning is dependent upon the stress level and motivation of the learner. Krashen noted that learners come to acquire a second language through language input that is comprehensible to the learner provided by daily language experiences (i.e., listening, speaking, reading, and writing) of the individual learner.

The acquisition learning hypothesis is the theory that learners have two distinct and independent ways of developing competence in a second language (Krashen, 2013). This theory claims that acquisition of language and content knowledge are obtained with separate practices. Krashen (1994) viewed acquisition to be subconscious process while learning is a conscious process; thus, he determined that a second language can be developed only through purposeful acquisition strategies. It is a natural and subconscious process in which the learner is unaware that it is occurring, and the learner does not realize that they possess new knowledge (Krashen, 1994). Krashen (1994) believed that language learners acquire language in a prescribed order, which cannot be affected by direct instruction – his natural order hypothesis. Grammatical structures of the language are acquired at different stages of language acquisition, certain structures early and others later. As Krashen (1987) posited, the affective filter is an impediment to learning or

acquisition caused by negative emotional, affective, responses to the learner's environment. Anxiety, self-doubt, fear, as well as other emotions, impede the process of learning a language. These act as a filter that reduces the amount and quality of language input the learner understands. According to Krashen (1987), there are two prime issues that prevent the lowering of the affective filter. The first is not allowing the learner time to process the new input as well as correcting the learner's errors too frequently. If the learner is not affected by stress or negative emotions during the language acquisition process, the ability to acquire a second language is increased. This is known as the affective filter, which is up when the learner encounters emotional barriers and down when those barriers are reduced. To ensure that the learners' affective filter is low, they must feel comfortable about taking language risks. This means that when learners begin to produce the target language, errors should not be corrected, particularly if they do not obstruct meaning (Ellis, 2015; Krashen & Terrell, 1983; Larsen-Freeman & Long, 2014). ELLs' growth potential builds when they are challenged to understand and experiment with language (Christoun, 2015; Ellis, 2015; Williams, 2019).

Krashen (1987) also provided research concerning when the instruction of how to acquire a second language is effective and when it is not. The classroom is a beneficial source of comprehensible input, which is central to acquiring a second language (Ellis, 2015; Krashen, 1987). Ellis (2015) stated, "We would expect a significant relationship between use and acquisition, since use nearly always entails comprehensible input" (p. 41). Ellis believed that language acquisition requires meaningful interaction in the target second language in which learners are focused on the messages that they are

understanding and conveying. ELLs acquire the language successfully if they have access to real work input and if their current ability allows them to understand some of it – scaffolding the demands of second language vocabulary and syntax.

The fundamental principle in second language acquisition, according to Krashen (1987), is that when comprehensible input is presented, acquisition is inevitable: input hypothesis. Students will learn the language in a natural order if they receive enough comprehensible input. Krashen's input hypothesis in which language learners advance best in their new language when they comprehend language input that is slightly more advanced than their current level: "i+1," language input is "i" and the advanced stage of language acquisition in "+1." If language teachers provide enough comprehensible input, grammatical accuracy of language acquisition will be achieved (Krashen, 1994). Comprehensible input is the effect of language acquisition (Krashen, 1994). He theorized that second language is developed by "understanding messages or by receiving comprehensible input" (as cited in Mullin & Oliver, 2010, p.155). In teaching second language learners, emphasis is placed on providing substantial language input "plus one," in which ELLs progress in their learning as they comprehend written and spoken language at a level that is slightly more advanced than their current level (Krashen, 2013; Short, 2016). By scaffolding the language that students receive, continually challenging them level upon level, they will acquire academic language effectively through instruction. Mullin and Oliver (2010) claimed, "The teacher provides roughly-tuned comprehensible input to continually extend the learner's understanding of more complex language" (p. 155). Given this structure, ELLs feel more comfortable and confident to

experiment and take risks with English, further extending their language acquisition. Research into language acquisition has shown the efficacy of comprehensible input during instruction and SIOP utilizes this language acquisition device throughout its protocol (Echevarria et al., 2014). Krashen (1987, 1994) expounded upon evidence showing that core comprehensible input for reading is associated with greater competence in vocabulary and spelling. According to Krashen (1987), beginning second language students in comprehensible input-based instructional methods courses consistently outperform students using skill-building based methods.

Krashen's research is the basis for the development of ELL instruction strategies designed to increase ELLs' proficiency with reading grade level text. The achievement gap of ELLs is an urgent concern for educators as academic demands in the classroom and on high stakes assessments are increasingly more rigorous (Mitchell, 2015; Nargund-Joshi & Bautista, 2016). In order to prepare ELLs for these cognitive expectations, all features of the academic language register must be explicitly taught and practiced in the classroom across all content areas. The framework of SIOP instructional strategies follows the theoretical framework of Krashen's language acquisition. In this study, I examined the effectiveness of SIOP instructional strategies in addressing the instructional needs of ELLs. Based on language acquisition theory, I posited that the outcome of the study could show a positive significant improvement in the reading proficiency ELLs who received SIOP instruction.

Current Literature

Best instruction for ELLs is a subject for continued research as educators strive to bridge the gap between language development and content knowledge, both of which need equal attention for ELLs to achieve high levels of proficiency. Ensuring that ELL students achieve academic success both in their language development and grade level content knowledge has consistently been a challenge in education. Both educators and politicians have worked to end the disparity in academic achievement between native English-speaking students, ELLs, and socioeconomically disadvantaged students (Barrett, 2015; Guzman, 2015; Nargund-Joshi & Bautista, 2016). For ELLs, this gap is difficult to close because they are required to learn and understand grade level academic content that is not delivered in their primary language. Incorporating evidence-based instructional practices to support ELL students is a complex and complicated endeavor. Many students are not literate in their primary language, which adds another layer of challenge to their capacity to understand both the English language and the content simultaneously (Baecher et al., 2014; Horwitz, 2013). ELLs spend most of their school day in mainstream English-only classrooms, and these settings are typically composed of a majority of native-English-speaking students with teachers not trained in teaching English to speakers of other languages (Fillmore, 2014; Nevarez-La Torre, 2011; Shapiro, 2014). These classrooms are focused on achieving high academic performance based on standards of proficiency for the core subjects: mathematics, science, and social science. However, most teachers are not adequately prepared to meet the needs of ELL students, as only 26% of teachers of ELLs have had professional development for

second-language learners (Short, 2016). Due to their lack of training and experience, teachers often do not provide accommodations for the language needs of ELLs (Echevarria et al., 2014; Fillmore, 2014; Guzman, 2015; Short et al., 2012). They may struggle to appropriately incorporate language acquisition and development techniques unless they have been taught these skills directly and then are provided with the support necessary for their implementation (Calderon & Zamora, 2014; More et al., 2016; Short, 2016; Short et al., 2012).

Bilingual Education.

Federal law mandates district-wide instruction and support for ELL students. School districts have research–based programs to choose to implement: bilingual education, English as a second language, or sheltered instruction programs (Herrera et al., 2013; Marian et al., 2013). A defining feature of bilingual education is the use of the student's native language for at least some of the academic instruction in which ELL students are placed in a self- contained classroom with classmates who share the same home language and a dedicated bilingual education teacher who can teach in that language (Chin et al., 2013; Marian et al., 2013; Murphy, 2014). Bilingual education classes use both the students' primary language and English for instruction in reading, mathematics and additional content areas. Researchers have found that skills, knowledge, and processes transfer across languages, thus the development of literacy skills in the first language strengthens academic skills in the second language (Marian et al., 2013; Murphy, 2014). There is recent evidence from long-term, randomized studies that transitional bilingual education programs result in successful academic performance in

English, while further developing students' proficiency in their native language (Marian et al., 2013). This instruction has resulted in growth in development of general language skills that facilitate other language acquisition (Chin, 2015; Herrera et al., 2013). According to Chin (2015), instructional strategies developed for primary language reading also apply for reading growth in the English language.

Efficacy of Bilingual Education.

Analysis of bilingual research does not support earlier findings that bilingual learning interferes with a student's ability to transfer primary language skills to a second language. Marian, et al. (2013), conducted an analysis of reading and math test scores of elementary students enrolled in bilingual programs which provided data that showed it does not hamper academic outcomes for English language learners when compared to the tests scores of students being taught in English-only classrooms and in many cases enhanced academic outcomes. This viewpoint is also supported by current research (Lindholm-Leary, 2016; Murphy, 2014).

Researchers of bilingual education have documented benefits such as expanded thinking skills that come from the curriculum being taught through the use of two languages, and a respect that comes from working with diverse peers in a dual language setting (Marian, et al., 2013; Mellblom-Nishioka, 2015; Thomas & Collier, 2012). Thomas and Collier (2012) stated that this model provides ELLs with the educational opportunity to close the achievement gap and academically outperform English only peers. This five-year long longitudinal research of bilingual schools across seven school districts in a south-eastern state showed that students from each group engaged in

bilingual instruction outperformed its comparison group of non-dual language students in both reading and math achievement. Additionally, bilingual education, when implemented with fidelity, has a positive impact on native English speakers (Mellblom-Nishioka, 2015; Thomas & Collier, 2012).

Limits of Bilingual Education.

Early bilingual research theorized that instruction in ELLs' primary language inhibits the students' ability to master a second language and therefore decreases academic success in other content areas (Chin et al., 2013; Marian et al., 2013; Thomas & Collier, 2012). Bilingual classes are self-contained with ELL students in homogeneous groups of peers who speak the same language. ELL students in bilingual classrooms receive less exposure to English than students in sheltered instruction programs in which instruction is delivered in English with language acquisition support. By reducing exposure to the second language, bilingual education may hinder the acquisition of English language skills (Chin, 2015; Herrera et al., 2013). According to Thomas and Collier (2012), when ELLs are enrolled in mainstream English classes, where the curriculum is only instructed in English, they typically only close half of the achievement gap with English speakers, and they tend to fall further behind in school. An additional shortcoming of bilingual education is the social impact of segregating limited English proficient students from other students (Agirdag & Vanlaar, 2016; Chin, 2015; Mellblom-Nishioka, 2015).

Sheltered Instruction

Schools are moving away from bilingual language classes toward sheltered instruction which integrates language development instruction with content curriculum (Daniel & Conlin, 2015; Short, 2011). Providing ELLs with additional time in sheltered instruction programs gives them the opportunity to acquire sufficient language skills in order to access the curriculum in their mainstream learning environment. English language learners face obstacles in education stemming from first, fundamental misunderstandings about what they need, and second, how to acquire both language and academic development at the same time (Dixon et al., 2012; Fillmore, 2014). In addition, ELLs enter school with varying skill levels in their primary language and education. Some have had little to no schooling prior to coming to the United States while others have had formal education experiences. These variances in skill levels provide additional challenges for the teachers as they bridge these gaps and scaffold language and academic rigor for ELLs (Baker at al., 2012; LeMoine & Soto, 2016).

A large body of research highlights the connections between language acquisition, reading proficiency, and the comprehension of content area texts which are addressed in sheltered instruction ELL programs (Nargund-Joshi & Bautista, 2016; Short et al., 2012). If the language needs of ELLs are not addressed, content lessons in language arts, mathematics, social science and science are not effective. ELL instruction needs to incorporate multiple disciplines including academic vocabulary development, content area literacy and critical thinking (Berg et al., 2012; Short, 2016). Content expert teachers often deliver sheltered instruction for ELLs to simultaneously provide access the

language structure and fluency as well as the core curriculum. However, these teachers are not language experts and often lack the training and skills to attend to both learning objectives (Baecher et al., 2014; Berg et al., 2012; Calderon & Zamora, 2014; Short, 2016). Traditional ELL instruction has involved language development as a primary priority, however, over the course of remedial English instruction, students only developed social communication skills (BICS), not the complex academic language (CALP) necessary to access rigorous grade level content. With sheltered instruction, content meaning is embedded in language acquisition in syntax, language functions and oral language discourse (Grainger & Jones, 2013; Nargund-Joshi & Bautista, 2016).

The efficacy of sheltered instruction strategies was presented in a study involving a large school district with an increasing ELL population (Burke, 2015). A large school district in North Carolina was working to meet the needs of a rapidly expanding ELL population. The district restructured its English as a Second Language (ESL) program, ending its practice of busing students to ESL centers. Instead, the district placed ESL teachers in schools and provided professional development training in SIOP for all teachers in the district. Teachers found it challenging to use SIOP's sheltering strategies as the district increased its expectations of their implementation of SIOP in order to benefit the ELLs in their classrooms. Consistent with recommendations in the literature, they used sheltering strategies to scaffold the development of academic language, literacy, and content area knowledge and tailored them to meet the individual needs of each ELL student (Baker et al., 2012; Burke, 2015; Calderon & Zamora, 2014; Short, 2016). The findings of this study confirmed the efficacy of sheltering strategies and their

benefits for ELLs which increased their comprehension, improved academic performance, and helped them access content area curriculum (Burke, 2015; Echevarria et al., 2014; Fillmore, 2014; Short et al., 2012).

Within the literature is an explanation of the importance of educators sufficiently supporting ELLs in their process of language acquisition and academic achievement. Incorporating the development of the English language with academic skills will advance both the language and cognitive development for ELLs (Atkinson, 2011; Fillmore, 2014). Promoting language and cognitive development together involves organizing and conveying instruction that engages students in academic learning.

Sheltered Instruction Observation Protocol (SIOP)

As sheltered instruction is consistently delivered, ELLs are able to access both core curriculum and language proficiency. SIOP is an instructional and observation framework for the faithful implementation of sheltered instruction for ELLs (Echevarria et al., 2014; Fritzen, 2011; Short et al., 2012). SIOP is used by teachers, instructional specialists and administrators to gather information regarding the consistency and efficacy of sheltered instruction in practice in the classroom. This information drives decisions about instruction that will best meet the students' needs. SIOP focuses on purposeful lesson planning with specific content and language objectives, emphasizing instruction of academic language and content, while concurrently developing students' English language proficiency (Echevarria et al., 2014; Short et al., 2012). As students receive information in English that is accessible for their language fluency, they learn not only the language itself, but grade level content as well. The goal of the SIOP model is to

help ELLs understand information on a deeper level by ensuring teachers deliver content in a way that all learners, regardless of their level of English development, (Fritzen, 2011; Grainger & Jones, 2013). While teachers make content comprehensible for students, they also support the acquisition of language skills through listening, speaking, reading and writing.

The SIOP model is a framework for educators to offer curricular concepts to English language learners through strategies and techniques that make complex information comprehensible to them. The SIOP model allows for natural variation in classroom implementation and presents educators with specific strategies to support ELLs in learning both language and content effectively (Echevarria et al., 2014; Horwitz, 2013; Negron, 2012). The SIOP model contributes essential characteristics for the academic success of students who are learning through a second language. Echevarria et al.'s (2014) findings suggested that students whose teachers utilized the SIOP model achieved significant gains in both language and content proficiency.

SIOP increases ELLs' responsibility for their learning and achieve independence (Kareva & Echevarria, 2013). As ELLs master a skill, teachers can remove supports and add new ones for the next level (Kareva & Echevarria, 2013; Kuti & Xu, 2012; Liasidou, 2013; Negron, 2012). Instructional strategies for SIOP include making conjectures, predicting, self-questioning, monitoring, self-assessing, evaluating, taking notes, and organizing information. By consistently utilizing these SIOP strategies, teachers ensure that EL students continue in the progression toward English proficiency, acquiring the

necessary CALP language skills in order to read at grade level and access grade level curriculum (Kester, 2013).

The features of the SIOP Model provide the language accommodations that English learners need to improve literacy skills. When teachers applied the features effectively, student reading scores in English improved (Chin, 2015; Echevarria, 2012). The Center for Research on Education, Diversity and Excellence (CREDE) conducted an initial study to determine the efficacy of the SIOP model with regard to student achievement (Echevarria et al., 2014). The sample in the CREDE study consisted of 346 students in grades 6 through 8 from a population of 166,000 students from 220 schools throughout the United States. The participating teachers were trained in SIOP strategies, implemented the SIOP model, and collaborated regularly in order to refine the model by analyzing their instructional practices and student achievement as revealed through formative assessments after SIOP lessons (Echevarria et al., 2014). Qualitative feedback was collected through teacher interviews, reflective journals and their classroom observations as they utilized SIOP strategies in their classrooms. Student outcomes were measured quantitatively through the results of a standardized reading and writing assessment called the Illinois Measure of Annual Growth in English (IMAGE). Pre and post test data of the treatment and control classes were analyzed and EL students whose teachers used SIOP showed more growth in expository writing as opposed to students whose teachers did not implement SIOP (Echevarria et al., 2014).

Efficacy of SIOP Model.

Research shows that, when faithfully implemented, SIOP provided an ideal learning environment, which offered equal access to content as well as the English language (Echevarria et al., 2014; Grainger & Jones, 2013; Horwitz, 2013; Kareva & Echevarria, 2013). The impact of SIOP strategies on the academic achievement of ELLs has been investigated in comparing teacher fidelity to the SIOP model and EL students' reading and language achievement (Bertram, 2011; George, 2015; Kester, 2013). The effectiveness of this structured sheltered instruction framework is based on the imbedded layers of support of language acquisition and content knowledge.

Teachers preparing to utilize the SIOP Model to support ELLs participate in professional development regarding initial implementation of the SIOP strategies. To ensure faithful implementation of a program, it is essential for teachers to believe that the strategies are effective in raising student achievement (Horwitz, 2013; Lee et al., 2013; Martin-Beltran & Percy, 2014; Negron, 2012; Williams, 2019). A study by Negron (2012) researched the perceptions of the impact of SIOP Model on reading achievement in a small urban school district in the Northeastern region of the United States. The research focused on how the SIOP Model was implemented in the district and teachers' perceptions of its effectiveness in meeting the needs of ELLs (Negron, 2012). It examined the reasons why the SIOP Model was chosen, the training design that was developed and implemented, and the teachers' perceptions of the effectiveness of using the SIOP Model to support English Language Learners (ELLs). When comparing the focus group interview data and the online survey data, teachers identified specific

changes in their students' vocabulary and oral language skills as well as their understanding of the content objectives and their comprehension of those objectives (Negron, 2012). The findings of this study concluded that teachers felt positively about using the SIOP Model in their classrooms and perceived the SIOP Model to enhance their skills in supporting the needs of their ELL students (Negron, 2012, p. 156). Comparing the implementation of the SlOP Model, over the course of three years prior to SIOP and the first two years of its use, and student reading comprehension scores, grades 4, 6 & 8, a positive correlation was found. It is clear that this research study supports the SIOP Model as an effective tool in meeting the needs of ELLs.

Research showed that, when faithfully implemented, the SIOP Model of sheltered instruction for English language arts and reading instruction provided an ideal learning environment for ELLs which offers equal access to content as well as the English language (Calderon & Zamora, 2014; Guzman, 2015; Nichols, 2012; Short at al.,2012). The positive impact of SIOP strategies on the academic achievement of ELLs was investigated in correlating teacher fidelity to the SIOP model and EL students' reading and language achievement (Calderon & Zamora, 2014; Nichols, 2012). The effectiveness of this structured sheltered instruction framework is dependent on teacher perception of its effectiveness and on the imbedded layers of support of language acquisition and content knowledge.

Teachers preparing to utilize the SIOP Model to support ELLs participate in professional development regarding initial implementation of the SIOP strategies (Guzman, 2015). To ensure faithful implementation of a program, it is essential for

teachers to believe that the strategies are effective in raising student achievement (Calderon & Zamora, 2014; Guzman, 2015). Research findings conclude that if teachers felt positively about using the SIOP Model in their classrooms and perceived the SIOP Model to enhance their skills in supporting the needs of their ELL students, student achievement significantly increased (Calderon & Zamora, 2014; Guzman, 2015). Comparing the implementation of the SlOP Model and student reading comprehension scores, a positive correlation was found. It is clear that the SIOP Model as an effective tool in meeting the needs of ELLs.

SIOP Research

The SIOP model research claims that this instructional framework improves the academic achievement of English learners (Echevarria et al., 2014; Guzman, 2015; Vogt & Echevarria, 2015). However, there is little research to confirm the effectiveness of SIOP with regard to improving ELs' reading proficiency. According to the U.S. Department of Education (2020), there are no studies that provide sufficient evidence to draw conclusions about the connection of SIOP and ELs' reading proficiency.

Of the five most known studies published on SIOP, the creators of the model have implemented four of them (Echevarria et al., 2011). Of those studies, two used the same 12 teachers and their students and either study reached statistical significance and the disaggregated data showed ELLs, had a very small effect size for academic gains (Crawford & Reyes, 2015; Krashen, 2013). While Crawford and Reyes (2015) found evidence of no overall positive effect of the SIOP model on student achievement, there is still the possibility of obtaining positive effects can be determined via individual practices

as opposed to the entire models' strategies. This can be the subject of further research. "It is [our] speculation that the SIOP creators might be in the early stages of theory development for second language acquisition and are currently grappling with the issues behind the theory," (Crawford & Reyes, 2015, p. 3).

To address the accuracy of SIOP's claims, Krashen (2013) evaluated a SIOP validity study conducted in 2011 by Echevarria, Richards-Tutor, Chinn, and Ratleff. The researchers rated 12 teachers on their implementation of the 30 instructional components of SIOP. The teachers were observed five times: eight were trained in SIOP and four were not. Pre- and post-test data showed a positive trend of student achievement. Krashen's analysis of this study revealed gaps in the study's validity based on the sample size, population and findings. That 12 teachers were observed for this research falls short of statistical significance (Krashen, 2013). A sample size of 12 is not enough to detect significant differences among the participants' results. As Krashen (2013) stated, in order to claim predictive validity, a SIOP study would need a sample size of at least 30 subjects. The student population used for this research did not have enough detail to determine if SIOP strategies helped the ELL students' achievement improve. There was no delineation of English Only versus ELL students within the study's findings. Therefore, the results do not indicate whether SIOP was instrumental for ELL students in particular, as the researchers claim. According to Krashen (2013), this SIOP study's results fall short of statistical significance and the tests lack sufficient power to detect a difference if one existed. The data suggested that there might be a relationship between SIOP implementation and student achievement, rather than the conclusion drawn by

Echevarria et al. (2011). According to Krashen (2013), studies regarding a relationship between SIOP and comparison groups do not show a significant difference. He concluded that research testing of SIOP as a whole will determine its success or failure.

The SIOP model is designed to follow an initial second language acquisition program, such as a bilingual program or an English immersion program (Temple et al., 2014). ELLs need BICS and beginning levels of CALP language skills in order to delve deeper into acquiring academic language and use the vocabulary for reading comprehension, critical thinking, questioning and problem solving. Thus, SIOP is effective with ELL students who have achieved at least intermediate level of English language development (Crawford & Reyes, 2015; Ziemke & Ross, 2016). Despite the intentions and the promising results of SIOP implementation, the strategies are not always utilized by teachers prescribed by the model, which comprises the resulting data of its effectiveness in improving student achievement. Teachers can misinterpret the model to be more teacher-centered than student driven, in which the teachers prioritize their actions rather than student thinking (Coffey et al., 2011). For language acquisition, ELLs need to be active participants in their learning, not passive receivers of information. With the demands of CCSS, ELLs are expected to use critical thinking skills and problem solve with their newly acquired language skills. Teachers' efforts must focus on developing students as thinkers. If teachers focus on the strategies of SIOP rather that student interaction and independence, the model is not effective (Coffey et al., 2011; Daniel & Conlin, 2015).

Implications

The purpose of this study was to determine if there is a significant difference in reading achievement scores between ELLs who have received Sheltered Instruction Observation Protocol (SIOP) instructional strategies in the classroom and those who have not. The ELL population in this district comprises 20% of the total enrollment, which is comparable to the ELL population of the state of California of 29% of K-12 students. If the data analyses in my study showed that elementary ELL students participating in SIOP strategies had significantly better gains in reading proficiency than did their non-SIOP peers, then the district may decide to expand the implementation of SIOP to the secondary level. In middle and high schools, ELL students are exposed to content instruction at a more complex level and for a longer period of time. ELL students need a strong reading foundation in order to meet these increased cognitive demands. If this study shows that ELL reading proficiency is improved with the use of SIOP strategies, the additional research can be conducted regarding implementation in secondary schools. A subsequent project based on the findings of this study could be the development of a curriculum plan for materials, units and detailed lessons for the use of SIOP in content area classes, such as Science and Social Science. An additional project would be professional development and training for SIOP curriculum plans, which outlines the training components, timeline and activities of 3 full days of training. This training would provide materials to teachers for faithful implementation.

Social change to the ELL community can occur based on the findings of this study as this population will have more opportunity to achieve academic success in all

content areas. English language proficiency is critical for an ELL in an English-language based classroom; instructional strategies to meet their needs must be used in their most effective manner. With this study, it can be determined that a protocol of strategies will narrow their achievement gap and provide more opportunities for reaching high academic goals such as high school graduation and admission to college. This social change extends beyond the elementary and secondary classroom as ELLs have the ability to pursue higher education and top tier careers.

Summary

Section 1 stated the purpose of this study as well as background information concerning the educational issues of English language learners. This section provided research about the conceptual framework regarding language acquisition**,** specifically Krashen's (1987) theory of second language acquisition and instructional support for ELLs. This section also described the purpose of this study which was to explore the efficacy of SIOP on the reading achievement at an elementary school in a large urban school district in California. A definition of terms, assumptions, and limitations for this study were also presented. Section 1 concluded with the significance of this study in relation to positive social change concerning the education of English language learners. The review of current literature showed that sheltered instruction for ELLs improves their academic achievement for both language and content objectives. However, there have not been many research studies on SIOP and this research has been conducted by the developers of the SIOP protocol. The problem may be that SIOP instructional strategies are not determined to have a significant effect on ELLs.

In Section 2, I detailed the methodology of this quantitative causal-comparative study, the participants, the data collection and the measurement instruments, the data analysis, and the results of the data analysis. This study investigated the relationship between of SIOP strategies and elementary English language learner student reading proficiency. Sample groups were comprised of ELL students taught by teachers trained in SIOP strategies through the district's professional development model. The control group was comprised of ELL students taught by a teacher who did not use SIOP strategies. Quantitative archival data were collected from CELDT and iReady Diagnostic assessment student scores administered in 2016 at the end of their grade 3, 4, and 5 years.

Section 3 is a description of a professional development (PD) plan created to utilize SIOP instruction for ELLs to improve their academic achievement. This quantitative study placed a focus on SIOP to improve reading achievement for ELLs. The literature review of effective PD plan with three full day sessions including classroom lesson observations using the SIOP model. In this section, I explained the goals and structure of the PD for instructional coaches and teachers to faithfully implement this project.

Section 2: Methodology

The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between ELLs who received SIOP instructional strategies in the classroom and those who had not. In this a causal-comparative study, I attempted to determine cause and effect relationships between two or more groups by comparing a criterion measure's mean scores of the participants based on their group participation (Creswell & Poth, 2016; Lodico et al., 2010). The rationale for this research design was the need to analyze archival student data for an ELL population that experienced different teaching strategies over the same period of time. In this study, SIOP participation was the independent variable, and the dependent variable was the ELL student test scores on the CELDT and iReady assessments. Selecting a quantitative study over a qualitative design was based on the local problem and the need to investigate an effect of an instructional strategy SIOP on reading proficiency for ELL students. One advantage of the quantitative method was the ease of collecting archival data and subsequent data analysis.

Other quantitative research designs (i.e., experimental) were not appropriate for this study. A causal-comparative design was chosen instead of the experimental design because the random assignment of participants to control and treatment groups was not possible (see Creswell & Poth, 2016). In this study, I investigated the effects of instructional practices on reading achievement in an ex post facto approach with participants' past experiences, which were not manipulated. This quasi-experimental design allowed for real-life school settings and an evaluative examination of two different

instructional approaches. A correlational design was not appropriate for this study because it addresses the linear relationship between variables using statistical analyses and is mostly observational (see Creswell & Poth, 2016). I posited hypotheses and thus this is not a descriptive study in which hypotheses are developed after data are collected (see Creswell & Poth, 2016).

This research design was chosen to analyze the effects of SIOP strategies for students in the fifth grade over a 3-year period. This approach allowed me to compare ELL assessment data from students with teachers who did use SIOP strategies to ELL students whose teachers did not use SIOP strategies.

Three dependent variables were used as measures of reading proficiency: CELDT reading scores, CELDT comprehension scores, and iReady Diagnostic assessment scores. Data were collected for Grade 3, 4, and 5 ELL students from each of the sample elementary schools and compared to a control group. The treatment group was comprised of ELL students taught by teachers trained in SIOP strategies through the district's professional development model. The control group was comprised of ELL students taught by a teacher who did not use SIOP strategies. The data analysis provided information regarding the significance of the relationship between the use of SIOP strategies and reading proficiency for ELLs.

Setting and Sample

Student data for Grade 3, 4, and 5 ELL student groups in the years 2013-2015 were collected from each of the participating elementary schools: Garner, Moren, and Endeaver (pseudonyms). The convenience sample included 50 ELLs from each school

for the treatment group (n=150) and 50 ELLs for the control group (n=50). This sample was based on a power calculation, drawn from ELL students enrolled at these elementary schools, excluding those not classified as English learners. Because these were archival in-tact groups, no assignment of participants was possible. This nonprobability sampling had no exclusion for gender. The justification for this sampling was to maximize internal and external validity by providing equal opportunity to students in the sample groups (Farrokhi & Mahmoudi-Hamidabad, 2012).

The target population was comprised of ELLs taught by teachers trained in SIOP strategies. The control group consisted of ELL students who were taught by teachers who did not use SIOP strategies. Both groups of students took the CELDT and iReady Diagnostic at the end of Grade 3, 4, and 5. The first year of CELDT and iReady Diagnostic administration is third grade. A screening survey that I created for the study was administered to teachers of ELLs at Garner, Moren, and Endeavor to collect self-reported data regarding their training history and frequency of SIOP use in their classrooms. I selected teachers who participated in SIOP professional development provided by the school district and who implemented the strategies for Grade 3, 4, and 5 students. I requested via email that they complete the survey. I also requested and received permission to access the school district's iReady data.

There were 539 ELL students in Garner, Moren, and Endeaver elementary schools. The power analysis indicated that a minimum of 36 students was needed to have a robust sample for analysis. The exact number of 50 student scores was determined after

the screening survey was returned, and I selected classes who were exposed to SIOP strategies from trained teachers. Raw data are available by request.

Instrumentation and Materials

Instrumentation for this study included archival data from the CELDT and iReady Diagnostic assessments for the dependent variables. A 4-question screening instrument that I created was administered to ELL teachers at Garner, Moren, and Endeaver elementary schools to classify their use or nonuse of SIOP strategies (the independent variable). The self-report instrument determined two criteria of SIOP use: (a) ELL teachers' participation in SIOP PD and (b) their implementation of SIOP strategies in the classroom. Data from this survey were used to determine the convenience sample of ELLs exposed to SIOP strategies and the control group of ELLs who did not have SIOP administered in the classroom.

Archived quantitative data were retrieved and analyzed using CELDT and iReady Diagnostic Assessment scores for 2013-2015. As explained in the following subsections, both assessments are reliable and valid as measures of language and reading proficiencies.

California English Development Test

The CELDT is a pen and paper assessment that ELL students sit for at the beginning of each year. The assessment results provide teachers and administrators with detailed information about individual ELL students' English language proficiency with categorized data sets (California Department of Education, 2016). The California Department of Education publishes and provides CELDT assessment annually

(California Department of Education, 2016). The CELDT is administered at the beginning of the school year with participants responding to the 55-item instrument over a 2-day period. The listening, speaking, and writing portions are administered under the supervision of a trained CELDT assessor. The reading portion is completed individually by each student under the supervision of the CELDT assessor.

Section 60810(d) of the California Education Code states that the purpose of the CELDT is threefold. The CELDT assessment (a) identifies students who are limited English proficient, (b) determines the level of English language proficiency of pupils who are limited English proficient, and (c) assesses the progress of limited-English-proficient pupils in acquiring the skills of listening, reading, speaking, and writing in English. (California Department of Education, 2016). The assessment uses five separate tests, including a test for kindergarten and grade one, Grade 2, Grades 3 to 5, Grades 6 to 8, and Grades 9 to 12. The reading domain assesses ELL students' receptive skills required to process information presented in written English (California Department of Education, 2016; Chavez, 2013). The three test components consist of (a) word analysis, including recognition of English sounds, root words, syllables, and affixes; (b) fluency and vocabulary, including identification of multiple-meaning words (i.e., synonyms, antonyms, phrasal verbs, and idioms); and (c) comprehension, including the ability to follow the sequence of informational text, identifying the main idea, character development, setting and theme of fictional text, and understanding the connotations of text content and context (California Department of Education, 2016).

CELDT assessment proficiency is measured by placing the student's scores on an overall scale with proficiency ranges for listening, speaking, reading, writing, and comprehension. Based on where the student falls on the range, achievement is rated as Beginning, Early Intermediate, Intermediate, Early Advanced, and Advanced. I did not use Beginning or Early Intermediate data because these measure basic reading skills, phonics, phonemic awareness, and vocabulary, which are foundational skills prior to fluency and reading comprehension (see California Department of Education, 2016). Reading proficiency using the CELDT data for this study was limited to the reading and comprehension scale scores of the top three levels. The score ranges for reading and comprehension for the three grades investigated are shown in Table 1 and Table 2, respectively. I did not use data for the listening, speaking, and writing categories for the CELDT assessment because these sections are scored manually by the assessor, and I did not want to add the confounding variable of scoring reliability.

Table 1

CELDT Score Ranges for the Reading Domain

Grade	Intermediate	Early advanced	Advanced
3	482 - 541	542 - 576	577 - 700
4	491 - 559	560 - 599	600 - 700
5	504 - 563	564 - 603	604 - 700

Table 2

CELDT Score Ranges for the Comprehension Domain

Grade	Intermediate	Early advanced	Advanced
3	462-519	520-563	564-670
4	476-538	539-588	589-670
5	488-549	550-601	602-670

The CELDT's standard error of measurement (SEM) is computed and reported annually as a measure of test reliability. The SEM is a measure of how much students' scores varied from the scores they would earn on a perfectly reliable test (California Department of Education, 2016). The margin of error on CELDT for grades K to 12 have been historically low, ranging from 1.10 to 2.67. In this study, I focused on Grade 5, and the SEM for CELDT Reading in Grade 5 is 2.54 (California Department of Education, 2016). The consistently low SEM across grade levels is evidence of reliability for the CELDT assessment.

Test validation for the CELDT is reported annually and the assessment revised by the California Department of Education. Construct validity is the central concept underlying the validation process. Evidence for the CELDT's construct validity is cumulative and integrates evidence from both content-related and criterion-related validity studies. As the California Department of Education (2016) explained, minimization of construct-irrelevant variance and construct underrepresentation were

addressed as the test was developed. According to the test developers, item specification, item writing, item review, field testing, test form construction, and standardized test administration were considered important variables that add to the validity and reliability of the assessment. Controlling for and managing these variables helps to ensure that relevant language skills are validly assessed. The pattern of correlations among the four language domains (speaking, listening, reading, and writing) are positive and relatively high (California Department of Education, 2016).

I used both CELDT and iReady Diagnostic Assessment data in order to include multiple measures of student achievement in this study. Both assessments measure students' reading proficiency based on the same categories: vocabulary, phonological awareness, and reading comprehension. Analyzing both sets of data showed ELLs' transferability of their reading skills on both assessments.

iReady Diagnostic Assessment

The iReady Diagnostic, published by Curriculum Associates, is a computerized assessment administered at the end of the school year which provides teachers and administrators with detailed information about individual students' reading proficiency (Bjorklaund-Young & Borkoski, 2016; Educational Research Institute of America, 2016). The iReady Diagnostic is administered at the beginning of the school year and at the end of each school year. Participants complete this assessment individually. This assessment measures student progress in phonological awareness, phonics, high frequency words, vocabulary, and comprehension (Bjorklaund-Young & Borkoski, 2016; Educational Research Institute of America, 2016).

The iReady Diagnostic Assessment for Reading measures students' reading proficiency based on vocabulary, comprehension, and phonological awareness. Reading proficiency for this study, as measured by the iReady Diagnostic, is indicated by the overall reading scale range. Student achievement is rated by the following levels on the iReady reading scale: beginning, early intermediate, intermediate, early advanced and advanced (Bjorklaund-Young & Borkoski, 2016; Educational Research Institute of America, 2016). Reading proficiency for this study was indicated by the reading scale score from intermediate to advanced levels. The iReady assessment score ranges for the four levels used are indicated in Table 3 for the two grades included in the study.

Table 3

iReady Score Ranges for Overall Reading Placement

Level	Grade 3	Grade 5
2 – Early Int.	474 - 510	474 - 495
3	511 - 602	496 - 541
4	603 - 629	542 - 580
5 - Advanced	630 - 800	581 - 640

Analysis of iReady's structural equation modeling (SEM) with classical test theory reliability is computed annually. The margin of error on iReady for grades 1-8 are consistently low ranging from .248 to .278. The SEM for iReady in fifth grade is .272 (Curriculum Associates, 2014). The consistency of SEM scores across grade levels established reliability for the iReady assessment. Given the adaptive nature of i-Ready

and the wide difficulty range in the item bank, standard errors are low and close to the theoretical minimum for the test of the given length (Curriculum Associates, 2014).

During the validity testing, the ELL subgroup was assessed for bias in the iReady Diagnostic by comparing item difficulty between English learners and non-English learners. Items with significant differences, Differential Item Function (DIF) between these comparison groups were flagged for revision (Curriculum Associates, 2014). The correlation study of the iReady Diagnostic 2014-2015 evaluated 3,117 items, with 3% showing significant DIF and 1% with large DIF. Those items were removed, revised or re-piloted (Curriculum Associates, 2014). The iReady SEM range for the ELL subgroup is 2.44-2.70. Using data from valid and reliable assessments, CELDT and iReady Diagnostic, allowed the researcher to use these test results to be generalized to other populations (Curriculum Associates, 2014).

Data Collection

Quantitative archival data were collected for student scores obtained from iReady and CELDT assessments administered in 2016. The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between ELLs who had received SIOP instructional strategies in the classroom and those who had not. A causal-comparative design is a research design that seeks to find relationships between independent and dependent variables after an action or event has already occurred (Creswell & Poth, 2016; Lodico et al., 2010). The researcher's goal is to determine whether the independent variable affected the outcome, or dependent variable, by comparing two or more groups of ELLs. The sample for this study consisted of two

groups of ELL students; those who received SIOP instructional strategies and those who had not. The control group for this study was a sample of ELL students who did not receive SIOP strategies. During the Walden University IRB approval process, I obtained permission from the district's Assistant Superintendent of Education Services to use the Educator's Assessment Data Management System (EADMS) website to retrieve this archival data. CELDT and iReady Diagnostic data for 2016 was extracted from EADMS and entered into SPSS software. Anonymous identification numbers were assigned to each ELL student coded 1 for receiving SIOP instruction and 0 for receiving no SIOP instruction. This coding was accomplished based on the teacher responses on the SIOP instructional survey. No teacher data were used in the coding or analyzing of data. The data were arranged in numeric form in a spreadsheet format.

I used an ANOVA test to analyze each of the dependent variables; CELDT scale scores for reading and for comprehension, and iReady diagnostic scale scores for overall reading achievement. The dependent variables were the ELL student CELDT and iReady scores and the independent variable was the use of SIOP instruction. Research question 1 (RQ1) asked if the reading proficiency of grade 3, 4, and 5 ELLs who received SIOP instruction was significantly different from those who had not, as measured by CELDT reading assessment. Research question 2 (RQ2) asked if the comprehension of grade 3, 4, and 5 ELLs who received SIOP instruction was significantly different from those who had not, as measured by CELDT comprehension assessment. Research question 3 (RQ3) asked if the reading proficiency of grade 3, 4, and 5 ELLs who received SIOP instruction

was significantly different from those who had not, as measured by the iReady Diagnostic assessment.

Assumptions, Limitations, Scope, and Delimitations

This study was based on several assumptions. I assumed for the purposes of this study the achievement tests used by the district are reliable and that they were administered with fidelity according to instructions including the use of proctors. I assumed that the data received by the district was accurate and complete because the results were retrieved through state (CELDT) and online testing (iReady Diagnostic). There were several assumptions about the potential teacher participants. It was assumed that the teachers who completed the screening survey shared their experiences transparently about their SIOP training experiences, as well as their use of SIOP techniques when teaching elementary ELLs. The teachers selected for the screening survey were randomly selected from all teachers at each elementary school. I assumed that the teachers were competent both in English as well in applying the SIOP methods of teaching ELLs for those who purport to have used those methods. I assumed there would be a sufficient number of both SIOP and non-SIOP teachers remaining at the research sites to enable me to locate and find a sufficient number of student records for both groups to download the required data for my data analyses to proceed.

A limitation of this quantitative study was that the sample groups may not reflect the general ELL population of the entire district. Although each elementary school teaches ELLs for all grade levels, this study was limited to three of the 17 elementary schools within this district. The study was a nonexperimental ex post facto design based

on archival ELL test scores. Hence, there was a possibility of unknown factors which may have influenced the results and as such the difference in test scores could possibly be considered the cause of a change in teaching methodology.

The variables of this study were delimited to grade 3, 4, and 5 ELL students' achievement data during the 2016 testing year. The study was delimited to grade 3, 4, and 5 students who completed the CELDT and iReady Diagnostic assessments and who were taught by teachers who either did or did not use SIOP techniques in their ELL instruction. Data were limited to these grades, because before third grade, these assessments are not administered.

Participant Protections

As the primary researcher for this study, I protected the confidentiality and rights of all participants. Data were grouped according to those students who participated in ELL SIOP instruction and a control group of ELL students who did not participate in SIOP instruction in third, fourth, and fifth grade. The confidentiality of all participants was accomplished using anonymous identification numbers for each student and pseudonyms for the school district and the elementary schools involved. No direct contact occurred between the researcher and the students and the researcher did not have influence to design the sample student groups. I presented my NIH certification to Walden University's Institutional Review Board (IRB), and I obtained IRB approval before I collected any data (IRB #08-01-19-0172206). There was no attempt to collect data until after approval was granted by the IRB at Walden University. Data for this study

were archival and participants were de-identified as data were retrieved. Data were kept in secured files, and after five years, all data files will be destroyed.

Data Analysis Results

Data analysis for this study was conducted using the one-way Analysis of Variance (ANOVA) to determine if there was a significant difference between two groups (SIOP treatment and non-SIOP treatment). The sample for each (treatment and control) was drawn from three different schools, and for three different grades (Creswell & Poth, 2016; Lodico et al., 2010). This test was the best fit for this study because it calculated whether a statistically significant difference in average reading achievement scores existed based on ELLs having received or not received SIOP instructional strategies. This inferential statistical test was appropriate because the data included two continuous dependent variables (one with two levels) for one treatment group and one control group (Creswell & Poth, 2016; Lodico et al., 2010).

Student reading levels were compared using CELDT Reading scores, CELDT Comprehension scores, and iReady Diagnostic scores to determine if there was a statistically significant difference in ELL reading proficiency for students who were taught using SIOP instructional strategies and those who were not. These assessments were conducted for three separate groups of elementary students as they completed the grades 3, 4, and 5. My data analysis plan included the use of one-factor ANOVAs for 3rd, 4th, and 5th grade results of the three assessments.

These data met the assumptions for one-way ANOVA. The independent variables consisted of three independent groups: grades 3, 4, and 5 with SIOP and grades 3, 4, and

5 with no-SIOP (Green & Salkind, 2011). Independence of observations assumption was met as students were equally distributed throughout the elementary classes, with no student participating in more than one group (One-way ANOVA in SPSS Statistics, 2021). The sample groups were drawn independently of each other through the screening survey which determined which teachers used SIOP and which did not. SPSS scatter plots showed the data were tightly distributed around the mean (Appendix B). The Levene's test showed statistical significance which can be problematic with ANOVA. However, ANOVA is generally robust when the sample size is not small (Blanca et al., 2018), and was still the best analysis for this study. While the assumption of equality of variance was not met, the means for grades 3, 4, and 5 have statistical significance. Eta squared is a descriptive statistic that neither requires normality nor homogeneity (SPSS ANOVA – Levene's Test "Significant"). The resulting eta squared statistics indicated small to medium effect sizes for the statistically significant tests and allow for reasonable interpretation of the ANOVA's (Zach, 2021). Table 4 shows demographics of the sample presented. Table 5 shows the results.

Table 4

One-Factor ANOVA – Descriptive Statistics

Grade	Test	*N*	Mean	*SD*
Third	CELDT Reading	200	497.59	28.55
	CELDT Comprehension	200	494.74	17.93
	iReady Diagnostic	200	511.00	23.01
Fourth	CELDT Reading	200	529.20	29.87
	CELDT Comprehension	200	526.72	20.93
	iReady Diagnostic	200	535.99	21.99
Fifth	CELDT Reading	200	554.31	32.28
	CELDT Comprehension	200	552.88	43.43
	iReady Diagnostic	200	556.39	26.55

Note. *N* = 200 for treatment and control groups.

Table 5

One-Factor ANOVA Comparing Students With SIOP vs No-SIOP

Grade	Test	*F*	*p*
Third	CELDT Reading	5.611	0.019
	CELDT Comprehension	0.016	.899
	iReady Diagnostic	38.04	0.000
Fourth	CELDT Reading	6.42	< 0.05
	CELDT Comprehension	31.64	0.000
	iReady Diagnostic	38.85	0.000
Fifth	CELDT Reading	31.44	0.000
	CELDT Comprehension	21.36	0.000
	iReady Diagnostic	103.81	0.000

Research Question 1 addressed CELDT Reading scores for each grade level: third, fourth, and fifth grade. As displayed on Table 5, there was a statistically significant difference between group means (SIOP vs. no-SIOP) for each grade level: 3rd ($F = 5.28$, $p = .023$), 4th ($F = 6.42$, $p = .012$), 5th ($F = 31.45$, $p = .000$). There was a statistically significant difference between SIOP and non-SIOP CELDT reading scores within each grade. Based on this finding, the null hypothesis that there was no significant difference in the CELDT Reading achievement scores based on the teachers' use of SIOP reading strategies was rejected. The partial eta squared values implied a small to medium effect size for the ANOVA and therefore SIOP instruction did have a substantial effect on the

CELDT Reading scores of each grade level: 3rd ($\eta^2 = 0.028$), 4th ($\eta^2 = 0.031$), 5th. ($\eta^2 = 0.136$).

Research Question 2 addressed CELDT Comprehension scores for each grade level: third, fourth, and fifth grade. As displayed in Table 5, there was a statistically significant difference between group means (SIOP vs. no-SIOP) for two grade levels 4th ($F = 31.64$, $p = .000$), and 5th ($F = 21.36$, $p = .000$). Based on this finding, the null hypothesis that there was no significant difference in the CELDT Comprehension achievement scores based on the teachers' use of SIOP reading strategies was rejected for fourth and fifth grades. The null was retained, however, for the third grade group, 3rd ($F = 0.016$, $p = .899$). The partial eta squared value $\eta^2 = 0.000$ implied that there was no effect size for the ANOVA and therefore SIOP instruction did not have an effect on the CELDT Comprehension scores of 3rd grade students. Situational characteristics that may have affected the third-grade results in comparison of CELDT data may have been that it was the first year of SIOP instruction and the first administration of the CELDT assessment for this group of students. The partial eta squared value $\eta^2 = 0.137$ implied a large effect size for the ANOVA and therefore SIOP instruction did have a substantial effect on the CELDT Comprehension scores of 4th grade students and demonstrated significant growth. The partial eta squared value $\eta^2 = 0.097$ implied a large effect size for the ANOVA and therefore SIOP instruction did have substantial effect on the CELDT Comprehension scores of 5th grade students.

Research Question 3 addressed iReady Diagnostic scores for each grade level: third, fourth, and fifth grade. As displayed on Table 5, there was a statistically significant

difference between group means (SIOP vs. Control without SIOP) for each grade level: 3rd ($F = 38.04$, $p = .000$), 4th ($F = 38.85$, $p = .000$), 5th ($F = 103.81$, $p = .000$). Based on this finding, the null hypothesis that there was no significant difference in the iReady Diagnostic scores based on the teachers' use of SIOP reading strategies was rejected. The partial eta squared value $\eta^2 = 0.160$ implied a large effect size for the ANOVA and therefore SIOP instruction had a substantial effect on the iReady Reading scores of 3rd grade students. The partial eta squared value $\eta^2 = 0.164$ implied a large effect size for the ANOVA and therefore SIOP instruction had a substantial effect on the iReady Reading scores of 4th grade students and increased from the previous grade. The partial eta squared value $\eta^2 = 0.343$ implied a large effect size for the ANOVA and therefore SIOP instruction had a substantial effect on the iReady Reading scores of 5th grade students.

The findings of this study show a statistically significant difference in ELL reading proficiency for students who were taught using SIOP instructional strategies and those who were not. Situational characteristics that may have affected the third-grade results in comparison of CELDT data may have been that it was the first year of SIOP instruction and the first administration of the CELDT assessment for this group of students.

In the next section, I outline the project design for professional development (PD) in SIOP to improve reading instruction for ELLs. The topics for instructional trainings were selected based on the instructional framework of SIOP. SIOP focuses on purposeful lesson planning with specific content and language objectives, emphasizing instruction of academic language and content, while concurrently developing students' English

language proficiency (Cummins, 2015; Fairbairn & Jones-Vo, 2015). These focus areas will be incorporated within 3 full-day PD sessions with demonstration lesson observations and feedback provided by the district coach. The plan, goals and implementation of the instructional training will be described in detail in Section 3. A literature review will support the selection of the professional development model.

Section 3: The Project

Introduction

The purpose of this study was to determine if there is a significant difference in reading achievement scores between elementary ELLs who received SIOP instructional strategies in the classroom and those who had not. The literature review for the project supported the professional development (PD) plan and the instructional approaches presented during 3 full-day sessions including classroom lesson observations using the SIOP model. Section 3 is a description of the PD plan created to use SIOP instruction to help improve ELLs' reading achievement and academic development. In this section, I explain the goals and structure of the PD for ELL teachers to implement this project.

The objective for this ELL PD is threefold: build a background on ELLs, provide instructional strategies to meet the diverse needs of ELLs in all content areas, and establish a professional learning community (PLC) among ELL teachers at many sites across the district. Explicit instruction with content-area academic vocabulary as well as language syntax and fluency are addressed in SIOP instructional strategies. After the PD, participants should be able to consistently and regularly embed both content and language objectives.

The PD will take place over the course of 3 full-day sessions, with demonstration lessons conducted between these sessions that are observed by a district-level English learner coach who is trained in SIOP strategies (Appendix B). During the first PD session, ELL teachers will research ELL learning styles, language and fluency needs, and SIOP strategies. This introduction to SIOP will take place during the first half of the day. Participants will collaborate and relate the research to their ELL students and current instructional practices, adjusting an upcoming lesson to incorporate SIOP strategies. Between the first PD session and the second, they will view a demonstrated SIOP lesson and teach their planned SIOP lesson with observational feedback gathered by the ELL coach. The goal of this observational cycle is to provide an objective lens to a lesson in which new strategies are implemented so that they can be refined over time.

The second PD session will give teachers an opportunity to collaborate about their insights from the demonstrated lesson, their own lesson implementation, and coach feedback. They will then plan a future lesson incorporating SIOP strategies and review district-wide ELL achievement data. Between the second PD session and the third, participants will again view a demonstrated SIOP lesson and teach their planned SIOP lesson, with observational feedback gathered by the ELL coach. This cycle will be repeated between the second and third sessions.

Finally, the third PD session will include the observation/feedback cycle conducted in the second session. Participants will review their own ELL student data and relate instructional strategies to address their needs. Collaboration time is allotted during

this PD session for participants to discuss their lesson plans incorporating SIOP instruction.

Rationale

The PD genre for this project was selected based on the findings and data analysis that showed that ELL students of teachers using SIOP instructional practices increase their reading achievement. The data showed that students who were taught using SIOP strategies had positive growth in three different measures of reading achievement, both within group and when compared to students who did not experience teaching with SIOP strategies. The SIOP PD for teachers of ELLs will address these students' specific needs and provide tools for these teachers to plan lessons that incorporate strategies that will improve student achievement (see Evers et al., 2016; Schaap & de Bruijn, 2018). The academic progress and achievement of ELLs is contingent on educators addressing their unique needs in all content areas (Crowley, 2017; Shea et al., 2018; Whitenack & Venkatsubramanyan, 2016), and the PD project will provide content to improve educators' knowledge and skills for effectively integrating SIOP strategies to support ELL students. The findings from my data analysis support previous findings of the causal relationship between PD that focusses on targeted teaching strategies and language performance gains among ELLs (see Tong et al., 2017, p. 309). Thus, continuing to provide PD for ELL teachers is necessary to improve the academic achievement of ELLs.

Review of the Literature

This review of literature supports the development of PD for teachers of ELLs using SIOP instruction strategies. The data in this study showed positive academic

growth with SIOP and the recommendations include a need for PD for ELL teachers that is targeted to improve ELLs' academic achievement throughout the school district. The literature examined for this review included research from peer-reviewed journals, Educational Resources Information Center (ERIC), and Education Research Complete that was published between 2015 and 2020. The following identifying terms narrowed the research: *English learner instruction, professional development for English learners, professional learning communities, professional development models,* and *professional learning.*

This literature review is focused on three areas: teacher education for ELL teachers, collaborative structure for PD, and PLCs. The PD genre for this project was chosen to provide the participants research-based education about ELL needs, SIOP strategies, and collaboration in professional learning communities. A goal of the PD is to encourage ELL teachers to plan lessons that incorporate the PD instruction to benefit language development and content learning for their ELL students. The research supports the need for effective PD that will provide educators of English learners with skills to address their needs toward increased academic success (Coady et al., 2019; Hiatt & Fairbairn, 2018; Ibrahim et al., 2020; Kalinowski et al., 2019). The project framework that I designed as a result of this study aims to improve local teacher practices with the goal of having a positive effect on student learning and achievement (Cavazos et al., 2018; Garcia et al., 2019; Murphy et al., 2019).

Teacher Education for ELL Teachers

The academic progress and achievement of ELLs is contingent on educators addressing their unique needs in all content areas (Coady et al., 2019; Crowley, 2017; Garcia et al., 2019; Harris & Jones, 2018; Shea et al., 2018). PD can provide tools for teachers to plan lessons incorporating strategies that will improve ELL student achievement (Ibrahim et al., 2020; Louie et al., 2019; Schaap & de Bruijn, 2018). Teacher education needs to be reformed (Crowley, 2017) because preservice teacher education programs do not prepare teachers to teach ELLs (Hiatt & Fairbairn, 2018; Ibrahim et al., 2020; Kalinowski et al., 2019; Murphy et al., 2019; Schaap & de Bruijn, 2018; Yough, 2019). Teachers often do not feel prepared to provide the necessary instruction for ELLs (Harris & Jones, 2018; Hiatt & Fairbairn, 2018; Little, 2020; Louie et al., 2019; Yough, 2019). Additionally, there is a need for effective PD for ELL teachers based on low reading achievement data for this population of students (Cavazos et al., 2018). PD at the district level should support increasing the quality of their instruction and developing teacher skills to meet the needs of ELLs. However, PD does not often address the specific needs of ELLs, such as having opportunities to practice and hearing language in context (Shea et al., 2018, p. 191).

PD for ELL teachers should increase teacher awareness of how ELLs learn and how to incorporate academic language into their instructional plans (Louie et al., 2019; Martin et al., 2020). Effective PD can change teachers' pedagogy and improve instruction for ELLs (Hiatt & Fairbairn, 2018; Schaap & de Bruijn, 2018; Tong et al., 2017). Further, there is a causal relationship between PD that targets language teacher development and

improved language performance among ELLs whom they teach (Tong et al., 2017). Thus, continuing to provide PD for ELL teachers is necessary to promote ELLs' academic achievement. In addition, the PD for teachers of ELLs needs to provide time for discussion about English learners, teachers' beliefs about students, and best instructional practices to meet their needs (Gore & Rosser, 2020; Harris & Jones, 2018; McDonagh et al., 2019). PD should also be research-derived and focus on strategies designed to improve core reading instruction for ELL students (Kalinowski et al., 2019; Murphy et al., 2019; Shea et al., 2018). For example, teaching practices for ELLs that are recommended involve incorporating content-area, specific academic vocabulary, and integrating oral and written English language into lessons (Coady et al., 2019; Ibrahim et al., 2020; McDonagh et al., 2019).

Components for Effective Professional Development

Effective PD is ongoing and involves collaborative and active learning opportunities focused on pedagogy and student learning (Beddoes et al., 2020; Lachuk et al., 2019; Little, 2020). Research and strategy-based PD provides teachers with high-quality specialized tools for their instruction (Crowley, 2017; Hiatt & Fairbairn, 2018; Schaap & de Bruijn, 2018). The use of new knowledge and skills acquired during PD can improve ELL teachers' pedagogy, which results in increased ELL achievement (Akiba et al., 2019; Crowley, 2017; Schaap, & de Bruijn, 2018; Shea et al., 2018; Vu, 2019).

The domains for this project's ELL-specific PD include pedagogy for English language development as well as knowledge of mathematics, science, and social science. Teachers need to build understanding of language stages and factors that influence

second language acquisition (Coady et al., 2019; Kalinowski et al., 2019; Little, 2020). Building these pedagogies into classroom practice is essential for implementation changes and student improvement (Alexander, 2019; Hiatt & Fairbairn, 2018; Lachuk et al., 2019). Therefore, PD content for ELL instruction should include both language and content area domains for ELLs to access curriculum for all areas during their classes throughout the day (Hiatt & Fairbairn, 2018; Ibrahim et al., 2020; Vu, 2019). The content of the PD should also have a strong connection to daily instructional practices, including exploratory work in the classroom (Beddoes et al., 2020; Cavazos et al., 2018; Murphy et al., 2019). The content of this project's PD incorporates practice SIOP lessons designed by the participants with observational feedback given by the district's ELL coach and collaboration among all participants.

Further, key components of effective ELL PD include structured workshops, content focus, active learning during PD sessions, and follow-up with feedback and consistency (Akiba et al., 2019; Prenger et al., 2019; Thornton & Cherrington, 2019; Yough, 2019). This project's PD includes these components with the workshop sessions, teacher collaboration, and coaching feedback regarding a SIOP lesson implementation. Teacher training with all these components contributes to student success (Beddoes et al., 2020; Hiatt & Fairbairn, 2018; Prenger et al., 2019). Following the structured PD workshops, faithful implementation during daily practice is essential to improving instructional practices that positively impact student improvement (Lachuk et al., 2019; Murphy et al., 2019; Schaap & de Bruijn, 2018; Thacker, 2017). Extensive PD leads to positive and significant student growth (Tong et al., 2017, p. 307).

PD for teachers increases their understanding of instructional processes and student learning (Avidov-Ungar, 2016). PD for ELL teachers is a means to improve student achievement, which is part of a system-wide solution to narrowing the achievement gap (Coady et al., 2019; Garcia et al., 2019; Ibrahim et al., 2020; Prenger et al., 2019). The design of this project's PD allows the participants to increase their instructional skills to have a positive effect on ELL students' achievement (Abbot et al., 2018; Ibrahim et al., 2020).

Teacher Collaboration in Professional Learning Communities

Professional learning for teachers is crucial for improving the quality of education (Abbott et al., 2018; Burns et al., 2018; Louie et al., 2019). Teacher collaboration in PLCs can contribute to the effectiveness of PD (Abbott et al., 2018; Little, 2020; Prenger et al., 2019; Williams, 2019). PD for practicing teachers is considered more effective when it is collaborative and inquiry-based (Alexander, 2019; Cavazos et al., 2018; Crowley, 2017; Lachuk et al., 2019; Long, et al., 2019). PLCs are a community of practice in which teachers form trusting relationships while they learn with colleagues about an identified topic, develop shared meaning, and identify shared purposes (Abbott et al., 2018; Gore & Rosser, 2020). Collaboration in PLCs support teachers in their exploration of new practices, improving their teaching by working and learning together (Avidov-Ungar, 2016; Luyten & Bazo, 2019; Prenger et al., 2019; Williams, 2019). In a PLC, a group comes together to share learning, develop common goals, and engage in reflective dialogue (Beddoes et al., 2020; Burns et al., 2018; Cavazos et al., 2018; Luyten & Bazo, 2019; Thornton & Cherrington, 2019). The shared goal for this project's PD is

for ELL teachers to understand the language and academic needs of ELLs and how to plan instruction to best meet these needs. PLCs can support teachers as they incorporate new skills into their practice and reflect together to enhance effectiveness (Abbott et al., 2018; Gore & Rosser, 2020; Thornton & Cherrington, 2019). Implementation of best practices for student achievement, demonstrating a cycle of inquiry, promoting continuing improvement through system processes, and focusing on results can lead to social change by narrowing ELLs achievement gaps (Burns et al., 2018; Cavazos et al., 2018; Kalinowski et al., 2019; Murphy et al., 2019)

Project Description

The PD for developing SIOP strategies will be facilitated by myself and ELL district coaches. These coaches were trained by a consulting firm that specializes in ELL instruction using SIOP strategies. The PD sessions will be conducted over three days in a group face-to-face setting. In the initial session, I will review the SIOP framework and review its impact on ELL reading achievement based on my research findings. The subsequent sessions will be held two to three months after initial PD session with the ELL district coach. Between PD sessions, teachers will have implemented a demonstration SIOP lesson while the ELL district coach observed them to identify strengths and weaknesses in using the SIOP instructional strategies. The coach will meet with the teacher following the lesson to de-brief and provide feedback. Detailed agendas for this PD including resources and the PowerPoint slides for each session are included in Appendix B.

This PD plan has been designed based on the findings of this study. Participants will engage in learning the SIOP framework, watching modeled teaching strategies through video clips, participate in hands-on activities, read articles, and plan lessons in cooperative groups. These sessions will allow time for teachers to purposefully plan SIOP lessons and have interactions together regarding the implications of successful SIOP implementation.

The goal of these PD sessions is to support initial learning of SIOP with observation and feedback regarding the hands-on practice of the instructional strategies. As the literature review showed, effective PD is designed with this follow-up cycle. Teachers will build a foundation of knowledge about the needs of ELLs and how SIOP strategies address these needs in all content areas (Guzman, 2015; Vogt & Echevarria, 2015).

The trainings will be held at the district office training rooms. The reservation of this room and teacher attendance will be facilitated by the educational services department led by the director of English learners. The training rooms are equipped with training materials needed such as a microphone, projector, and screen. The first session will take place in August, the beginning of the school year, as a pull-out release day from the classroom. The following sessions, also pull-out release days, will be scheduled in October and February. The non-contiguous scheduling of the PD allows for time in between the sessions for teachers to implement SIOP strategies and collaborate, engaging in inquiry and reflection.

Resources

Resources for the PD will include facilities and staff. The full-day PD sessions will take place at a central location within the district. This will allow participants a convenient location from their school site. The PD will be in a large conference room with table groupings of eight to 10. These table settings are conducive for collaborative group talk as the table seating arrangement do not need to change when groups discuss topics throughout the day.

For ELL teachers to participate in the full-day PD sessions, they need to be released from the classroom by a substitute teacher. The district or site administrator will fund this release time.

Support will be provided by the ELL coach for the participants during the PD session cycle, as well as when the strategies are implemented. The coach will facilitate time for PLC groups to continue to collaborate between PD sessions. They can observe SIOP lessons and give feedback regarding the application of the teachers' new knowledge and pedagogy to their daily work. Student data will be collected and analyzed by the teachers and ELL coach. I will support the implementation of observation and data collection by keeping open communication with the coach to ensure fidelity.

Potential Barriers

The potential barriers to this PD are funding, individual buy-in, and scheduling. The district needs to commit to funding substitute teachers to release ELL teachers for three non-contiguous full-day PD sessions. If such funding is limited, the initial one-day training could be recorded and shown at the site-level so that teachers would not need to

be released from the classroom for PD. However, the teachers would need to be provided with substitute teachers for full day release time from the classroom to participate in the two subsequent day's PD in order to provide the needed collaboration and lesson planning time for classroom implementation.

The role of the teachers will be to attend the training sessions and faithfully implement SIOP in their daily pedagogy. The ELL Coach will meet with the teacher participants to explain description of the PD build buy-in for this training and explain the time commitment. Collaboration with their peers during the PD sessions will establish PLC teams and build upon their personal commitment to differentiating their instruction to address the specific needs to ELL students in all content areas. The PLC teams will review student data, develop collective goals for improving student achievement and reflect on their instructional practices during and following the PD sessions.

Scheduling the full-day PD sessions will involve coordinating with the district to reserve a conference room, presentation technology and substitute teachers to release ELL teachers to attend the sessions. The district ELL Coach will also schedule time to observe lessons after the PD sessions in which the teachers incorporate SIOP strategies. The coach will keep open communication with teachers to support them in the implementation stage of this training and facilitate time for the teachers to meet and collaborate about their experiences. This follow-up will reinforce the focus, priority and buy-in for utilizing the knowledge and skills they learned during the PD sessions with the goal of improving ELL academic achievement.

Roles and Responsibilities of Teachers, Facilitators, and Administrators

Teachers

The teachers' roles will be to buy-in and be engaged in the PD process, which includes learning about ELL instruction, lesson planning, and reflective collaboration. The participants will commit to participate in all three, one-day PD sessions and implement demonstration SIOP lessons. During the sessions, they will participate in reflective discussions in their PLC team as they refine and implement their lesson plans. They will watch demonstration videos of SIOP lessons to watch the instruction in action:

1. SIOP Model for Teaching English Learners: Lesson Delivery
   https://www.youtube.com/watch?v=lVGbz4EqyGs
2. SIOP Practice & Application
   https://youtu.be/hUrQr4GBg0g

In addition to ELL teacher participants, the district ELL Coach will attend all PD sessions, in addition to scheduling observations of the ELL teachers' SIOP lessons.

Facilitators

The facilitators will be the district ELL coaches. These coaches are trained in SIOP strategies and were ELL teachers within the district. Their role will include preparing resources, presenting the PD sessions, and facilitating group discussions following my initial presentation of the framework and research results from this study. These sessions will be led by the coaches to support the teachers in new learning and implementing new instructional practices based on the SIOP model.

Administrators

The district administrators' role is to communicate the priority of narrowing the achievement gap for ELLs by committing funding resources to host the PD sessions. They will support site administrators in organizing the schedule and release time for ELL teachers to participate. The site administrators' role is to work with the ELL teacher participants to get buy-in for the PD and help facilitate further PLC work at the site following the sessions. The administrator can observe lessons that the teacher plans with SIOP strategies and provide feedback.

Project Evaluation Plan

Teachers will provide feedback about the sessions by answering five questions on a Likert scale (see Appendix B). At the end of the first training session, teachers will complete the SIOP PD Reflection (see Appendix B). At the end of the two subsequent sessions, the feedback form will be modified to include short answer spaces for teachers to expand on their answers and propose what they will implement after the PD (see Appendix B). In a group discussion, following each day's training, teachers will reflect on their demonstration lessons and plan for adjustments to instruction following the SIOP PD goals.

The evaluations will be compiled after each session by the ELL coach and the responses analyzed by the coach for curriculum and instruction. Teacher feedback will inform adjustments in the following sessions. For example, if teachers request more collaboration time during the PD sessions, additional time will be added to the following session.

After the full PD cycle is complete, ELL coach will observe lessons and provide feedback using the SIOP checklist. The iReady Diagnostic assessment is administered at the beginning of the school year and at the end of the year. Teachers who participated in the PD will analyze the iReady ELL data. Site and district administration will continue to facilitate the PLC collaboration with the participating teachers. In subsequent years, using this iReady data, the reading achievement of ELL students in their classrooms can be compared to determine if there is positive change.

Project Implications

As a result of having experienced the PD, the ELL teachers will have tools that will enable them to work more collaboratively at the site and district levels to facilitate the implementation of the instructional strategies, problem solve challenges, and collect data. The instructional strategies taught in the SIOP PD will increase teachers' knowledge about the needs of ELLs and provide them with skills for addressing those needs to more quickly improve ELL reading proficiency. Reading and academic language are the cornerstones of education success (Stoffelsma & Spooren, 2019). By closing of this achievement gap, ELL students will benefit directly by experiencing a higher quality education. The ELL teachers will benefit by increasing their collective efficacy for working with this population of students. Finally, the participating schools will benefit by having better success by ELL students on standardized tests.

To the extent that other school districts have demographic contexts similar to the school in this study, the success of this project could lead to training and implementation of SIOP strategies in those districts as well. As these strategies are utilized in more and

more classrooms, they could have a positive influence on a greater number of ELLs. Elementary students' improved achievement in reading comprehension can lead to their success in all content areas as they progress into secondary school. "Early academic skills related to literacy are a significant factor of future academic achievement," (Hanover Research, 2016, p.4). Their subsequent academic success could lead them to increasing high school graduation rate for this population. Thus, college admission rates for ELLs will increase as well, leading to employment in meaningful high level careers (Barrett, 2015).

Conclusion

In Section 3 I explained the professional development goals and plan for district-wide SIOP training for all ELL teachers by in-district ELL coaches. A brief literature review described the efficacy of professional development and the rationale for the training sessions that I included in the development of my research-derived PD for the school district. A complete description of the PD plan, goals, and implementation were included along with the implications. This section also outlined the timeline, supports, and possible barriers as well as effects for social change.

In the next and last section, Section 4, I summarize the entire study and my experience with this study. I will discuss the study's strengths and limitations as well as recommendations for alternative approaches. Also, I will highlight the benefit of project development and potential barriers that need to be considered for facilitation. Finally, the next section will include my insights on being a doctoral candidate and practitioner of social change.

Section 4: Reflections and Conclusions

Introduction

Through this study, I examined student achievement in reading for those who participated in SIOP instructional strategies. The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between ELLs who received SIOP instructional strategies in the classroom and those who had not. This section includes the project strengths and limitations, recommendations for alternative approaches, reflections on my scholarship, project development experience, and my own leadership and change, as well as reflections on the importance of the work. Finally, this section ends with my discussion of implications, applications, and directions for future research, as well as a final statement to conclude my capstone research project.

Project Strengths and Limitations

Strengths

A strength of this project is that it provides professional development that has the potential to have a positive impact on ELL students. Through their use of SIOP strategies, elementary students could improve their reading achievement. Achievement in reading could lead to improved achievement in all content areas. Early skill development can lead to long-term positive outcomes for students as they progress to middle and high school (Ibrahim et al., 2020).

Additional SIOP PD sessions can be facilitated in following years as additional teachers are brought in to receive the training, increasing the use of strategies to narrow the achievement gap and promote positive change across the district.

Limitations

One of the limitations of this project could be the dependence upon active participation of ELL teachers in the PD sessions and implementation of SIOP strategies. The participants need to be committed to the new instructional model and apply it to their pedagogy. Another limitation could be the collaborative relationship between the teachers and the ELL coach. Instructional observations and feedback given by the ELL coach may not be accepted by the participants. These limitations can be remediated by additional time embedded in the PD session agendas for building relationships between the ELL coach and PD participants. In addition, peer observation and coaching could be conducted by PD participants themselves.

Recommendations for Alternative Approaches

I chose 3 full-day PD sessions in order to immerse the participants in training designed to develop new knowledge about sheltered instruction and SIOP strategies, as well as to provide time to analyze data in their SIOP-centric PLC group. However, there are alternative approaches that could have been developed. I could have chosen to have ELL teachers work together at their respective sites. The limitation with this approach is there is not enough time to delve into the SIOP practice in biweekly, 1-hour increments of collaboration time provided at each site.

Effective PLCs provide time for teachers to learn together, practice new instructional strategies, and develop a shared goal (Shea et al., 2018). I chose the PLC model to bring teachers together from different sites and have a structure to engage with each other during PD (see Little, 2020; Prenger et al., 2019). Through PLCs, the PD

participants can develop trusting, collaborative relationships to critically reflect on their instructional practice and analysis of their student data (Abbott et al., 2018; Little, 2020; Prenger et al., 2019; Williams, 2019).

Another approach I considered was to have the site principals meet with each ELL teacher to give feedback on their instruction and analyze student data. Limitations with this approach are the principal's limited knowledge of ELLs and SIOP, their instructional leadership style, and lack of motivation for including this segment in their instructional supervision strategy. If the principal does not have a background in ELL instruction and strong instructional leadership, individual work with each teacher may not be effective. In addition, the relationship between the site administrator and their teachers needs to involve respect and trust to have meaningful conversations about their teaching practice, recommendations for improvement, and analysis of student data. Teachers can feel defensive and distrustful as their supervisor facilitates these discussions, and those feelings would interfere with rather than enhance their instruction for the benefit of student achievement. Based on my data analysis results and consultation with my research committee, this PD was chosen as the most appropriate project for this study.

Scholarship

I grew as a scholar and educator in the development of this project. It helped me delve into the structure of PD sessions and PLCs. I now understand best practices in developing PD that can result in increased knowledge and changes in instructional strategies when the teachers return to the classroom. Before conducting this literature review, I had relied on common sense and how I had critically evaluated PD sessions that

I participated in. I now have more confidence in planning PD for my site as well as my district as I am involved in a variety of leadership groups district-wide. I can develop PD that advocates for educational change at both levels.

Project Development and Evaluation

In designing this PD, I strove for it to be effective and meaningful for teachers not only during the PD sessions but also extending to their teaching practices after they have completed the sessions. The relationships they develop in the PLC process can support them as they continue in their educational careers to address student needs and differentiate their instruction.

As a researcher, I learned additional information about how ELLs learn, what they need in order to grow academically, and how to improve not only their language fluency but also their grade level content knowledge. My first teaching assignment was an ELL teacher and, through the doctoral program, I returned to my first love to advocate for social change. I see my ELL students struggle on a daily basis, and I hope that this research and project can promote reform at my site and district as a whole.

I have always loved research, which goes back to my childhood, when I wanted to become a journalist enjoying thorough investigations at a young age. I am an avid reader and value delving deeper into the topics I explored in my doctoral journey, whether during my coursework or for this study. At times, I felt like I was exploring concepts that were off topic and I needed to regain focus and direction.

Leadership and Change

Throughout this journey, I have reflected on my goals and the project study process itself. My passion is teacher education, so I designed my project around that. Teachers have the greatest impact on student achievement with their daily interaction and targeted instruction. As an administrator, my priority is supporting my teachers, and as I advance into district administrative roles, I will continue to hold this focus at the forefront of my work. In completing my doctoral work, I will have accomplished a life-long goal, through commitment, dedication, and perseverance.

I began my teaching career as an ELL teacher and, with this study and project, I hope to bring about change with instructional approaches that will support them in closing the achievement gap. I hope the project will be implemented not only in this study's district but also in additional districts to expand the knowledge highlighted in my project for more and more ELLs. Their improved academic success can lead to higher self-esteem and confidence to pursue education beyond high school and, subsequently, career paths that require postgraduate degrees.

Reflection on Importance of the Work

A teacher's focus is to improve student learning. When I entered the profession, I had a limited amount to training to address the student issues I would face. Teacher induction programs may try to provide a balance in their teacher training; however, throughout my career, I have added to my knowledge and skills on my own to benefit my students.

Enhancing their practice by collaborating together and developing PLCs will support not only their professional work but also their personal connections with their peers. Working at a school when you have trusted colleagues to reflect and plan with is invaluable and their mutual support can promote positive change across the site.

Project Implications

This study has implications for social change because there is a need for more research about effective strategies to support the academic growth of ELLs. Teachers are continuously working to meet the needs of their students, particularly the ELL population, and they feel that they do not have the skills to do so. In addition to their knowledge of content and general educational pedagogy, they need the specific knowledge about strategies that help ELLs across all content areas. As these are purposefully integrated into their instructional practice, it could lead to improved educational outcomes for ELLs (Louie et al., 2019; Murphy et al., 2019).

Project Applications

This project's PD focuses on the implementation of SIOP strategies to address the needs of ELL students. Application of this project's strategies could support ELLs' academic success in all areas, such as mathematics, social science, and science. With higher levels of reading comprehension, ELLs can access the content in these courses, with corresponding academic vocabulary (Echevarria et al., 2014; Murphy et al., 2019).

Directions for Future Research

Additional research in effective instruction of ELLs and SIOP strategies can produce additional data to generalize to larger populations. This research can be

accomplished with additional studies such as this one to analyze achievement data for ELL students as they participate in instructional strategies could have a positive effect on their academic achievement. ELL researchers and teachers can collect and analyze ELL data and document the effectiveness of educational treatments for this population. The implementation of strategies that will support and challenge these students could provide them with greater academic success as they progress in their education.

Conclusion

The purpose of this causal-comparative study was to determine if there was a significant difference in reading achievement scores between ELLs who had received SIOP instructional strategies in the classroom and those who have not. My district had provided limited training with SIOP, and I wanted to explore more about these instructional strategies and to conduct a study to determine if there was a positive effect on student achievement based on using of these strategies. This study and project could be implemented on a broader scale within this or other districts. Additional data resulting from consistent use of SIOP could lead to marketing the project to other districts.

In this study, I found that ELL students who participated in SIOP instructional strategies showed improvement in reading achievement. Addressing the achievement gaps of ELL students is a challenge, and teachers strive to meet their needs so they can succeed as their English-speaking peers do (Abbott et al., 2018; Guzman, 2015). A positive correlation was found comparing student reading comprehension scores, Grades 3, 4, and 5, over the course of the first year of SIOP instructional strategy implementation

and the first 2 years of its use. It is clear that this research study supports the SIOP model as an effective tool in meeting the needs of ELLs.

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Appendix A: Three-day SIOP Professional Development

Project Purpose

The purpose of this project is to learn about SIOP instruction and its implementation in the elementary classroom. The PD genre for this project was selected based on the findings and data analysis that showed that ELL students of teachers using SIOP instructional practices increase their reading achievement. The data showed that students who were taught using SIOP strategies had positive growth in three different measures of reading achievement, both within group and when compared to students who did not experience teaching with SIOP strategies. The SIOP PD for teachers of ELLs will address these students' specific needs and provide tools for these teachers to plan lessons that incorporate strategies that will improve student achievement (Evers, Kreijns, & Van der Heijden, 2016; Schaap & de Bruijn, 2018).

Applicable Target Level(s)

The target level for this project is grade 3, 4, and 5 ELL teachers.

Project Goals

The objective for this ELL PD is threefold: build a background on ELLs, provide instructional strategies to meet the diverse needs of ELLs in all content areas, and establish a professional learning community (PLC) among ELL teachers at many sites across the district. Explicit instruction with content-area academic vocabulary as well as language syntax and fluency is addressed in SIOP instructional strategies.

Learning Outcomes

After the PD, participants will be able to consistently and regularly embed both content and language objectives.

Target Audience

The target audience for this project PD is grade 3, 4, and 5 ELL teachers.

Discuss PD components, timeline, activities, trainer notes, and module formats

The PD will take place over the course of three full-day sessions, with demonstration lessons conducted between these sessions that are observed by a district ELL coach who is trained in SIOP strategies. During the first PD session, ELL teachers will research ELL learning styles, language and fluency needs, and SIOP strategies. They will collaborate and relate the research to their ELL students and current instructional practices, adjusting an upcoming lesson to incorporate SIOP strategies. Between the first PD session and the second, they will view a demonstrated SIOP lesson and teach their planned SIOP lesson with observational feedback gathered by the ELL coach. The goal of this observational cycle is to provide an objective lens to a lesson in which new strategies are implemented so that they can be refined over time.

The second PD session will give teachers an opportunity to collaborate about their insights from the demonstrated lesson, their own lesson implementation, and coach feedback. They will then plan a future lesson incorporating SIOP strategies and review district-wide ELL achievement data. Between the second PD session and the third, participants will again view a demonstrated SIOP lesson and teach their planned SIOP

lesson, with observational feedback gathered by the ELL coach. This cycle will be repeated between the second and third sessions.

Finally, the third PD session will include the observation/feedback cycle conducted in the second session. Participants will review their own ELL student data and relate instructional strategies to address their needs. Collaboration time is allotted during this PD session for participants to discuss their lesson plans incorporating SIOP instruction.

After all full-day PD sessions, teachers will complete an evaluation to provide feedback to the PD facilitator. The evaluation uses a four-point Likert scale to collect responses regarding the PD content and implementation. Participants will state the level of new knowledge they received during the PD and the collaboration time provided to work in their PLC teams.

Implementation plan

The PD sessions will be held at the district office training rooms. The reservation of this room and teacher attendance will be facilitated by the educational services department led by the director of English learners. The training rooms are equipped with training materials needed such as a microphone, projector, and screen. The first session will take place in August, the beginning of the school year, as a pull-out release day from the classroom. The following sessions, also pull-out release days, will be scheduled in October and February. The non-contiguous scheduling of the PD allows

for time in between the sessions for teachers to implement SIOP strategies and collaborate, engaging in inquiry and reflection.

Day 1: Overview of the SIOP Model

This Professional Development (PD) session provides a summary of the SIOP Model and its research base. It includes information and discussions about how the Model can be articulated with other professional development efforts and how to support SIOP learning and implementation. This session also includes collaboration and lesson planning time for teachers to implement their learning of SIOP instructional strategies.

8:30-10:00 Introductions of participants & Icebreaker using the powerpoint presentation

Introduction to SIOP:

- Jigsaw reading of *Using Sheltered Instruction to Support English Learners* by Amy Markos & Jennifer Himmel (2016)

  The printed article is provided for each participant and groups are assigned by table number. Each group reads one section of the article.
- Groups are re-assigned to different tables – one section represented at each new group. Each participant will present the article's section.
- Discussion of SIOP strategy implementation

Presentation by ELL district coach using PowerPoint

10:00-10:20 Break

10:20-10:45 Icebreaker using the PowerPoint presentation

10:45-12:00 Participants individually outline a lesson they conducted in the past week

- Using this lesson's outline, they individually: Identify SIOP categories implemented and missing in their lesson

- Participants share observations with their table group
- The group collaborates to make suggestions to add SIOP categories to each lesson. These suggestions are recorded on chart paper & shared with all groups.

12:00-1:00 Lunch

1:00-2:30 Participants plan a SIOP lesson to be implemented within the next two weeks and schedule an observation of that lesson by the ELL district coach.

Participants present their lesson to the table group. The group members give feedback to each participant.

2:30-3:00 Participants complete the session's evaluation using the SIOP Professional Development form

SIOP ELL PROFESSIONAL DEVELOPMENT

SESSION ONE

Introductions

- Introductions of ELL teachers
- Icebreaker
  - What is your greatest accomplishment as a teacher?

Sheltered Instruction to Support English Learners

- Jigsaw reading

  Using Sheltered Instruction to Support English Learners

  by Amy Markos & Jennifer Himmel
- Groups A, B, C & D
- Jigsaw Groups & Presentations

English Language LEARNERS

Sheltered Instruction Elements for ELLs

Sheltered Instruction Observation Protocol

- Provides an explicit framework for organizing instructional practices to optimize the effectiveness of teaching second
- Promotes acquisition of both subject area content (e.g., math, science, literature) and language development

SIOP® PROMOTING ACADEMIC LANGUAGE DEVELOPMENT FOR ALL

Collaboration

- What elements of SIOP did you identify in the demonstration lesson?
- How did these elements support both language acquisition and content knowledge?

Day 2: Implementation of the SIOP Model with Data & Feedback

This PD session focuses on district & site level ELL achievement data. This session also provides feedback about teacher's first SIOP lesson from the ELL district coach. The teachers have reflect and collaborate about this lesson. They are provided with time to plan another lesson incorporating SIOP strategies that will be implemented within the next two weeks.

8:30-10:00 Welcome and group rotations in which participants are assigned a number 1-3 at each table and create new groups:

Group A: Review district & site level ELL data

- Use Protocol for Examining Data

Group B: Meet with ELL Coach for Feedback on SIOP Lesson

- Identify SIOP categories implemented in lesson
- Identify SIOP categories missing from lesson

Group C: De-brief SIOP Lesson implemented between Day 1 and Day 2

10:00-10:20 Break

10:20-10:45 Icebreaker using the powerpoint presentation

10:45-12:00 Participants return to their table groups and collaborate together, reviewing their individual SIOP lesson feedback given by the by ELL district coach

- Identify SIOP categories implemented and missing in their lesson

- Participants will explain these SIOP categories to their table group

12:00-1:00	Lunch
1:00-2:30	Participants work together in table groups to create a common assessment for ELLs using a SIOP lesson
2:30-3:00	Participants complete the session's evaluation using the SIOP Professional Development form

SIOP ELL PROFESSIONAL DEVELOPMENT

SESSION TWO

- Icebreaker
  - What is your greatest accomplishment as a teacher?
- Session One Questions
  - Parking Lot - Questions answered throughout Session Two

Data Dive!

English Language Learners

- Review ELL Data
  - District
  - Sites

SIOP Lesson Feedback

Sheltered Instruction Observation Protocol

- Identify SIOP categories implemented in lesson
- Identify SIOP categories missing from lesson

Sheltered Instruction SIOP® Observation Protocol

Group Rotations

Group A	Data Dive	SIOP Lesson Feedback	Demo SIOP Lesson
Group B	SIOP Lesson Feedback	Demo SIOP Lesson	Data Dive
Group C	Demo SIOP Lesson	Data Dive	SIOP Lesson Feedback

SIOP Lesson Review

- Review SIOP lesson with Feedback
  - Identify SIOP categories implemented in lesson
  - Identify SIOP categories missing from lesson

Common Assessment

- Develop a common assessment for ELLs using a SIOP lesson

Future SIOP Lesson Planning

- Plan a future lesson with SIOP categories

- Schedule observation with ELL district coach

SHELTERED INSTRUCTION
SIOP®
OBSERVATION PROTOCOL

Session Evaluation

Thank you! See you at Session 3

Group Rotations

- Group A: Data Dive → SIOP Lesson Feedback → Demo SIOP Lesson
- Group B: SIOP Lesson Feedback → Demo SIOP Lesson → Data Dive
- Group C: Demo SIOP Lesson → Data Dive → SIOP Lesson Feedback

SIOP Lesson Review

- Review SIOP lesson with Feedback
  - Identify SIOP categories implemented in lesson
  - Identify SIOP categories missing from lesson

Common Assessment

- Develop a common assessment for ELLs using a SIOP lesson

Future SIOP Lesson Planning

- Plan a future lesson with SIOP categories

- Schedule observation with ELL district coach

SHELTERED INSTRUCTION SIOP® OBSERVATION PROTOCOL

Session Evaluation

Thank you! See you at Session 3

Day 3: Implementation of the SIOP Model with Feedback

This PD session provides time for analysis of Common Assessment data of their SIOP. They review data review of ELLs in their individual classes, collaborating to determine patterns and commonalities between students and develop data goals for their students.

The teachers have time at the end of this final session to discuss how their perceptions of ELLs and instructional practices to address their needs may have changed with this PD.

8:30-10:00	Welcome and group rotations in which participants are assigned a number 1-3 at each table and create new groups. In these groups, the participants review the common assessment data from each participants' class using Data Review Protocol Common data and reflections are recorded on chart paper & shared with all groups
10:00-10:20	Break
10:20-12:00	Participants review their own class's ELL data, which has been compiled by the ELL district coach using Data Review Protocol. They each develop a plan to address ELL needs with SIOP instructional strategies. Participants share their individual plans with their table group.

12:00-1:00 Lunch

1:00-2:30 Participants return to the groups they were assigned to at the beginning of the day's session. In these groups, they discuss what they have learned from the SIOP PD and reflect on changes they plan to make to their instruction with this new knowledge.

- New knowledge and reflections will be recorded on chart paper & shared with all groups.

2:30-3:00 Participants complete the session's evaluation using the SIOP Professional Development form

SIOP ELL PROFESSIONAL DEVELOPMENT

SESSION THREE

- Icebreaker
  - What is an "ah ha" moment from your SIOP lesson

- Session Two Questions
  - Parking Lot - Questions answered throughout Session Three

Data Dive!

English Language Learners

- Review Common Assessment ELL Data
- Share in group discussions

SIOP Lesson Feedback

Sheltered Instruction Observation Protocol

- Identify SIOP categories implemented in lesson
- Identify SIOP categories missing from lesson

Sheltered Instruction SIOP® Observation Protocol

SIOP Lesson Review

- Review SIOP lesson with Feedback
  - Identify SIOP categories implemented in lesson
  - Identify SIOP categories missing from lesson

ELL Data

DEEP-DIVE INTO THE DATA

- Data Review of your ELL student data
- Develop plan to address ELL needs with SIOP instructional strategies
- Groups share plans

Reflection

- Reflect and disuss learnings from SIOP PD

SHELTERED INSTRUCTION SIOP® OBSERVATION PROTOCOL

PD Evaluation

Thank you!

SIOP Professional Development

PD Session # _____

Please provide feedback for this PD session by using the 4-point rating scale to indicate the extent to which you agree or disagree with each statement. Please circle the number that applies (4 = Agree Completely, 3 = Somewhat Agree, 2 = Somewhat Disagree, & 1 = Disagree Completely).

PD Session objectives were stated clearly and met.	4	3	2	1
PD Session was well organized.	4	3	2	1
PD Session information was relevant and useful.	4	3	2	1
The presenter(s) provided enough time for questions and answered them satisfactorily.	4	3	2	1
PD Session increased my knowledge and skills for ELL students.	4	3	2	1
The presenter allowed me to work with and learn from my peers.	4	3	2	1
I feel confident to implement new information and strategies in my lessons.	4	3	2	1

Protocol for Examining Data

Step 1: What parts of these data catch your attention? Just the facts. (8 minutes: 2 minutes silently writing individual observations, 6 minutes discussing as a group)

Step 2: What do the data tell us? What does the data not tell us? (10 minutes: 3 minutes silently making notes, 7 minutes discussing as a group)

Step 3: What good news is there to celebrate? (5 minutes to identify strengths)

Step 4: What are the problems of practice suggested by the data? (10 minutes: 3 minutes silently writing individual ideas for practice, 7 minutes discussing as a group)

Step 5: What are key conclusions? What recommendations does the team have for addressing the problems of practice?

Generation School Network. (2019). https://www.generationschools.org/

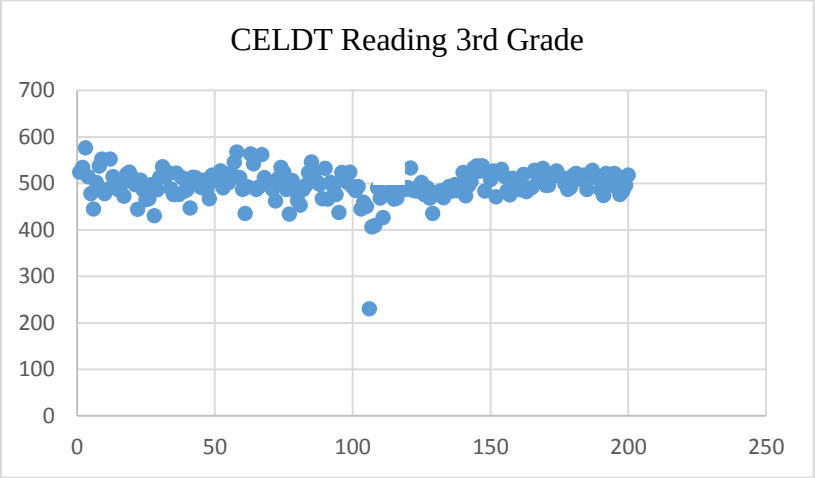
Data Review Protocol

Here's What!	So What?	Now What?
Formative Assessment Data • How have they demonstrated proficiency? (Use specific facts/ data) • What trends do we see? • What are students in each group able to do?	*Data Analysis - Conclusions* • So what does this mean? • Conclusions (be careful not to focus on test questions/format) • Why do we think this happened?	*Next Steps* • What will be the focus of lessons we plan? • What strategies will we use to move students to the next level of learning?
Group 1: Exceeded Standard/Skill	*Group 1: Exceeded Standard/Skill*	*Group 1: Exceeded Standard/Skill*
Group 2: Meets Standard/Skill	*Group 2: Meets Standard/Skill*	*Group 2: Meets Standard/Skill*
Group 3: Nearly Meets Standard/Skill	*Group 3: Nearly Meets Standard/Skill*	*Group 3: Nearly Meets Standard/Skill*

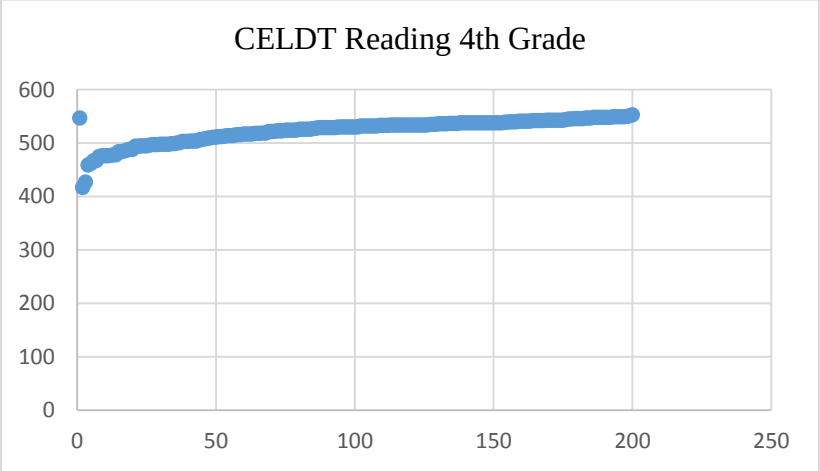
School Reform Initiative, A Community of Learners. What? So What? Now What? (2019).

https://www.schoolreforminitiative.org/download/what-so-what-now-what

Appendix B: Scatter Plots



Note: Range 406-532



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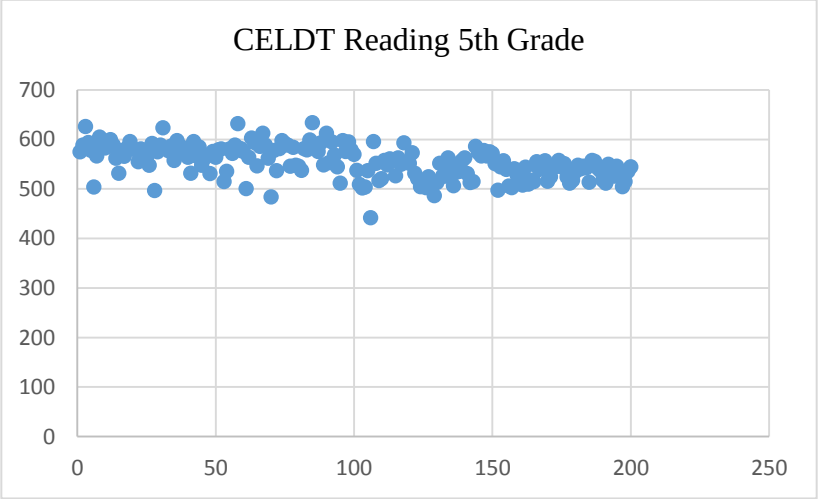

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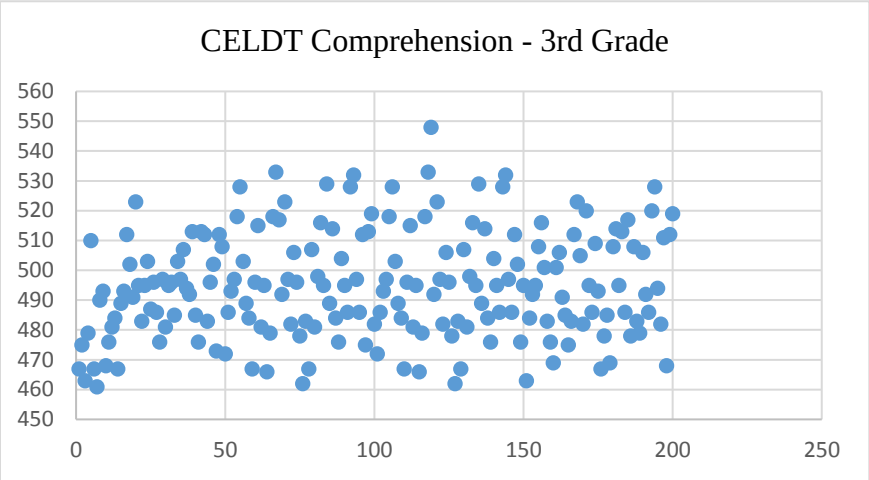

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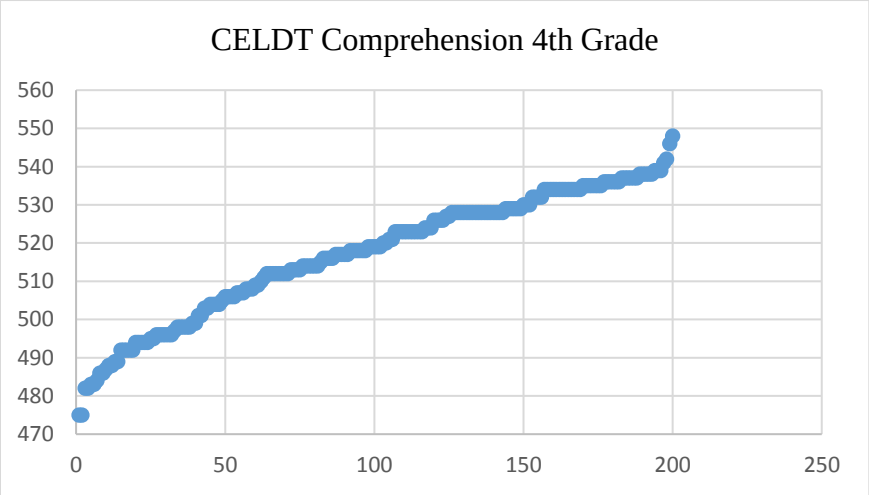

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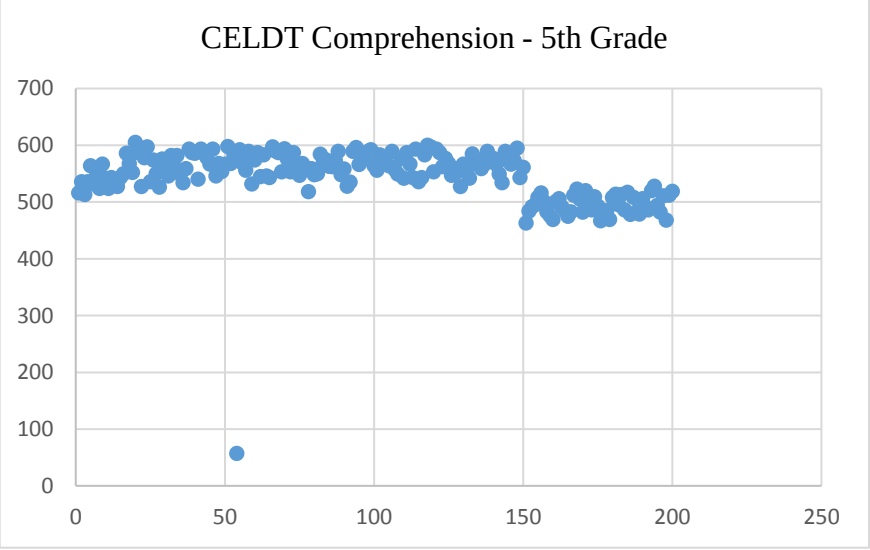

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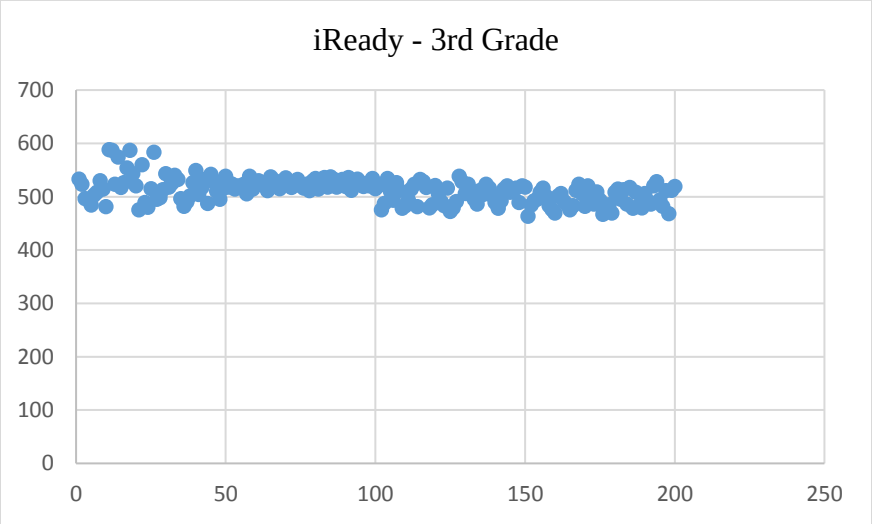

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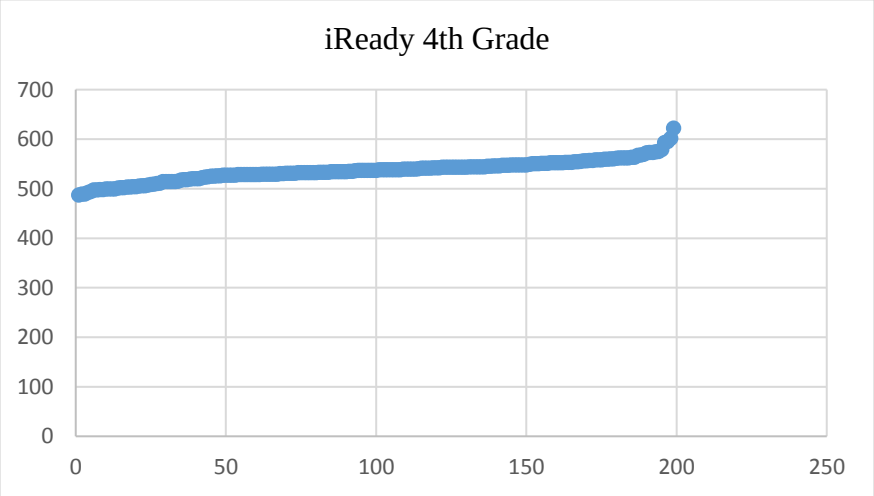
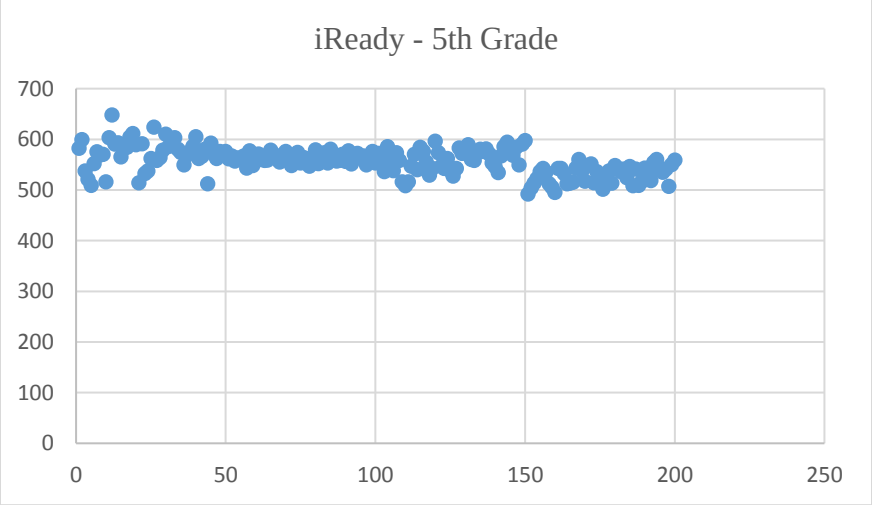


Note: Range 477-622



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